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**THE HONG KONG POLYTECHNIC UNIVERSITY**

**SCHOOL OF NURSING**

**CHINESE FEMALE NURSES' PERCEPTIONS OF  
AND SENSITIVITY TOWARDS MALE GENITALIA  
RELATED CARE**

**BY**

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**Ph.D.**

**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF DOCTOR IN  
PHILOSOPHY**

**NOVEMBER 2, 2006**



### **CERTIFICATE OF ORIGINALITY**

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it produces no material previously published or written, nor material that has been accepted for the award of any other degree or diploma, except where due acknowledgement has been made in the text.

\_\_\_\_\_ (Signed)

YU-LI ZANG (Name of the student)

## **ABSTRACT**

### **Background**

Mainland China is a society which has a conservative sexual culture and a group of sexual impropriety/propriety rules have been developed. In this society, female nurses who physically contact or expose the penis during their provision of male genitalia related care (MGRC) might be considered as behaving in sexually improper ways. An extensive literature review suggested that, across cultures, male patients and nurses, both female and male, held negative perceptions about certain types of MGRC. However, there is a dearth of research which has investigated the practice of female nurses delivering MGRC and associated issues.

### **Aims**

This research aimed to investigate Chinese female nurses' perceptions of MGRC, and to measure Chinese female nurses' sensitivity to MGRC (FNS-MGRC).

### **Design and methods**

This research was carried out in two stages: the preliminary study stage and the main study stage. In the preliminary study stage, Study 1 and Study 2 were conducted, while in the main study stage, i.e. Study 3, four tests were conducted. Study 1, an exploratory qualitative study, investigated eight subjects' experiences, perceptions, attitudes and responses in their practice of MGRC, using semi-structured interviews. Study 2, a cross-sectional descriptive survey, investigated 312 subjects' perceptions of certain types of MGRC and the influence of their demographic factors and other factors on their perceptions. Subjects were

recruited from five teaching hospitals and surveyed using questionnaires. Findings from Study 1 and Study 2 contributed to the implementation of Study 3. Study 3 investigated the personality trait of FNS-MGRC using psychometric techniques. Different samples and sampling methods were used in Test 1, Test 2, Test 3 and Test 4 according to the test objectives and the availability of subjects.

## **Results**

Two themes emerged from Study 1: ‘association with sexuality’ and ‘consequences’. The former included the sub-themes of ‘being sexual’, ‘impact on intimate relationship’, and ‘emotional responses’. The latter consisted of the sub-themes of ‘care with preconditions’, ‘unavoidable responsibilities’ and ‘limited involvement with implicit approval’. In Study 2, the majority of subjects may perform and prefer to perform only few types of MGRC. Subjects’ perceptions of MGRC may not be extensively negative, and these perceptions could be influenced by female nurses’ roles as wife, mother or as a head nurse. Study 3 supported that FNS-MGRC had a 2-dimensional structure, i.e. ‘general sensitivity to MGRC’, and ‘specific sensitivity to MGRC’. The responses of 588 female nurses fitted with the predictions of this factorial model. The 13-item FNS-MGRC scale was developed which had satisfying psychometric properties.

## **Conclusion**

This research suggests that female nurses may play limited roles in the practice of MGRC in Shandong Province in mainland China. Local female nurses may possess negative perceptions, attitudes and responses towards MGRC. The trait of FNS-MGRC may determine one’s capability to perceive the association between female nurses delivering MGRC and sexual impropriety and other

related consequences. Appropriate education programmes require to be developed so as to help female nurses to improve their perceptions, attitudes, responses, FNS-MGRC and practice of MGRC.

## PUBLICATIONS

- Zang, Y.L., Chung, L.Y.F., & Wong, T.K.S. (2007). A review on the psychosocial issues for nurses in male genitalia-related care. *Journal of Clinical Nursing* 16, 1-16.
- Zang, Y.L., Chung, L.Y.F., Wong, T.K.S., & Lou, F.L. (2006, April 16-20). Investigation and analysis of the teaching and practice of male genitalia related care. In 2006' 两岸四地护理学术论坛 : 21 世纪护理专业发展趋势 [2006 2-side and 4-region Nursing Symposium: The trend of nursing development in the 21st century] (p. 74). Nanjing, China.
- Zang, Y.L., Chung, L.Y.F., & Wong, T.K.S. (2006, March 30-31). Female nurses' perceptions of male genitalia related care in Shandong, China. In *The 9th EAFONS: Strengthening nursing knowledge through doctoral education and research networking* (p. 96). Bangkok, Thailand.

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## LIST OF ABBREVIATIONS

Accident and Emergent (Unit)	A&E
AGFI	Adjusted goodness of fit
AM	Approval motivation
AMS	Approval Motivation Scale
ANA	American Nurses Association
bFNES	brief Fear of Negative Evaluation Scale
BI	Bladder irrigation
BPH	Benign prostatic hyperplasia
BW	Bladder washout
CCU	Critical Care Unit
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CR	Critical ratios
<i>df</i>	Degree of freedom
DSC	Interdependent self construal
EFA	Exploratory factor analysis
ES	Embarrassability Scale
FNE	Fear of negative evaluation
FNES	Fear of Negative Evaluation Scale
FNS-MGRC	Female nurses' sensitivity to MGRC
GFI	Goodness of fit
GS-item	General sensitivity item
GS-MGRC	General sensitivity of FNS-MGRC

GWC	Genital wound care
KMO	Kaiser-Meyer-Olkin
KR	Kuder-Richardson
ICN	International Council of Nurses
ICU	Intensive Care Unit
IFI	Incremental fit index
ISC	Independent self construal
IT	Intravesical therapy
MC	Meatal cleansing
MGRC	Male genitalia related care
min.	Minute(s)
MoH	Ministry of Health
NFI	Normed fit index
PAS	Pubic area shaving
PGFI	Parsimonious goodness of fit
PH	Perineal hygiene
RFI	Relative fit index
RMSEA	Root mean square error of approximation
RMSR	Root mean square residual
RN	Registered nurse
SC	Suprapubic catheterization
SCS	Self Construal Scale
SD	Standard deviation
SDS	Social Desirability Scale

SES	Susceptibility to Embarrassment Scale
SN	School of Nursing
SS-item	Specific sensitivity to MGRC item
SS-MGRC	Specific sensitivity of FNS-MGRC
UC	Urinary catheterization
UCR	Urinary catheter removal
UK	The United Kingdom
USA	The United State of America
UTI	Urinary tract infection
vs.	Versus
$\chi^2$	Chi-square
$\alpha$	Cronbach's alpha

## **Chapter 1 Introduction**

This chapter presents an overview of the background and the significance of this research. This will be followed by the statements of aims and objectives of the research and then the significance of the research. The introduction to the organization of this thesis will conclude this chapter.

### **Background**

#### **Introduction to MGRC**

Male genitalia related care (MGRC) refers to a grouping of nursing procedures performed within or near to male external genitalia, e.g. penis, testes. The following procedures, e.g. urinary catheterization, condom catheterization (or penile sheath), meatal cleansing, genital wound care, perineal hygiene (including the hygiene of genitalia, anus and perineum), and pubic area shaving, fall into this category.

Bladder irrigation, bladder washout and intravesical therapy, i.e. chemotherapy, immunotherapy, are usually carried out through a urinary catheter. During the first performance of these procedures, it is necessary to insert a catheter into the bladder through the urethral tract. Subsequently, and before any fluid and/or medications are administered via the indwelling catheter into the bladder, it is important to check and ensure the patency of the urinary catheter. In addition, before suprapubic catheterization, the pubic area must always be cleaned and shaved. Suprapubic catheterization may need to be performed if, for example, there is acute urinary retention caused by an enlarged prostate, and urinary catheterization has not been possible (Addison & Mould, 2000). Therefore, all of the above bladder interventions could be grouped into the

category of MGRC resulting from the use of a urinary catheter.

In summary, all the procedures mentioned above, ranging from perineal hygiene to suprapubic catheterization, require the exposure of or physical contact with the penis and/or scrotum.

### **Prevalence of MGRC**

MGRC is commonplace in some specialty wards in hospital and in the community, especially among male elderly people. In a number of conditions the patients will require MGRC: for example, incontinence, coma, pubic or femoral fracture, urodynamics, cytourethrography, prostatectomy, catheterization during surgery, post-radiotherapy and/or following operation for cancer of the genitalia, bladder, testes, colon, rectum or anus.

The following conditions, in all of which the patient is likely to require MGRC, are particularly prevalent among men over 40 years, i.e. incontinence (Gray, 2005; Landi et al., 2003; Parker & Thorsen, 2002), benign prostatic hyperplasia (BPH) (Li, Garcia, & Rosen, 2005; Wei, Calhoun, & Jacobsen, 2005), the use of an indwelling urinary catheter (McNulty et al., 2003; Sorbye, Finne-Soveri, Ljunggren, Topinkova, & Bernabei, 2005), and cancer of the genitalia, bladder, testes, colon, rectum or anus (Borden, Clark, & Hall, 2005; Stotts, 2004; Viale, Fung, & Zitella, 2005). Details of the prevalence are reported in Chapter 2 (See pp. 13-18).

All of the above physical conditions have been found to have considerable negative impact on male patients' psychological, sexual and social functions, leading to decreased quality of life (Jakobsson, Lovén, & Hallberg, 2004), emotional and psychological discomfort (Hajjar, 2004; Cliff & Macdonagh,

2000), sexual problems (Hendren et al., 2005; Li et al., 2005) and psychosocial dysfunctions (Cameron & Bernardes, 1998; Weber & Sherwill-Navarro, 2005). These may be because the penis not only constitutes the centre of penetrative sex, but also is often associated with masculinity and power. Sex, masculinity and power are of significant concern in a man's life in both eastern (Jankowiak, 2002) and western societies (Gascoigne, Mason, & Roberts, 1999; Milligan, 1999; Newman, 1997; Oliffe, 2005).

### **Problems of MGRC in mainland China**

The foregoing introductory analysis showed that male patients requiring MGRC may simultaneously have serious concerns about the psychological, social and sexual consequences caused by their disease, treatment and/or receiving MGRC. However, no teaching content or education programmes were found which were relevant to these consequences and which could guide, direct or facilitate Chinese female nurses' performance of MGRC in mainland China. This might be related to the prevailing conservative sexual culture, resulting from approximately 3,000 years of female sexual suppression (Ruan & Lau, 1997; Zeng, 2004; Zhang, 1995; Zhou & Wu, 2001), and also to the predominantly female nursing workforce in mainland China (Li, 2001; Li & Wang, 2005; Xu, Xu, & Zhang, 2000).

National statistics showed that there was a total of 1,308,433 registered nurses (RNs) in mainland China in 2004 (Ministry of Health [MoH], 2006a). Though accurate statistics about the numbers of male nurses in 2004 are unavailable, national statistics showed that 1.7% of 1,000,000 RNs were male in 2002 (MoH, 2006a), and it was estimated that less than 1% of RNs were male in

2005 (Li & Wang, 2005).

Chinese female adults are usually restricted from any expression with actual or potential sexual meaning in public, and are educated to minimize any direct physical contact with male adults. Transgressing these rules is often thought to be immoral and undesirable (Ren, 2005; Zhao & Li, 2003). The conduct of MGRC by female nurses therefore challenges traditional cultural and moral rules, and could entail a variety of issues with potentially negative impact on female nurses and male patients.

The few available findings support this inference. Ding (1998) studied both female nurses' (N=40) and male patients' (N=40) attitudes towards female nurses delivering meatal care. She reported that all female nurses in her study were reluctant to perform meatal care for those male patients who could take care of this by themselves (Ding, 1998). Nearly 33% (13/40) of male patients disliked female nurses conducting meatal care for them when they were able to do this by themselves. Twenty percent (8/40) of male patients disliked female nurses performing meatal care for them even when they were unable to do this by themselves (Ding, 1998).

In another survey focusing on male patients' (N=108) attitudes towards female nurses delivering MGRC, 70% (76/108) preferred a male to perform the procedures in the private area (Xiang, Dong, & Liu, 2005). The term 'private area' is commonly used in mainland China to refer to the area where male external genitalia and anus are located. According to Carnaby & Cambridge (2002), the care tasks performed in such an area are termed 'intimate care'.

In Xiang et al.'s study (2005), approximately 22% (24/108) to 60% (64/108)

of male patients reported that they would have a variety of physical and psychological discomforts if such intimate care was provided by female nurses. In particular, approximately 10% (11/108) of male patients reported that they would have an erection if such care were performed by female nurses. However, given that nearly 70% (75/108) of the male patients had never received such care from female nurses (Xiang et al., 2005), the above findings might not reflect actual responses among male patients receiving MGRC. Rather, it may better reflect the imagined perceptions and responses among ordinary Chinese who do not have experience of receiving MGRC from female nurses.

In a different survey conducted by the same group of researchers (Xiang, Dong, & Liu, 2004), nearly 90% (155/176) of female nurses reported that they had many different psychological, e.g. aversion, and physiological, e.g. blushing, discomforts when performing care in the male private area. Furthermore, over 95% (170/176) thought that it was more appropriate for male nurses to do these tasks (Xiang et al., 2004).

However, the studies by Xiang et al. (2004) and Ding (1998) not only failed to question further about female nurses' perceptions about the psychosocial and sexual issues associated with MGRC, but also failed to analyse the influence of a variety of background factors over female nurses' perceptions and responses. Neither of these two surveys (Ding, 1998; Xiang et al., 2004) indicated which specific MGRC actions were considered by these nurses and patients. For example, male catheterization and perineal hygiene may be perceived dissimilarly because of the different level of technical difficulty and the extent to which the penis is held by a hand.



In summary, a paucity of research has been conducted in mainland China to explore the delivery of MGRC by female nurses. There is a dearth of knowledge available on Chinese female nurses' perceptions, responses and attitudes towards MGRC and their concerns during the performance of MGRC.

### **Statements of aims and objectives of the research**

This research aimed to: 1) investigate Chinese female nurses' perceptions of MGRC; and 2) measure Chinese female nurses' sensitivity to MGRC (FNS-MGRC).

To reach these aims the following objectives were developed: 1) to explore female nurses' experience of delivering MGRC so as to bring to the surface the issues associated with MGRC; 2) to analyse female nurses' perceptions of MGRC and the influence of nurses' demographic factors and their experience of providing MGRC on these perceptions; 3) to develop a conceptual model explaining FNS-MGRC; and 4) to examine the hypotheses derived from the conceptual model using the technique of psychometric measurement.

### **Significance of the research**

This research was expected to expand nursing knowledge, leading to an understanding of Chinese female nurses' perceptions and responses to MGRC. This would lay the foundation for the development of education programmes for the purpose of adequately preparing female nurses with the necessary knowledge and skills about how to conduct MGRC. It is anticipated that the findings of this research will lead to the generation of appropriate strategies to improve the outcome of MGRC and to decrease nurses' negative perceptions and responses.

This research was also expected to contribute to the enrichment of nursing

knowledge in the area of MGRC. Language barriers and cultural diversities across societies create difficulties and problems in sharing experiences and research findings among nurses from different societies and cultures. This research may contribute to a better understanding of Chinese female nurses and Chinese nursing in respect of their sexuality and the perception of sexual norms. The anticipated feedback from future readers may facilitate the further development of knowledge and the improvement of practice and education in the area of MGRC in mainland China. This could form a circle of knowledge flowing into and expanding in the area surrounding MGRC.

### **Structure of the thesis**

This thesis consists of eight chapters.

Chapter one is an introduction to the background of the research, the statement of research aims and objectives, and the significance of the research.

Chapter two is a comprehensive literature review aiming to establish the research context for this PhD research. It will provide evidence about the technical aspects of MGRC, and about the psychosocial and sexual issues embedded in MGRC. Simultaneously, it will critically analyze relevant research investigating female nurses' practice of MGRC, and female nurses' perceptions, responses and attitudes towards MGRC.

Chapter three presents the design of the research, and the overview of the methods used. The detailed description of these methods will be reported separately in Chapter four and Chapter six.

Chapter four reports the preliminary studies and includes sections on methods, results and discussion. The preliminary studies included Study 1, i.e.

the semi-structured interviews with eight female nurse subjects, and Study 2, i.e. the questionnaire survey with a convenience sample of 312 female nurse subjects in five teaching hospitals. An overall discussion will be provided in conclusion.

Chapter five describes and explains the conceptual model of FNS-MGRC which was developed based on the findings from Study 1 and Study 2, in combination with others' research findings relevant to the psychosocial issues associated with MGRC. The operationalized 2-dimensional FNS-MGRC was then proposed accordingly, from which a group of hypotheses was derived. These hypotheses are then presented. Six existing scales related to FNS-MGRC are introduced in conclusion.

Chapter six reports Study 3, i.e. the development of the FNS-MGRC scale and of four tests which were designed to determine its psychometric properties and to test the hypotheses derived from the above conceptual model. Study 3 is reported in two parts. Part 1 presents the process of the development of the FNS-MGRC scale. In this Part, Test 1, which was designed to reduce the proposed item pool of FNS-MGRC, is reported. The focus of Part 2 is the examination of hypotheses derived from the operationalized 2-dimensional FNS-MGRC through a series of tests, i.e. Test 2, Test 3 and Test 4. The chapter concludes with a summary of all findings from Study 3.

Chapter seven firstly introduces the organization of the chapter, and secondly, synthesizes findings from Study 1, Study 2 and Study 3. Thirdly, it provides a discussion about the particular aspects of this research, i.e. sexual interpretation, power of socialization and ethical issues. This chapter aims to build a relatively rich picture of Chinese female nurses' practice of MGRC,

mainly focusing on female nurses' perceptions and responses towards MGRC. The interpretation of these findings is carried out by referring to psychological and social research evidence. In conclusion, the implications of these findings are analysed, some recommendations are made, and the limitations of the research are stated.

Chapter eight concludes this thesis by briefly summarizing the research findings, research implications, recommendations and limitations.

## **Chapter 2 Literature Review**

This chapter focuses on summarizing and analyzing references available before May 2006 relevant to nurses' perceptions, attitudes and responses towards MGRC.

It firstly introduces the background leading to the concern over nurses delivering MGRC. Secondly, it describes the prevalence of some conditions requiring MGRC, followed by the negative psychosocial and sexual consequences of these conditions on male patients. The last part is the main body of this chapter, i.e. critical analysis of studies relevant to nurses' perceptions, responses and attitudes towards MGRC.

### **Background**

Nursing is a female dominated vocation worldwide (Anthony, 2004; Evans, 2004; Li, 2001) with females representing approximately 90% of all registered nurses (Armstrong, 2002; Li & Wang, 2005; Nelson & Belcher, 2006; Nilsson & Larsson, 2005; Romem & Anson, 2005; Yang, Gau, Shiau, & Shih, 2004). This gender predominance may contribute to what Porche and Willis (2004) considered to be the systematic negligence about and the lack of the development of education, practice and research emphasising male-specific needs and care.

The traditional social construction of maleness and masculinity may also be detrimental to men's health and the provision of male-specific care (Cameron & Bernardes, 1998; Courtenay, 2000; Foss & Sundby, 2003; Miers, 2002; Newman, 1997; Porche & Willis, 2004). Male external genitalia are necessary for the basic human functions, i.e. urination, having sex. In particular, the penis is central to sexual activities which constitute the necessary components of

hegemonic (or patriarchal) masculinity (Milligan, 1999; Newman, 1997). In the form of hegemony, masculinity represented those things which were considered to be socially and politically correct, and those which showed what a man should be and in what ways (Newman, 1997). This social construction of masculinity has been widely recognized as being detrimental to men's health (Cameron & Bernardes, 1998; Courtenay, 2000; Kirby, 2000; Porche & Willis, 2004; Seymour-Smith, Wetherell, & Phoenix, 2002).

When facing threats to their health, men are found to be reluctant to seek help and reticent about disclosing their emotions and health problems (Cameron & Bernardes, 1998; Newman, 1997; O'Brien, Hunt, & Hart, 2005). Male patients with prostatic problems or testicular cancer were found to make adaptation to their changed body, sexuality and social functions following their diagnosis and treatment, and to redefine masculinity (Gurevich, Bishop, Bower, Malka, & Nyhof-Young, 2004; Oliffe, 2005). However, no conclusion could be drawn concerning the consequences of the construction of masculinity on a man's health (Gurevich et al., 2004; Oliffe, 2005).

However, healthcare professionals may perceive male patients as undemanding, e.g. the male patient takes up little time, asks little, lets staff decide or hands over responsibilities (Foss & Sundby, 2003, p. 50). This could result in insufficient attention being paid to male patients' problems, and inadequate provision of nursing care (Cameron & Bernardes, 1998; Foss & Sundby, 2003). Given the dearth of male nurses' voices about men's problems induced by social construction, the predominance of females within the nursing profession might exacerbate this situation.

Furthermore, nurses' negative feelings and attitudes could be perceived by their patients, which in turn could intensify the patient's own negative perceptions and responses. The patient may then give up seeking help from nurses (Norton, 2004; Peate, 2004). In the holistic approach to men's health, nurses are expected to make efforts to meet patients' psychological, social, emotional, sexual and spiritual needs (Porche & Willis, 2004). The potential threats to patients' health by nurses' negative attitudes thus necessitates nurses' astute awareness of and self-regulation over any negativity they feel in order to achieve optimal care.

Male patients requiring MGRC because of, e.g. incontinence, postprostatectomy, regional radiotherapy near to the genitalia, have been consistently found to have a wide variety of psychological, social and sexual concerns and needs (Kelsey, Owens, & White, 2004; Pateman & Johnson, 2000; Paterson, 2000; Roe & May, 1999). However, literature suggests that nurses hold extensively negative perceptions about MGRC, for example, embarrassing, sexual, intimate, dirty, stigmatizing and associated with low social status and value (Jervis, 2001; Lawler, 1991; Norton, 2004; Wolf, 1997). Surprisingly, the literature seemed devoid of critical review and well-designed research investigating nurses' negative perceptions, responses and attitudes about MGRC.

The prevalence of the above conditions which require MGRC, and male patients' various concerns associated with these conditions should be analyzed so as to facilitate the understanding of the importance of the nurses' role, and of their perceptions, responses and attitudes towards MGRC.

## **Prevalence of conditions requiring MGRC**

MGRC comprises a variety of nursing actions ranging from perineal hygiene, meatal cleansing, genital wound care, urinary catheterization, to various forms of intravesical therapy. The commonality among these actions is the physical contact with or exposure of the penis, scrotum and/or testes. MGRC is beneficial to the maintenance, recovery or improvement of the body functions, i.e. urination, sexual intercourse, the performance of some investigations, e.g. urography, and increased comfort of the body, e.g. perineal hygiene.

MGRC is common in hospital, in nursing homes or in communities across countries. This may be because of the common occurrence of physical problems necessitating MGRC, for example, incontinence, BPH, cancer of the male genitalia, bladder, colon or rectum, requiring surgery or radiotherapy, and the use of an indwelling urinary catheter. General postoperative patients, ICU patients and those with femoral fracture, pelvic fracture or genital injury may also require MGRC. However, statistics are available only about the occurrence of BPH (Li et al., 2005; Lin & Wang, 2004; McVary, 2006), cancer near to the penis (Bordon et al., 2005; French & Jones, 2005; Hedestig, Sandman, & Widmark, 2003; Kirkali et al., 2005; Madeb & Messing, 2004; Stotts, 2004; Viale et al., 2005), incontinence (Adedokun & Wilson, 2004; Aggazzotti et al., 2000; Moore & Gray 2004; Parker & Thorsen, 2002; Tariq, 2004) and indwelling urinary catheter (Falkiner, 1993; Getliffe & Mulhall, 1991; McNulty et al., 2003; Sorbye et al., 2005). Therefore, the following will only focus on the prevalence of these conditions which require MGRC.

The urinary dysfunction caused by BPH is also referred to as lower urinary



tract symptoms featured by voiding problems, e.g. reduced stream, hesitancy, straining, and storage problems such as frequency, nocturia and symptoms of incontinence (Li et al., 2005). BPH is one of the leading causes of disease and admission to nursing homes for the elderly (Madersbacher, H. & Madersbacher, S., 2005).

Among western people, the incidence rate of BPH ranges from 15.3% to 26% in men aged 40 years to 49 years, 34.8% to 50.9% in men aged 50 years to 59 years, and 32.5% to 54.3% in men over 60 years, respectively (Li et al., 2005; Lin & Wang, 2004; McVary, 2006). The prevalence among Asian men was not as high as that among European, American, Canadian and Australian men (Li et al., 2005; Lin & Wang, 2004). The overall incidence rate of BPH in Chinese men is now rising and is coming closer to that of western people (Lin & Wang, 2004).

In western countries, e.g. America, Sweden, UK, prostate cancer is the leading source of solid organ cancer in men (Bailey, Mishel, Belyea, Stewart, & Mohler, 2004; French & Jones, 2005; Hedestig et al., 2003; Jakobsson, Hallberg, & Lovén, 2000; Jakobsson, Hallberg, & Lovén, 2004; Kelsey et al., 2004; Petry et al., 2004; Stotts, 2004; Wareing, 2005; Weber & Sherwill-Navarro, 2005). The overall incidence rate ranged from 140 to 175.5 per 100,000 persons (French & Jones, 2005; Hedestig et al., 2003).

Also in western countries, colorectal cancer (Viale et al., 2005) and bladder cancer (Borden et al., 2005; Kirkali et al., 2005; Madeb & Messing, 2004) are the third and fourth most commonly diagnosed cancer in men, respectively. In particular, bladder cancer accounts for 5% to 10% of all malignancies in men (Kirkali et al., 2005). It is 2.5 to 4 times more common among men than among

women (Madeb & Messing, 2004).

In comparison, the statistics between 1993 and 1997 about cancer incidence and mortality in 12 cities and counties in mainland China showed that colorectal cancer and bladder cancer, but not prostate cancer, were among the first 10 most prevalent cancers, with an incidence rate of 14.1 to 33.3, and 4.5 to 10.6 per 100,000 Chinese, respectively (Li, Rao, Zhang, Lu, & Zhou, 2002). Although the incidence rate of prostatic cancer in Beijing or Shanghai is higher than that in the above 12 cities and counties (Li et al., 2002), it is still lower, i.e. 2.3 to 6.6 per 100,000 Chinese (Li, 2003; Li et al., 2002; Zhang et al., 2004; Zhu, Wang, Li, & Xing, 2003), in contrast with that, i.e. 36 to 81.9 per 100,000 persons, for European, American, Australian and Canadian people (Li, 2003).

As to other genitalia cancer, i.e. penile cancer, testicular cancer, it is very rare among both western and Chinese men (Bartkiw, Goldfarb, & Trachtenberg, 1995; Gurevich et al., 2004; Mohr et al., 2003; Stotts, 2004; Xiao, 2005; Wang & Shen, 2005). For example, the incidence rate for penile cancer and testicular cancer is approximately 0.8, 5.2 per 100,000 in America, respectively (Stotts, 2004). In particular, testicular cancer was found to mainly affect young men between 20 and 40 years of age (Tuinman, Hoekstra, Fler, Sleijfer, & Hoekstra-Weebers, 2006).

Faecal and urinary incontinence together constitute the second most common cause of institutionalization in America, e.g. admission to nursing home (Tariq, 2004). Faecal incontinence is common, affecting 2.2% to 5% of the general population, 3.7% to 27% of elderly people over the age of 65 years, and over 50% of the institutionalized elderly population in America and Italy

(Adedokun & Wilson, 2004; Parker & Thorsen, 2002; Tariq, 2004). Urinary incontinence is found to be more prevalent in young adult women than in young adult men, but the gap narrows with age. Statistics in America and Italy showed that the incidence rate of urinary incontinence for men over 60 years ranged from 8% to 39.2% (Aggazzotti et al., 2000; Moore & Gray, 2004).

In comparison, in mainland China, no statistics were found to report the incidence of faecal incontinence, while only two studies reported the incidence of urinary incontinence. It was found that the incidence of urinary incontinence in 199 men over 18 years was 12.1% in Beijing (Duan et al., 2000), while the incidence rate in 1,381 males, aged from 11 to 89 years, in the community in Wuhan, was 13.9% (Chen et al., 2004). This suggests that the incidence of urinary incontinence may be similarly high among Chinese males.

The high prevalence of urinary incontinence may be associated with the high prevalence of the use of a urinary catheter. Approximately 10% of inpatients in hospital and 4% to 9% of residents in nursing home were found to have a urinary catheter in situ (Falkiner, 1993; Getliffe & Mulhall, 1991; McNulty et al., 2003; Sorbye et al., 2005).

However, many studies suggested that in 20% to 33% of cases urinary catheters were found to be used inappropriately, e.g. use without justifiable indications, no documentation, prolonged use or delayed removal (Cornia, Amory, Fraser, Saint, & Lipsky, 2003; Jain, Parada, David, & Smith, 1995; Munasingle, Yazdani, Siddique, & Hafeez, 2001; Saint, Lipsky, & Goold, 2002; Webster et al., 2001).

Furthermore, when a urinary catheter is in situ, the risk of the patient

developing a urinary tract infection (UTI) increases 5% - 8% per day (Choong, Wood, Fry, & Whitfield, 2001). Other researchers found that almost all patients developed a bacterial infection within four days of catheter use (Liedl, 2001). Stewart (1998) reported that even up to 30 days after removal, the risk of developing a UTI remains. These references suggest that UTI may be highly associated with the use of a urinary catheter, and that the UTI could last for a considerable period of time even after the removal of the urinary catheter.

In fact, UTI associated with an indwelling catheter or transurethral surgery accounted for 20.8% to 31.7% of nosocomial infection (Feng, Yu, & Li, 2003). The incidence of bacteriuria for patients with an indwelling catheter varies between 3% and 10% per day, among whom 10% to 25% develop symptoms of local infection, but less than 5% develop bacteremia (Hashmi, Kelly, Rogers, & Gates, 2003; Saint, 2003).

UTI is asymptomatic in general. It can resolve spontaneously once the catheter is removed. This may result in UTI being mistakenly thought of as insignificant, and so it may receive little attention (Tambyah & Maki, 2000). However, urinary catheter related UTI is also associated with increased mortality. A threefold risk of dying has been noticed when co-morbid conditions and other factors are accounted for (Saint, 2003).

UTI may be the most expensive single-site infection. In Britain in 1999 it caused additional £1,327 cost per case, and by estimation, cost the NHS approximately £124 million per year (Brennan & Evans, 2001; Seymour, 2006). By estimation, in America, on average \$558 to \$676 was spent on symptomatic UTI without bacteriuria, and annually more than \$1.5 billion is spent on treating

adult UTI cases. Each incidence of catheter related bacteriuria costs at least additional \$2,836 (Bass III, Jarvis, & Mitchell, 2003; Saint, 2000, 2003; Tambyah, Knasinski, & Maki, 2002).

Patients with a long-term indwelling urinary catheter are also at risk of another complication, i.e. recurrent catheter encrustation. Encrustation is a progressive process of crystalline deposition on the catheter surface or in the urine (Getliffe, 2002, 2003; Hedelin, 2002; Morris, Stickler, & McLean, 1999; Warren, 2001). It can result in obstruction, surface tissue trauma and leakage of urine around the catheter. Approximately 40% of patients with a long-term indwelling urinary catheter may be at risk of obstruction (Liedl, 2001; Morris et al., 1999). Unnoticed obstruction could precipitate the occurrence of pyelonephritis, septicaemia and/or shock (Liedl, 2001).

Given the association between MGRC and sexuality and masculinity, all of the above conditions requiring MGRC may have negative influences over male patients in respect of psychosocial and sexual responses.

### **Effects on patients of conditions requiring MGRC**

A growing number of studies suggest that all of the above physical problems or situations may have a negative influence on the patient's psychosocial and sexual functions. The majority of these studies placed emphasis on the experiences of patients with BPH (Glover, Gannon, McLoughlin, & Emberton, 2004; Wareing, 2005), prostate cancer (Hedestig et al., 2003; Jakobsson et al., 1997a, 2000; Kelsey et al., 2004; Pateman & Johnson, 2000), testicular cancer (Gascoigne et al., 1999; Gurevich et al., 2004), incontinence and/or indwelling catheter (Roe & May, 1999; Wilde, 2002a, 2002b, 2003a,

2003b).

Patients with urinary and faecal incontinence reported many emotional responses, e.g. stigma, embarrassment (Joachim & Acorn, 2000; Mitteness & Barker, 1995; Paterson, 2000; Wilde, 2003a). As with many patients, psychological conditions, e.g. depression, distress, can occur to patients with prostatic and testicular cancer (Bailey et al., 2004; Balderson & Towell, 2003; Bennett & Badger, 2005; Cliff & Macdonagh, 2000; Engström, Walker-Engström, Henningsohn, Lööf, & Leppert, 2004; Gascoigne et al., 1999; Hajjar, 2004; Mishel et al., 2002; Weber & Sherwill-Navarro, 2005). Sexual dysfunction is often present among patients with BPH, incontinence, cancer in male external genitalia or the organs nearby (Li et al., 2005; Hendren et al., 2005; Jakobsson, Lovén, & Hallberg, 2001; Manderson, 2005; McVary, 2006; Roe & May, 1999; Rosen, 2006).

As a result, the overall quality of life for patients with a urinary catheter in situ or prostatic disease was found to be poor in comparison with the general population (Crowe & Costello, 2003; Hampton, 2005; Jakobsson et al., 2004). Psychosocial morbidity was also found to be high among these patients' wives (Petry et al., 2004; Resendes & McCorkle, 2006). This may in turn cause further deterioration in patients' psychosocial and sexual dysfunction.

The psychosocial and sexual dysfunction suffered by these male patients suggests that they may be in need of psychological, social and sexuality support. However, the majority of these patients' needs were found to be unmet (Jakobsson et al., 1997a; Weber & Sherwill-Navarro, 2005). Many barriers have been found which have a negative influence over male patients' help-seeking

behaviours. Of these, lack of knowledge of the causes and treatments of incontinence and cancer is thought to constitute the major barrier to help-seeking and a successful outcome (Horrocks, Somerset, Stoddart, & Peters, 2004; Shaw, 2001; Shaw, Tansey, Jackson, Hyde, & Allan, 2001). Appraisal of illness and coping resources were found to be important moderating factors between the experience of symptoms and subsequent behaviour and outcome in patients with urinary incontinence (Shaw, 2001). Some factors, such as personality, e.g. introverted patients, social support and cultural influence may contribute to the appraisal process (Shaw, 2001).

In addition, the passive view of aging as a natural and degenerative process was found to result in reduced health expectations (Horrocks et al., 2004). Emotional responses, e.g. shame, stigma, embarrassment, fear of cancer, can hinder patients from accessing health professionals and health services (Gascoigne et al., 1999; Horrocks et al., 2004). Healthcare providers' misattribution of cancer symptoms and patients' self-examination may be contributory to the delay in patients' presentation in the healthcare service units (Gascoigne et al., 1999).

To date, few educational intervention programmes have been developed to facilitate male patients to deal with the problems requiring MGRC and the associated issues (Weber & Sherwill-Navarro, 2005). Almost all of these programmes were found to be ineffective at improving patients' psychological conditions, suggesting the needs for further development (Weber & Sherwill-Navarro, 2005).

In summary, many studies have investigated the influence of conditions

requiring MGRC on male patients, but no research was found which studied the influence of MGRC on male patients. Given that nurses' negative responses may exacerbate the lack of sexuality and psychosocial support to male patients, this review is expected to bring to the surface the issues related to nurses' delivery of MGRC.

### **Nurses' experience in MGRC**

A computerized search of literature was carried out. PubMed and all available databases in English related to nursing available from The Hong Kong Polytechnic University were searched. One Chinese language database was also searched. The key words and the databases are listed in Box 2.1.

**Box 2.1 Searched databases and the key words**

<b>Databases</b>	
<b>English</b>	
Blackwell Synergy	British Nursing Index
CINAHL	Cochrane library
Internurse.com (1995+)	journals@Ovid
JSTOR	Ovid MEDLINE
ProQuest Dissertation and Theses	PsycInfo
PsycARTICLES	PubMed
Science Direct	Web of Science
<b>Chinese</b>	
CAJ Full-text database (1994+ Chinese)	
<b>Key words</b>	
genitalia OR penis OR testes OR testicular OR scrotum	
Incontinence	
(catheter OR catheterization) AND (urine OR urethral OR urinary)	
wound care OR skin care	
intimate OR embarrassment OR privacy OR dirty work OR stigma	

Note: OR and AND are terms which indicate the logical relationships between key words during searching the databases.

In the searching of English language databases, a variety of key word combinations were used in order to seek out all relevant references. Before searching, the following limits were indicated in order to find out the most relevant references: (1) the publication date was between 1990 and 2006; (2) the original publication was written in either Chinese or English.



In comparison, only the key words of ‘nurse’ and ‘male patients’ were combined during searching the Chinese language database, i.e. CAJ Full-text database (See Box 2.1, p. 21). That is, both ‘nurse’ (*hu shi*) and male patients (*nan bing ren*) had to appear in any reference. The logical relationship between *hu shi* and *nan bing ren* is ‘AND’. If either *hu shi* or *nan bing ren* appeared in the reference, the logical relationship between them is ‘OR’. The relationships between different key words which were used to search English language databases are listed in Box 2.1 (See p. 21).

Potentially relevant references were selected according to the titles and the abstracts. The full text of these references, including their cited references, was then examined so as to identify all relevant publications.

The inclusion criteria for this review were as follows: (1) for research studies: a) the sample population was nurses; b) the study foci were relevant to MGRC; c) the study outcomes were relevant to nurses’ perceptions, thoughts, feelings, responses, attitudes and behaviours related to MGRC; (2) for references in other forms, i.e. literature review, editorials or experts’ opinion, only if the focus was relevant to nurses’ perceptions, thoughts, feelings, responses, attitudes towards MGRC, was it included.

A total of 32 references were considered as relevant and these are summarized in Table 2.1 (See pp. 39-44). Four types of reference were identified: a) qualitative study (n=13); b) quantitative study (n=9); c) literature review (n=4); and d) an expert’s opinion (n=4).

Among the 13 qualitative studies, four studied both the patients/residents and care providers (Edwards, 1998; Jervis, 2001; Routasalo & Isola, 1996; Twigg,

2000a, 2000b); Seven focused only on the perspective of care providers (Bridger, 1997; Carnaby & Cambridge, 2002; Evans, 2002; Giuffre & Williams, 2000; Lawler, 1991; Savage, 1995; Seed, 1994, 1995; Wolf, 1997). The care providers involved in MGRC encompass nurses, nurse assistants, healthcare assistants, student nurses and informal caregivers. One study focused on male nurses (Evans, 2002), and one studied both nurses and doctors (Giuffre & Williams, 2000). These qualitative studies provided rich descriptions and deep analyses of nurses' and other care providers' responses towards MGRC, e.g. bathing/washing genitalia, genitalia exposure, urination assistance, urinary catheterization. The details are shown in Table 2.1 (See pp. 39-44).

Among the nine quantitative studies, five were about the protection of privacy (Bäck & Wikblad, 1998; Lemonidou, Leino-Kilpi et al., 2003; Lemonidou, Merkouris, et al., 2002; Lemonidou, Merkouris, et al., 2003; Scott et al., 2003b). The perceptions of patients and the perceptions of the nurses who provided care to these patients were investigated with two different instruments with the same questioning focus. Four of the above five references came from the same cross-national project conducted in five European countries with different aspects were reported, i.e. Finland, Greece, Germany, Scotland and Spain (Lemonidou, Merkouris, et al., 2002; Lemonidou, Leino-Kilpi et al., 2003; Lemonidou, Merkouris, et al., 2003; Scott et al., 2003b).

The other four were questionnaire surveys. One investigated female nurses' responses to male catheterization in Wales, UK (Porter-Jones, 1998). One studied the relationship between knowledge, attitudes, beliefs and the practice of incontinence care among nurses in Texas, America (Henderson & Kashka, 2000).

The other two surveys were conducted in Beijing, China, and investigated female nurses' acceptance of female nurses delivering meatal care (Ding, 1998) and female nurses' psychological responses to providing care of the private area for male patients, respectively (Xiang et al., 2004) (See Chapter 1, pp. 4-5).

Four literature reviews were identified relevant to MGRC, i.e. bath (Wolf, 1993), intimate touch (Williams, 2001a), male catheterization (Milligan, 1999) and faecal incontinence care (Norton, 2004) (See Table 2.1, pp. 39-44). Several issues were found to be discussed in the above reviews, i.e. hygiene, sexuality, stigma, dirty work and intimacy. These issues are analyzed in detail later in this chapter.

The fourth type of reference is that of an expert's opinion. All were written by Pomfret (1993, 1994, 1999, 2000) and focused on the problems for female nurses in catheterizing male patients.

From Pomfret's articles (1993, 1994, 1999, 2000), it is clear that the situation in relation to male catheterization remains controversial. Changes in organizational policies and attitudes were evident over time. Initially it was organizational policy that female nurses were not allowed to catheterize male patients, but later, even if in some areas the policy permitted them to do so, some female nurses themselves were reluctant to perform male catheterization.

The above analysis shows that the identified references were heterogeneous in terms of methodology, study/writing foci and sample population. Therefore meta-analysis or research synthesis is not possible. The next section is a summary of findings relevant to nurses' perceptions and responses towards MGRC (See Table 2.1, pp. 39-44). These findings will be organized and presented according

to the issues associated with MGRC which were identified from the above references, i.e. privacy intrusion, intimacy, sexuality issues, dirty work, emotional responses and stigma, but the majority of these references only placed emphasis on only one or two issues (See Table 2.1, pp. 39-44).

### **Privacy intrusion**

Although it appears to be easy to understand Woogara (2001), the concept of privacy is considered as inadequately and inconsistently defined. Privacy, one of the basic human rights, is thought by Scott et al. (2003a, p. 45) to constitute four dimensions: a) physical privacy, which is about the maintenance of personal space and territoriality, e.g. home; b) informational privacy, which deals with the right to make decisions on when, how and to what extent information could be shared with others; c) psychological privacy, which refers to one's ability to control the right to decide when, with whom and under what circumstances he/she would like to disclose information or express emotions; and d) social privacy which is related to one's ability to control the level and the scope of social contact he/she prefers.

Some MGRC, e.g. genital hygiene, toileting assistance, and penile sheath, invariably intrudes into male patients' privacy, which can cause strong embarrassment (Woogara, 2001). All available research on privacy (Bäck & Wikblad, 1998; Leino-Kilpi et al., 2003; Lemonidou, Leino-Kilpi et al., 2003; Lemonidou, Merkouris, et al., 2002; Lemonidou, Merkouris, et al., 2003; Schopp et al., 2003; Scott et al., 2003b) investigated both the patients and the nurses who provided care to these patients. It was consistently found that nurses' overall perception of privacy protection or the needs for privacy were significantly

different from their patients' perception, i.e. the nurses usually overestimated patients' needs for privacy (See Table 2.1, pp. 39-44).

Further analysis of the available research (Bäck & Wikblad, 1998; Leino-Kilpi et al., 2003; Lemonidou, Leino-Kilpi et al., 2003; Lemonidou, Merkouris, et al., 2002; Lemonidou, Merkouris, et al., 2003; Schopp et al., 2003; Scott et al., 2003b) showed that few items were related to MGRC in the instruments measuring the perception of the needs for and/or protection of privacy. For example, in the 10-item instrument examining the needs for privacy in Bäck and Wikblad's (1998) research, only two items, i.e. 'morning toilet in private', 'use of urine bottle/bedpan in private', were relevant to MGRC. In another 11-item instrument in other studies (Leino-Kilpi et al., 2003; Lemonidou, Leino-Kilpi et al., 2003; Lemonidou, Merkouris, et al., 2002; Lemonidou, Merkouris, et al., 2003; Scott et al., 2003b), four items were found relevant to MGRC, that is, 'not use the toilet in front of others', 'not have enemas in front of other patients', 'not shower/bath in front of other patients' and 'not undress in front of other patients' (Leino-Kilpi et al., 2003; Lemonidou, Leino-Kilpi et al., 2003; Lemonidou, Merkouris, et al., 2002; Lemonidou, Merkouris, et al., 2003; Scott et al., 2003b). Although nurses' scores over these individual items were different from that of their patients, these studies could at best suggest that nurses may perceive the protection of privacy differently from their patients during some MGRC, i.e. bathing/showering, toileting, enema. More studies are required to investigate privacy intrusion during MGRC as perceived by both nurses and patients.

### **Intimate care**

The term 'intimate care' was found to be used loosely and inconsistently in

the identified nursing literature. For instance, "... while the nurses also mentioned intimate body parts, such as the genitalia, stomach and women's breasts ..." (Routasalo & Isola, 1996, p. 171), "Intimate touch involves handling and touching parts of the body which are considered private. These are areas which are associated with sexual activity and proscribed" (Williams, 2001a, p. 664). "Intimate care tasks have certain things in common, i.e. associations with bodily functions, body products or personal hygiene which require direct or indirect contact with or exposure to the sexual parts of the body" (Carnaby & Cambridge, 2002, p. 122).

The other two references simply used the term "intimate care" (Seed, 1995, p. 1137) or "intimate task" (Edwards, 1998, p. 814) directly without giving any definition. For example, Seed (1995) presented some statements which seemed rather vague as to what may constitute intimate care. That is, "Janet: ... because I've never seen a man naked before."; "Helen: I can't remember the procedure for this [bathing a patient in bed]..."; and "Rachael: ... To be honest I find this way embarrassing [fitting a urinary appliance to a patient's penis]..." (Seed, 1995, p. 1137). In another reference about adult children providing intimate care to their parents or in-laws in Hong Kong, Wong (2005, p. 381) stated that "intimate caregiving included such tasks as dressing, bathing and toileting assistance".

All of the above quotations suggest that the use of the term 'intimate care/touch/tasks' in nursing literature may be inconsistent and loose. A close examination of their use follows, in relation to the concept of 'intimacy' (Dowling, 2005; Williams, 2001a) and 'physical touch' (Routasalo, 1999).

In comparison, 'intimate care' was described more clearly by Carnaby and

Cambridge (2002). They distinguished ‘intimate care’ from ‘personal care’ according to whether the sexual body parts were exposed or were touched (See Table 2.2). Identified personal and intimate care tasks were classified into four levels along a continuum of purpose ranging from social functional care, i.e. level 4, aiming to improve one’s personal presentation and appearance, to physical dysfunctional care, i.e. level 1, e.g. menstrual care, incontinence care (Carnaby & Cambridge, 2002). Between level 1 and level 4 was a body of tasks which might be interpreted as sexual. Those including touch with non-intimate body parts were classed into level 2, while those including touch with intimate body parts were classified into level 3 (See Table 2.2).

**Table 2.2 The classification of personal care and intimate care**

	Level	Tasks	Contact
Intimate care	Level 1	Changing soiled pad	Urine
		Menstrual care	Blood (menstrual)
		Administering enema	Faeces
		Administering rectal medication	Body fluids
		Catheterization	Insertion
	Level 2	Washing	Intimate body parts
		Bathing	(e.g. breast, penis)
		Dressing/undressing (underwear)	
Personal care	Level 3	Skin, oral and hair care	Non-intimate body parts
	Level 4	Dressing/undressing (clothing other than underwear)	Personal presentation and appearance

Source: Carnaby & Cambridge, 2002, pp. 123, 125

According to the above classification system, MGRC could be viewed as part of intimate care, given that male external genitalia are exposed or physically contacted during this care.

### **Sexuality issues**

Sexuality in a broad sense is a complex life-long process featured by the continuous interaction between biological, psychological, sociological, situational, cultural, spiritual and ethical dimensions in relation to sexual activities (Burlew & Capuzzi, 2002). Milligan (1999) found that little was known about male

patients' experiences of urinary catheterization, or about the experiences of female nurses dealing with associated sexuality issues. Therefore, knowledge about patients' and nurses' responses in relation to MGRC in the dimension of sexuality is required and remains to be investigated.

Twigg (2000b) described the enjoyable aspect of bathing disabled clients living at home. However, his respondents appeared reluctant to answer further questions as to whether bathing brought about comfort or social pleasure because it involved bodily touch. Some male clients seemed to like a female caregiver to bath them although most preferred to bath their genital and anal areas by themselves, while caregivers developed a strategy to bath the genitalia from the client's back.

This echoes others' findings, e.g. Edwards (1998), Evans (2002), Giuffre and Williams (2000). That is, some male patients preferred female instead of male nurses to perform intimate procedures, e.g. catheterization, as they felt uncomfortable with male nurses/doctors performing these. It was explained that some men were "homophobic" because these patients considered male nurses as "homosexual" (Edwards, 1998, p. 814; Evans, 2002, p. 447; Giuffre & Williams, 2000, p. 466). In an earlier study, McCann and McKenna (1993) found that male patients disliked being touched by a male nurse for the same reason, i.e. they felt that male nurses were homosexual, these authors failed to report whether the feeling arose only during the touching of intimate body parts or during any type of care.

The above findings about some male patients' fear/avoidance of male nurses seem to confirm the persistence of the stereotype of male nurses as gay.



This stereotype is stigmatizing, and could be hurtful to male nurses (Evans, 2002). On the other hand, in two studies (Edwards, 1998; Porter-Jones, 1998) male nurses stated that they should not be expected frequently to perform intimate tasks for male patients, particularly under conditions of staff shortages.

Considering that the above relevant research (Edwards, 1998; Evans, 2002; Giuffre & Williams, 2000; McCann & McKenna, 1993; Twigg, 2000b) focused on generating rich description, further research, using a survey approach may be necessary as results from such studies could suggest to what degree, and by what number of male patients a male or female nurse was preferred when MGRC is needed. Two surveys (Ding, 1998; Xiang et al., 2004), both of which were conducted in Beijing in mainland China, were found to be able to make some suggestions about male patients' reluctance to be cared for by female nurses during meatal care (Ding, 1998) and care in the private area of the male body (Xiang et al., 2005).

In one survey 32.5% (13/40) of male patients in a urology ward would not accept a female to perform meatal care for them when they were able to take care of this themselves (Ding, 1998). Even when self-care was unable to be performed, 20% (8/40) would not accept a female nurse to provide meatal care for them (Ding, 1998). In the other survey, i.e. Xiang et al. (2005), over 70% (76/108) of male patients preferred a male to perform such tasks. Many (22.2%-68.5%) reported psychological and physical discomfort if such tasks were performed by female nurses. A small percentage (22.2%, 24/108) of subjects mentioned the possibility of reacting by blushing and sweating, others (68.5%, 74/108) mentioned discomfort at the lack of curtain to protect them from others' sight.

Approximately 10% (11/108) indicated the possibility of erection (Xiang, et al., 2005).

However, nearly 70% (75/108) of the male patient subjects in Xiang et al.'s study (2005) had never been provided with MGRC by female nurses. In comparison, no statistics were provided in Ding's study (1998) about the number of male patient subjects who had actually received MGRC from female nurses. Admission to a urology ward, as the subjects in Ding's study (1998), does not of itself mean that all patients will receive meatal care, e.g. postoperative patients with varicocele will not receive this care. The above findings from Ding (1998)'s and Xiang et al.'s study (2005) therefore cannot be assumed to reflect the perceptions and responses of male patients who have actually received MGRC.

Some references (Bridger, 1997; Porter-Jones, 1998; Shallcross, 2000) suggest that male catheterization by a female nurse may still be controversial in some places in the UK. Porter-Jones (1998) found that although 85% (51/60) of female nurses considered it acceptable to catheterize a male patient, only 7% (4/60) had ever done so. Over 90% (56/60) wrongly believed that there existed a policy which prevented them from catheterizing male patients (Porter-Jones, 1998). However, Porter-Jone's study (1998) was the most recent research found which investigated the controversy over whether or not female nurses should catheterize male patients. This suggests that large scale, possibly nationwide studies are required to investigate and reveal details of the practice of MGRC in general, with the aim of improving MGRC as a whole.

### **Dirty work**

The term 'dirty work' has been long and widely used in nursing literature,

e.g. Jervis, 2001; Lawler, 1991; Savage, 1995; Twigg, 2000a, 2000b; Wolf, 1993. This term was initially developed to refer to the degrading tasks integral to any society but the society disliked admitting it and by common consent hid it (Stacey, 2005; Twigg, 2004; Wolf, 1993). Later, the term was extended to comprise aspects of a job which were viewed as shameful, distasteful or totally at odds with the worker's self-image (Twigg, 2000a).

Because nursing involves dealing with other people's bodies and with body excretions, e.g. faeces, urine, blood, sputum, vomit, it has been categorized as 'dirty work' for long. Nurses, nurse assistants, nursing aides and home caregivers may be recognized as 'dirty workers' as a result (Lawler, 1991; Wolf, 1993; Wilde, 2002a). Over time, the so-called basic care such as dealing with body excretions, e.g. washing, bathing, toileting assistance, has been increasingly delegated to the most junior nurses or to auxiliaries. In some cases, delegation is to students or informal care-givers' (Jervis, 2001; Lawler, 1991; Norton, 2004; Stone, 2004; Twigg, 2000a).

Some non-nurse caregivers reported receiving positive feedback from their patients/clients as a result of bathing them, e.g. they felt more dignity (Jervis, 2001; Karner, 1998; Stacey, 2005; Twigg, 2000b). However, this could not outweigh the negativity of certain aspects of their work, i.e. feeling overloaded, being low paid, little rewarded, disregarded, not respected, of low status, little supported, and so forth (Jervis, 2001; Lawler, 1991; Mather, 2002; Stone, 2004; Twigg, 2000a, 2000b).

Jervis (2001) proposed that stigmatization occurred in a circular process in aides' work: aides' work stigmatized those who did it, while some characteristics

of aides, e.g. as people of low class, without any alternative job choice and uneducated, in turn stigmatized the occupation. Nurses disliked and avoided these stigmatizing tasks, and made attempts to exclude them totally from their responsibilities (Jervis, 2001; Lawler, 1991; Stone, 2004; Twigg, 2000a).

It seems that little controversy exists in all the above references concerning the meaning of 'dirty work'. This term was used by Hughes (1971, reprinted in 1984) to describe the perpetration by Germans of acts of cruelty and murder directed mainly against Jews, Slavs and Gypsies during the period of Second World War. The continued use of this term (Stacey, 2005; Twigg, 2000a) to describe the work of nurses in the 21st century should be challenged and explored further.

Nursing has advanced to a stage beyond the early emphasis on hygiene. However, helping patients and clients to maintain their personal hygiene will always be essential to the maintenance of their physical comfort and human dignity. Hygiene is therefore an integral and essential aspect of nursing and should never be denigrated or excluded from the field of nursing because the work of caring will always involve contact with the human body and human products (Twigg, 2000a). A challenge thus arises from the persistent negative labelling of aspects of nursing work as described above, and about what can be done to transform this negative image and increase public awareness of the importance of nursing care to human beings in their environment

### **Psychological responses**

Few studies have been found to place particular emphasis on nurses' responses towards MGRC. Nevertheless, available research evidence does

suggest that nurses' responses may be extensively negative (See Table 2.1, pp. 39-44).

Intimate care was found to be embarrassing, stressful (Carnaby & Cambridge, 2002; Lawler, 1991; Savage, 1995; Seed, 1995; Xiang et al., 2004; Williams, 2001b) or even "scary" (Wolf, 1997, p. 42). This was more evident if nurses were performing such care for patients of a similar age (Edwards, 1998). Touching the external genitalia was thought by both nurses and patients to be emotionally unsafe (Routasalo & Isola, 1996). Nursing students were afraid of exposing and touching the external genitalia during their first experience of bathing a patient, especially for the opposite sex (Wolf, 1997). In particular, when the intimate care provider was a good friend of the patient, it was much more uncomfortable for both nurses and patients (Savage, 1995; Twigg, 2000b).

Care which involves dealing with urine and faeces was thought of as dirty and stigmatizing work (Jervis, 2001). Female nurses were reluctant to catheterize males (Pomfret, 1994, 1999, 2000). All female Chinese subjects (n=40) in Ding's (1998) study expressed their inner reluctance to cleanse the urinary meatal for male patients who were able to carry out self-care. However, all accepted their responsibility to perform this when male patients were unable to do this care for themselves (Ding, 1998).

It could be concluded therefore that providing MGRC was a very uncomfortable experience for both nurses and patients. Few studies explored the mechanism of this discomfort. Seed (1995) and Lawler (1991) attributed the occurrence of such discomfort to the crossing over of normal social boundaries and the invasion into the others' private space. Nurses' limited competence in

dealing with patients' and their own negative responses may also contribute to the negative perceptions. Seed (1995) and Lawler (1991) apparently failed to analyze their subjects' competence in dealing with negative responses associated with MGRC.

In summary, nurses' responses towards MGRC have not been comprehensively and systematically investigated. The research foci were hygiene, e.g. of the genital and anal areas, and male catheterization. From available research (Jervis, 2001) some types of MGRC, i.e. genitalia and/or anal hygiene, seem to have been excluded from nurses' work in western societies, which evokes a concern over whether nursing professionals belittle or downplay their own work such as (genital) hygiene. Therefore, issues surrounding MGRC are complicated and may be related to privacy, intimacy, sexuality, dirty work and negative emotional responses. Age, gender, race and social class may compound these issues.

However, of 32 identified references (See Table 2.1, pp. 39-44), only two, i.e. Ding (1998) and Xiang et al. (2004) placed emphasis on nurses' perceptions and responses towards MGRC. Both investigated Chinese female nurses' responses towards MGRC in Beijing, mainland China. Ding's survey (1998) focused on male patients' and female nurses' acceptance of delivering meatal cleansing by female nurses, while Xiang et al.'s (2004) study investigated female nurses' psychological responses towards the care performed in the privacy area of the male body (See Chapter 1, pp. 4-5).

Some findings and limitations of these two studies have been analyzed briefly in Chapter 1 (pp. 4-5). To go further, it was found that these two reports

lacked reflection on and analysis of the influence of Chinese culture on female sexual propriety over female nurses' conduct during the practice of MGRC.

Furthermore, in Ding's study (1998), she failed to define the concept of 'acceptance' leading to over simplification of female nurses' perceptions, responses and attitudes towards meatal care. By contrast, in Xiang et al's study (2004), almost all of the female nurses' psychological responses towards providing care in the male private area were actually demonstrations of embarrassment. This group of researchers failed to categorize these responses, thus reflecting a poor awareness of how to make use of the well established concept, i.e. embarrassment, to simplify their discussion.

In addition, in the above two studies, it was recommended that the number of male nurses should be increased in order to have MGRC to be delivered mainly by male nurses. In Ding's study (1998), this recommendation seemed justifiable as nearly 33% (13/40) of male patients did not accept female nurses delivering MGRC for them when they were able to do this by themselves, and 20% (8/40) reported that they did not accept female nurses delivering MGRC for them even when they were unable to do this by themselves. The employment of male nurses therefore could possibly meet these patients' needs for a male MGRC provider. The recommendation (Ding, 1998) of an increase in the number of male nurses seems justified.

In comparison, the recommendation in Xiang et al.'s (2004) research, that employing more male nurses did not seem justifiable based simply on the finding that over 95% (170/176) of female nurses thought that it was more appropriate for male nurses to do such tasks in the private area of the male body (Xiang et al.,

2004). After all, Xiang et al.'s study (2004) investigated only female nurses' psychological responses towards MGRC, and not male patients' preferences.

The findings from a different study Xiang et al. (2005) conducted by the same group of researchers, did support the recommendations that more male nurses should be employed as 70% (76/108) of male patients preferred a male to perform the procedures in the male private area. However, given that nearly 70% (75/108) of the sample had never received MGRC from female nurses (Xiang et al., 2005), the interpretation of male patients' preference for male MGRC providers should be made with caution. These male patients' gender preference may not be consistent with patients' gender preference who had received MGRC (See Chapter 1, pp. 4-5).

Furthermore, the finding that Chinese male patients may prefer male nurses as providers of MGRC seems to be different from the findings from the studies conducted in western societies, where some male patients were found to prefer female nurse MGRC providers (Edwards, 1998; Evans, 2002; Giuffre & Williams, 2000; McCann & McKenna, 1993). This suggests another cultural difference between Chinese and western cultures which requires further investigation.

## **Conclusion**

This chapter presented an overview and a critical analysis of the available references related to nurses' perceptions, responses and attitudes towards MGRC. This review thus so far has established the research context leading to a better understanding about the issues embedded in MGRC and suggests the following research gaps.



Firstly, a number of studies have investigated the influence of physical conditions on male patients who require MGRC, but there remains a lack of investigation of the influence of MGRC on male patients.

Secondly, nurses' responses indicate that they consider they have an important role in providing support to patients who require MGRC. However, a dearth of research is available which focuses on nurses' perceptions, responses and attitudes towards MGRC.

In the next chapter, the design of this research is described and justified. The appropriateness of the methods selected, the obtaining of ethical approval and the collection and analysis of data are explained.

**Table 2.1 Overview of the relevant references (N=32)**

References	Design	Settings/context	Sampling	Data collection	Main relevant findings
<i>Qualitative study</i>					
Bridger, 1997	Descriptive design	A large district general hospital in the south-east of England	Purposive sample Registered nurses: n=12	Unstructured interviews	Nurses played little role in catheter-associated urinary tract infection prevention as they had limited time and power to take effective measures to prevent its occurrence. Male catheterization was perceived as doctors' responsibility and was thought to need more skills. Nurses may not evaluate the competency of bank/agency staff (e.g. auxiliaries).
Carnaby & Cambridge, 2002	Exploratory case study	A specialist unit within a day centre and a specialist residential service for severely disabled people	Staff: n=15	Semi-structured interviews Analysis of documents	Staff's attitudes towards personal care were more positive than those towards intimate care. Personal care tasks and intimate care tasks were proposed to move in a continuum from social functional tasks (e.g. dressing), sexual tasks (e.g. touching/exposing body parts including genital area and breast) to physical dysfunctional tasks (e.g. continence management).
Edwards, 1998	Ethnography	An acute medical ward in Britain	Staff: n=7 Elderly patients: n=6 (male: n=2)	Participant observation Semi-structured interviews	Sexuality issues and embarrassment surrounded intimate care (e.g. catheterization, bathing, dressing/undressing, rectal examination) particularly between male patients and female nurses. Nurses used desexualization and distraction to cope with such situations. The touch with genitalia was considered emotionally unsafe for both nurses and patients.
Evans, 2002	Not stated	Nova Scotia, Canada	Convenience sampling Male registered nurses: n=8	Semi-structured interviews	Male nurses were complicatedly stereotyped as both homosexual and sexual aggressive. This sexualized and sensitized male nurses' touch so that male nurses may be stigmatized by the accusations that their behaviours were inappropriate.
Giuffre & Williams, 2000	Not stated	A teaching hospital and two hospitals nearby in Texas, America	Snowball sampling Nurses: n=36 (male: n=8) Doctors: n=34 (male: n=17)	Semi-structured interviews	Nurses and physicians used a variety of strategies to desexualize patients during physical examination. Male patients may prefer male or female nurses to catheterize them. In the former situation patients were thought of as homophobic, while in the latter, male nurses were thought to be able to lessen the discomfort and embarrassment of the patient.

**Table 2.1 Overview of the relevant references (N=32)**

References	Design	Settings/context	Sampling	Data collection	Main relevant findings
(1) <i>Qualitative study</i> (Cont'd)					
Jervis, 2001	Ethnography	A nursing home in a midsize midwestern city in America	Staff members: n=16 Residents: n=14	Participant observation Semi-structured Interviews Medical records review	Body products, e.g. excreta, menstrual fluid and sexual fluid, were viewed as pollutants. The frequent contact with pollutants meant aides or assistants were thought of as polluted people or dirty workers. These pollution beliefs were strong and popular. Urinary incontinence care was dirty and stigmatized work. This negatively impacted the nursing assistants' status within the nursing profession, the relationships with others and their attitudes towards themselves and the work.
Lawler, 1991	Ethnography & Grounded theory	Hospitals in Australia	Nurses: n=34 (female: n=30) (RN: n=27; Enrolled nurse: n=5; Year3 students: n=2)	Participant observation On-site observation Semi-structured interviews	Nurses' work centred on dealing with people's bodies, sexuality and body excrements. It was seen as dirty work, concealed and privatized. Nursing care could be a sexual experience. Nurses gradually learned to cope with sexual harassment and embarrassment.
Routasalo & Isola, 1996	Not reported	3 long-term wards with a total of 130 beds and 68 female nurses in a small town in a rural area in Finland	Purposive sampling Nurses: n=30 Elderly patients: n=25	Semi-structured interviews	The touch with the genitalia may not be emotionally safe in the view of nurses. Male patients' touch may be interpreted as sexually inappropriate therefore disagreeable so that male patients learned to avoid touching nurses.
Savage, 1995	Ethnography	Two medical/surgical gastroenterology wards in England	Permanent staff: n=19 (nurses: =18; Healthcare assistants: n=1)	Participant observation Semi-structured interviews	One of the dimensions of intimacy involved the physical and emotional closeness during intimate care. Close relationship and the delivery of intimate care were found to contribute to each other, but it was difficult to carry out intimate care for the opposite sex of similar age or if the patients were very good friends of the nurses.

**Table 2.1 Overview of the relevant references (N=32)**

References	Design	Settings/context	Sampling	Data collection	Main relevant findings
(1) <i>Qualitative study</i> (Cont'd)					
Seed, 1994, 1995	Longitudinal study Grounded theory	Various settings in England	Student nurses: n=23 (male: n=3)	Participant observation Unstructured interviews	Intimate care (e.g. bed bath, naked men, fitting a urinary appliance to a penis) was particularly stressful and difficult to deal with. Sexual harassment may be inherent particularly in the situations where female nurses provided intimate care to male patients. Female nurses viewed a male as a man without any health needs instead of a male patient who required their care.
Twigg, 2000a, 2000b	Feminism	Howe care settings in two contrasting areas (i.e. wealthy vs. deprived) in Britain	Disabled elderly: n=30 Bath caregivers: n=34 Frontline managers: n=11	One-to-one or group Interviews	The focus of caring for elderly and disabled people in the community was on maintaining their personal hygiene and appearance. The experiences were mediated by the meanings of age, gender, race and class in accordance with that in the wider social and cultural context. The meaning of the aged and disabled body contained ambivalences which centred around the negative aspects of the body, i.e. incontinence, decay, bodily failure. Managing these was awkward, embarrassing and little rewarded. A strange intimacy was created resulting from the closeness marked by nakedness and touch, and the distance to avoid uneasiness.
Williams, 2001b	Descriptive design	Not stated	Purposive sampling Registered practising nurses: n=10	Interviews Diary	Intimacy was also linked to the touch or handling of patients' private parts of the body during assisting in urination or washing following incontinence. Such care was perceived as embarrassing and difficult, but the perception was not dominant as was anticipated.
Wolf, 1997	Not stated	Settings in America	Junior nursing students: n=16	Participants' writing on the experiences of bathing the first patient	During bathing their first patients, students were afraid of exposing and touching the patient's genitalia, handling urine and faeces, but they were not as embarrassed as was anticipated. It was more uncomfortable for female students to bath male patients.

**Table 2.1 Overview of the relevant references (N=32)**

References	Design	Settings/context	Sampling	Data collection	Main relevant findings
<i>(2) Quantitative study</i>					
Bäck & Wikblad, 1998	Questionnaire survey	Acute care and long-term care wards in Sweden	Nurses: n=42 Patients: n=99 (male: n=67)	Two structured questionnaires with the same inquiry foci	Nurses may perceive more needs for privacy when patients were using urine bottle/bedpan than patients themselves did. The needs for privacy during morning toileting may be perceived similarly by patients themselves and the nurses.
Ding, 1998	Survey	A urological ward in a teaching hospital in Beijing, China.	Female nurses: n=40 Male patients: n=40	Two questionnaires with the same inquiry foci	All nurses were reluctant to perform urinary meatal care for male patients capable of self-care. The acceptance of meatal care among nurses may be higher than male patients' acceptance of female nurses delivering meatal care.
Lemonidou et al., 2002	Survey	Nine long-term care hospitals for elderly patients comprising 70% of such institutions in Greece	Convenience sampling Nursing staff: n=144 (female: 75%)	Questionnaire survey Parallel structured interviews	Nurses' perceptions, compared with those of elderly patients, may have overestimated the protection of privacy during care such as, helping to the toilet, giving enema, giving a bath/shower or exposing the patient's body.
Lemonidou, Leino-Kilpi et al., 2003	Survey	Surgical wards in 35 hospitals in five European countries	Convenience sampling Nurses: n=1280 (female: 58%) Surgical patients: n=1454	Questionnaire survey Parallel structured interviews	The perceptions of nurses in Greece, Germany and Scotland, compared with those of nurses in Finland and Spain, may have overestimated the protection of privacy during care such as, helping to the toilet, giving enema, giving a bath/shower or exposing the patient's body.
Lemonidou, Merkouris, et al., 2003	Survey	Surgical nursing setting in 6 hospitals in Greece	Convenience sampling Nurses: n=222 (female: 91%) Patients: n= 275 (male: 57%)	Questionnaire survey Parallel structured interviews	Nurses' perceptions, compared with those of surgical patients, may have overestimated the protection of privacy during care such as, helping to the toilet, giving enema, giving a bath/shower or exposing the patient's body.

**Table 2.1 Overview of the relevant references (N=32) (Cont'd)**

References	Design	Settings/context	Sampling	Data collection	Main relevant findings
(2) <i>Quantitative study</i> (Cont'd)					
Porter-Jones, 1998	Survey	Six wards in a district general hospital in Wales	Female nurses: n=61	Semi-structured questionnaire	It was viewed as acceptable for female nurses to catheterize a male patient. Most had never catheterized a male patient as they thought that there existed policies preventing these patients from being catheterized by nurses of the opposite sex.
Henderson & Kashka, 2000	Survey	Texas, America	Random sampling Response rate: 18% Nurses: n=126	Structured questionnaire survey	Nurses' attitudes had a direct effect on practice. Knowledge and belief influenced attitudes but had not a significant relationship with practice. 54% of subjects thought that it was not rewarding to work with men with urinary incontinence.
Scott et al., 2003b	Survey	Long-term facilities (n=22) in two areas in Scotland	Convenience sampling Nurses: n=159 The elderly: n=96 (male: 27%)	Questionnaire survey Parallel structured interviews	Patients and nurses may perceive the protection of privacy during enema, showering/bathing and undressing differently, but their perceptions over the protection of privacy during toileting may not be different.
Xiang et al., 2004	Survey	Five hospitals in Beijing, China	Female nurses: n=176	Structured questionnaire	Negative psychological responses among female nurses were common while erection was very possible during the care on the private parts of the male body. Nearly 97% thought that male nurses should perform such care.

**Table 2.1 Overview of the relevant references (N=32) (Cont'd)**

References	Design	Settings/context	Sampling	Data collection	Main relevant findings
(3) <i>Literature review</i>					
Wolf, 1993	-	-	-	-	Bathing was a necessary component in nursing resulting from the beliefs in hygiene, art and science of nursing. It was also a channel for many other nursing activities.
Milligan, 1999	-	-	-	-	Sexuality issues were associated with male catheterization which may impact nurses, but silence on these issues among nurses and patients were found to be prevalent.
Williams, 2001a	-	-	-	-	Intimate touch involving touch with the parts thought to be private and associated with sexual activity.
Norton, 2004	-	-	-	-	Faecal incontinence care was associated with stigma, low value and low status. It is now practised with a variety of advanced skills, e.g. good communication skills to relieve patients' embarrassment, building up friendly rapport to promote patients' compliance, bowel training.

**Table 2.1 Overview of the relevant references (N=32) (Cont'd)**

References	Design	Settings/context	Sampling	Data collection	Main relevant findings
<i>Expert's opinion</i>					
Pomfret, 1993	-	-	-	-	Female nurses were found to be prevented by some organizations from performing male catheterization. Male catheterization continued to be viewed as an extended role function of nurses. Male district nurses were often regarded as specialist (male) catheter nurses.
Pomfret, 1994	-	-	-	-	Male nurses were specially trained in male pubic shaving, male catheterization. Such care was seen as the 'province' of male nurses and was handed down from males to males. Male nurses were regularly employed in settings where these skills could be utilised. Male catheterization was associated with mental, social, sexual and masculine issues far beyond its physical importance for male patients.
Pomfret, 1999	-	-	-	-	Some female nurses still appeared reluctant to catheterize male patients, although guidelines on male catheterization had been issued by RCN from 1993, and therefore female nurses should be aware of how to perform male catheterization. The author considered that the problems of phimosis, retracted penis, and/or external sphincter resistance may deter some female nurses from catheterizing male patients.
Pomfret, 2000	-	-	-	-	Catheterization of male patients by female nurses was still a controversy. Male student nurses received 'specialist' training only from male nurses in pubic shaving and male catheterization, although female nurses taught lay people to catheterize males. In some areas, female nurses, or both female and male nurses were prevented from performing male catheterization. Pomfret cited an example where a number of male patients had to be sent to hospital to be catheterized because there were insufficient numbers of community nurses who were trained and competent to do this.

### **Chapter 3 Research design and methods**

This chapter firstly introduces the researcher's stance towards qualitative and quantitative approaches to research, and the background from three different perspectives which influenced the research design and the methods selected. The main focus of this chapter is the description and justification of the research design, strategies and methods which are used to increase reliability and validity. Ethical considerations and a brief introduction to the methods used in each study, i.e. sampling, data collection and data analysis, conclude this chapter.

#### **Research approaches**

Social research can enable people to understand not only the phenomenon under study, but also the society. Similarly, nursing research can enable people to understand both the nursing phenomenon of concern and the nursing profession. Over time, nursing research has extensively acknowledged and used both qualitative and quantitative approaches to study nursing phenomena of interest (Crossan, 2003; Foss & Ellefsen, 2002; Halcomb & Andrew, 2005).

The qualitative approach has advantages in generating rich information which facilitates the vivid presentation of human states within their own natural living environment (Liehr & Marcus, 2002). The nature of qualitative data is always textual, and always has multiple meanings, given that the same text may be interpreted variously by different readers (Bergsjø, 1999). This creates a difficulty in establishing the necessary methodological rigour (Long & Johnson, 2000; Mays & Pope, 1995; Tobin & Begley, 2004; Tuckett, 2005). The researcher is an indispensable element, i.e. an instrument, in any qualitative inquiry, so that subjectivity is always a feature in the qualitative approach to



research (Carr, 1994; Clark, 1998; Lowes & Prowse, 2001; Sale, Lohfeld, & Brazil, 2002).

In contrast, the quantitative approach makes it possible to draw inferences from the analysis of numeric data using statistical methods (Bergsjø, 1999; Carr, 1994). It facilitates the understanding of a population with similar characteristics to those of the studied sample. The researcher, at best, is an observer of the phenomenon under study who exerts much less influence when analyzing and interpreting the data (Clark, 1998; Sale et al., 2002). However, it is impossible to present in a vivid way the occurrence of any nursing phenomenon or to interpret it in depth within its context (Clark, 1998; Sale et al., 2002).

Debate continues about the distinction between the qualitative and quantitative approaches (Clark, 1998; Corman, 2005; Letourneau & Allen, 1999), but it is not so fierce or intensive as it was before the 1950s and the philosophical development of postpositivism (Clark, 1998; Corman, 2005; Crossan, 2003). Postpositivism overcomes the most noticeable weakness of logical positivism by contending that reality is not “a rigid thing” but can be constructed with multiple meanings (Crossan, 2003, p. 52). Objective reality can be seen as “only one aspect or dimension of reality” (Crossan, 2003, p. 52). This fundamental modification of the philosophy underpinning the quantitative approach is not in sharp contrast with the philosophy underpinning the qualitative approach (Corman, 2005; Crossan, 2003).

Whatever the past and status quo are, the debate between qualitative and quantitative approaches will continue, given the nature of human activities, i.e. occurrences within specific contexts. Nursing phenomena involve human

activities which occur within specific psychological, situational, cultural and social contexts, and not all aspects are observable and measurable (Monti & Tingen, 1999; Playle, 1995). This nature determines that either the qualitative or quantitative approach is universally applicable without any problem in any nursing research. This is especially the case when research questions require a deep inquiry into human beings' subjective experiences and/or require an interpretation of the influences of social, cultural, economical and political factors over their experiences.

To be positive, the debate concerning the distinction between qualitative and quantitative approaches is beneficial as it drives philosophers and researchers to explore alternative approaches and methods, so to better investigate nursing phenomena with their inherent characteristics of complexity and multiplicity. The use of both quantitative and qualitative approaches gives specific strengths and benefits to the investigation of the nursing phenomenon under study. The combined use of these two approaches, with the aim of achieving convergent validity, is usually termed as across-methods or between-methods triangulation (Begley, 1996; Halcomb & Andrew, 2005; Thurmond, 2001). Three key concepts are thought to be the most apparent strengths of between-methods triangulation, that is, completeness, abductive inspiration and confirmation (Risjord, Dunbar, & Moloney, 2002; Risjord, Moloney, & Dunbar, 2001).

It was considered that, by using the quantitative approach, findings obtained through the qualitative approach could be further developed, and vice versa. This is referred to as complementarity between two approaches (Risjord, Dunbar et al., 2002; Risjord, Moloney et al., 2001).

It was also thought that findings from a qualitative approach could suggest directions for a quantitative approach to the study of a phenomenon, and vice versa. This is often referred to as abductive inspiration (Risjord, Dunbar et al., 2002; Risjord, Moloney et al., 2001).

As to the achievement of confirmation through between-methods triangulation, the qualitative approach may help to clarify the results of the quantitative approach to the same research, e.g. clarifying apparently inconsistent findings. Additionally, findings derived from the two approaches to the same research could support each other, which yields a stronger result than either one could generate alone (Risjord, Dunbar et al., 2002; Risjord, Moloney et al., 2001).

Given the above complexity concerning the appropriate use of qualitative and quantitative approaches, it is necessary for the researcher to state her own stance towards qualitative and quantitative approaches in research, so as to assist readers to understand why both qualitative and quantitative approaches could be used in the same research to investigate female nurses' practice of MGRC and associated issues.

In the first place, the researcher strongly agrees that the reality of a nursing phenomenon is unique and with multiple facets, which are influenced by who interprets which type of data from what perspective. In the second place, the researcher also agrees that numbers and statistical analysis of these numbers are meaningful in terms of the possibility to make inferences from the statistical outcomes using data collected from a sample, and the possibility, where appropriate, to generalize research findings to a population with similar characteristics. Furthermore, the researcher supports that different types of

knowledge, e.g. general broad knowledge versus (*vs.*) deep knowledge, micro- *vs.* macro- knowledge about the society which consists of individuals *vs.* individuals in their own social environment, and knowledge of individuals' meanings and values (Foss & Ellefsen, 2002), are required which should not be ranked in a hierarchical order, nor be seen as of different values.

The above stances and the following factors drove the researcher to use both qualitative and quantitative approaches to gain different types of knowledge about Chinese female nurses' practice of MGRC and associated issues in order to answer different research questions.

### **Background**

This section introduces the researcher's considerations from three different perspectives, all of which influenced the design of this research.

The first perspective focuses on the sensitivity of the topic about female nurses delivering MGRC, which distinguishes MGRC from other nursing care. This sensitivity may trigger physical, emotional, psychosocial and sexual concerns or needs among female nurses and male patients.

These concerns might be noticeable in the society in mainland China which has a conservative sexual culture. Within this culture, there exists a longstanding restriction on physical contact between male and female adults (Ren, 2004; Zhao & Li, 2003). The examples regarding people's concerns were perceived by the researcher, during her practice in three of the five targeted hospitals, who witnessed various negative attitudes and responses towards MGRC and towards female nurses delivering MGRC. The details from the researcher's personal experiences of the above concerns are presented as the second perspective. Her

curiosity about and burning desire to understand more about the phenomenon concerning people's negative attitudes and responses not only drove the researcher to investigate female nurses' experiences, perceptions, responses and attitudes towards MGRC, but also motivated her to move further in order to improve female nurses' attitudes and, as a result, to help improve female nurses' practice of MGRC.

In addition, there is a growing need in mainland China for sexual health education among patients and other people, e.g. gay individuals, sex workers. Nurses and nursing students are required to deal with MGRC and associated issues, but there is a lack of content relevant to MGRC and associated issues in current nursing education programmes. The researcher therefore hoped to be able to develop nursing education programmes which included appropriate content and teaching methods. The twofold aim of these programmes would be able to help nurses and nursing students develop competencies in dealing with MGRC and associated issues, and competencies in providing sexual health education. The researcher was thus driven to develop an instrument, i.e. a scale, which would be used to measure and evaluate nurses' and nursing students' FNS-MGRC. This scale was intended to measure nurses' and nursing students' FNS-MGRC both before and after the implementation of these education programmes. Qualitative studies about female nurses delivering MGRC are also needed as these could generate rich knowledge and deep insights about female nurses' practice of MGRC. However, this type of research could not satisfy the identification of the correlations between different concepts, and could not make an inference regarding whether the influence of female nurses' demographic

factors and their experiences of MGRC could significantly influence their perceptions, responses and attitudes towards MGRC. Furthermore, this type of research could not satisfy the aspiration for a scale which would be used to measure FNS-MGRC, and to evaluate the effect of these education programmes. All of the above considerations are presented as the third perspective.

The above analyses demonstrate the three perspectives of the researcher's reflections, i.e. the sensitivity of this research topic, the researcher's personal experience, and her concern over the future applicability of findings from this research, all of which had an impact on the research design. The following provides a detailed discussion about these matters.

#### **Sensitivity of the research topic**

Research about or related to sexuality and/or, more specifically, in relation to external genitalia is thought of as sensitive (Lawler, 1991; Mitchell & Jolley, 2004; Sullivan, 2001; Waltz, Strickland, & Lenz, 1991, 2005). During the delivery of MGRC, the penis may require to be uncovered and/or touched. The penis is always associated with sexuality and hegemonic masculinity which are significant concerns in a man's life in both eastern (Jankowiak, 2002) and western (Milligan, 1999; Newman, 1997; Pomfret, 1994) societies.

In particular, in mainland China, sexuality is the last most mysterious aspect of human life (Ren, 2004, 2005). This may be attributed to the more than 3,000 year history of sexual suppression which has led to the formulation of a culture of sexual conservativeness (Ruan & Lau, 1997; Zeng, 2004; Zhang, 1995; Zhou & Wu, 2001). However, the sexual suppression is, in essence, female sexual oppression (Ren, 2004, 2005; Zhao & Li, 2003). In mainstream society in

mainland China, physical contact between female and male adults is carefully avoided. Any physical or bodily contact between two Chinese people of the opposite sex who are assumed, whether by themselves or others, to have a non-close relationship might be interpreted as sexual, suggesting they have an intimate relationship (Ren, 2004, 2005). Nowadays, topics dealing with human beings' external genitalia and with sexuality remain taboo (Ren, 2004, 2005), although implicit friendly joking on sexuality among a very small group of same-sex acquaintances or close friends in relatively private situations is sometimes acceptable (Jankowiak, 2002).

All of the above factors, i.e. the long history of female sexual suppression, taboo and mystery surrounding the topic of the penis and sexuality, and potential misinterpretation of physical contact between female and male adults as sexual contact, may contribute to the sensitive nature of this research topic.

#### **Researcher's experience**

The researcher has practiced as a student nurse (1992-1994), qualified nurse (1994-1995), nurse supervisor (1995-1999) and surgical resident intern (2000-2002) in three of the five teaching hospitals of the same university in the capital of Shandong Province, mainland China. From 2002 to 2003, the researcher, as a lecturer in the university school of nursing, taught Surgical Nursing and Acute & Emergency Nursing. This experience of practice in hospital and of teaching in the university allowed the researcher to perceive clearly Chinese female nurses', nursing educators' and nursing students' different, and mainly negative, responses and attitudes towards MGRC.

These negative responses towards MGRC and female nurses delivering

MGRC may be influenced by many factors, e.g. traditional practice in which female nurses were not required to deliver MGRC and the conservative sexual culture. However, the researcher felt that the conservative sexual culture had a strong influence on female nurses' responses towards MGRC.

The following introduces female nurses', nursing educators' and nursing students' negative responses and attitudes towards, or negative consequences of female nurses delivering MGRC. Such negativity was considered by the researcher to demonstrate local Chinese people's sensitivity to MGRC and to female nurses delivering MGRC.

When working in hospital, the researcher noticed that certain types of MGRC, especially perineal hygiene and meatal cleansing, were ignored, avoided, or delegated to patients themselves or their family members. Family members usually did these procedures carelessly, or did not do them at all, while staff nurses appeared not to monitor family members' performance of MGRC and the outcome of their MGRC. As a result, a patient's genital area, anal area, bottom, urinary catheter and linen were often found to be soiled. This was especially the case for postoperative patients following transurethral surgery.

All of the above occurrences were brought to light because, whenever on duty, the researcher always organized her nursing duties in such a way as to make time to perform MGRC personally. The patients and their families appeared to be interested in why the researcher did what they considered to be such simple care so carefully and asked why such care was important. Some of them also talked with the researcher about their own attitudes towards providing such care, and about how other female nurses dealt with MGRC.



In addition, pubic area shaving, intravesical medication, male catheterization, genital wound care and suprapubic catheterization were often performed by doctors and/or interns. Sometimes, doctors reproached nurses, or complained in front of head nurses, because of the poor quality of some types of MGRC, e.g. perineal hygiene, meatal cleansing, bladder irrigation. Some doctors even attributed the poor healing of a wound in the area of the genitalia and/or nearby to the poor quality of nursing provision of some types of MGRC. As to female staff nurses, they continually argued against female nurses delivering MGRC, especially those which required the penis to be touched or fully exposed. These nurses thought that doctors were neglecting their responsibilities when they failed to do what nurses thought they should do, e.g. pubic area shaving, genital wound care. Under these conditions, stress and conflict were not uncommon occurrences between staff nurses and head nurses, or between nurses and doctors, regarding who should be responsible for what types of MGRC, and then whether these types of MGRC had been done well and in an appropriate manner. Such dissention and misunderstandings contributed to the fact that the delivery of MGRC by female nurses was a sensitive issue, for both nurses and doctors. According to information given to the researcher by a head nurse and some staff nurses, it seemed that a unique method of managing obvious conflict between staff nurses and head nurses, and between nurses and doctors was to allow a man, aged over 50 years, who was employed as a member of the cleaning staff, to perform meatal cleansing. Before he was employed, he was given some training in this procedure, similar to that given to nursing aides.

Shortly before the commencement of this research in 2003, the researcher

had informal discussions with two Year3 nursing students, two nursing teaching staff specializing in the subject of Nursing Fundamentals and a senior manager in the university school of nursing. She was told by all these informants that nursing students spent little time studying any content related to MGRC because knowledge about and performance of MGRC were not assessed, and students were not supposed to perform MGRC in hospital. In comparison, nursing teaching staff and the manager said that a brief introduction to male catheterization was given, but nothing to other types of MGRC.

In addition, female nurses' negative attitudes and negative consequences of these attitudes, which were perceived during the researcher's practice in hospital, were confirmed when Study 1 was carried out. Some subjects hesitated about disclosing their practice of MGRC, including their reflection on their own practice of MGRC, which may suggest their negative attitudes and conduct during the delivery of MGRC were below what was expected of nurses working in that ward. Furthermore, such disclosure might have had a negative influence on the public image of local nurses, and of the hospital in which they were employed. None of the subjects would risk being blamed for disclosing the hidden and negative sides of the local practice of MGRC, neither would they be immune to the risk of negative evaluations about their competencies in dealing with MGRC and associated issues. The above aspects may contribute to the sensitive nature of the research on female nurses delivering MGRC.

### **Future orientation**

This part introduces the societal needs for sexual health promotion in mainland China, and patients', nurses' and nursing students' needs for the

development of competencies in delivering MGRC and in dealing with the issues associated with MGRC. It also introduces the weakness in current nursing education programmes, i.e. a lack of content on MGRC per se, and the issues embedded in MGRC.

At present, in mainland China, the incidence of sexually transmitted diseases, e.g. AIDS, syphilis, has been increasing since the 1980s, along with the growing openness of the society to the western world (MoH, 2004). For example, in 2005, the incidence of syphilis, a total of 126,400 cases, was 35.79% higher than in 2004 (MoH, 2006b). Sexual problems, e.g. sexual dysfunction, and various sexual orientations, e.g. homosexuality, are reported and publicly discussed (Jiang, Bai, Hong, Xu, & Zhu, 2005; Zheng, Xu, & Zhang, 2005).

However, nursing managers, nursing educators, nurses and nursing students appear to lack awareness, knowledge and competencies in dealing with MGRC and matters related to MGRC and/or sexuality in the provision of health services and/or nursing education. In fact, there is a lack of education content in the nursing curriculum (See Appendix A, pp. 301-302) so as to prepare nurses and students to perform MGRC and/or to provide sexuality support.

Nursing is a female dominated vocation worldwide (Anthony, 2004; Evans, 2004; Li, 2001). Statistics showed that males represented no more than 11% of all registered nurses, even in developed societies, e.g. 10.2% in the UK (Romem & Anson, 2005), 10% in Sweden (Nilsson & Larsson, 2005), 9% in Australia (Armstrong, 2002), 5.7% in the USA (Nelson & Belcher, 2006) and 4.0% in Taiwan (Yang, Gau, Shiau, & Shih, 2004).

In mainland China, the number of male registered nurses is far less than

1% of the total number of nurses (Li & Wang, 2005). Although Ding (1998) and Xiang et al. (2004) recommended employing more male nurses to deliver MGRC in mainland China, only approximately 13,000 male nurses would be available in the whole country, as was estimated based on the total number of nurses in 2004, i.e. 1,308,433 (MoH, 2006a), and of whom 1% are male. Given the big population, i.e. 1.3 billion ("People's Republic of China", 2005), the above estimated number of male nurses suggests that very few male nurses in hospital would be available to provide MGRC. Even if male nurses are available, male nurses may dislike being frequently arranged, or requested by female nurse colleagues, to perform MGRC, as was suggested in relation to the practice of male catheterization in the UK (Pomfret, 1993, 1994, 1999, 2000; Porter-Jones, 1998) (See Chapter 2, pp. 43-44). Therefore, in practice, to employ more male nurses may not be an ideal strategy for the time being so as to solve the immediate problem that male patients may prefer a male MGRC provider. Attention should rather be paid to providing MGRC related education for female nurses and female nursing students who are relatively more available, i.e. over 99% of nurses in mainland China are female (Li & Wang, 2005), thereby leading to a more rapid improvement in the practice of MGRC.

Furthermore, it was expected that this research would generate broad and rich knowledge about female nurses' practice of MGRC, and female nurses' perceptions, responses and attitudes towards MGRC. Such knowledge would facilitate the development of education programmes with appropriate content and teaching methods so as to help improve nurses' and nursing students' attitudes and competencies in the provision of MGRC.

Also expected, as an outcome of this research, was the generation of a scale which could be used to evaluate nurses' and nursing students' FNS-MGRC before and after the implementation of education programmes related to MGRC and associated issues, i.e. the effect of such programmes would be evaluated using this scale. The scale development would require the technique of psychometrics.

In summary, the design of this research was influenced by: a) the sensitivity of the research topic; b) the researcher's experiences related to nurses', nursing teaching staff's and nurse students' negative perceptions, responses and attitudes towards MGRC; and c) the further orientation to the improvement of the practice and teaching of MGRC in addition to the better understanding of female nurses' perceptions, responses and attitudes towards MGRC within an environment with a conservative sexual culture. This understanding was anticipated to lay the foundation for the improvement of the practice of MGRC and for the development of education programmes so as to help nurses and nursing students develop competencies in dealing with MGRC and associated issues.

## **Research design**

### **Aims**

The aims of this research were to: 1) investigate Chinese female nurses' perceptions of MGRC, and 2) measure Chinese female nurses' FNS-MGRC. The following research questions were raised accordingly.

### **Research questions**

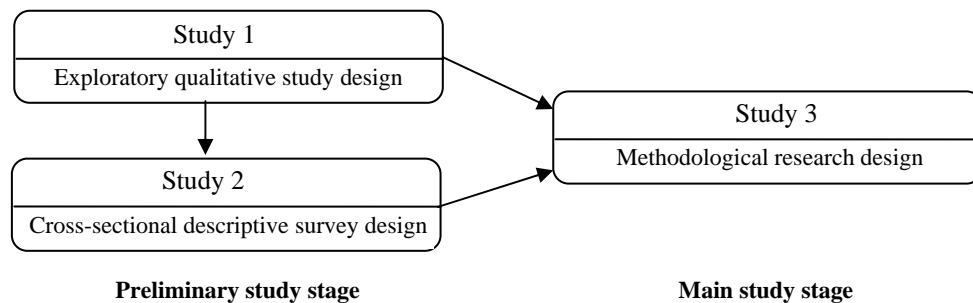
- 1) What types of MGRC do female nurses deliver in hospital?

- 2) How do female nurses perceive MGRC in hospital?
- 3) What factors influence female nurses' perceptions of MGRC?
- 4) How can FNS-MGRC be measured?

## Design

To achieve the above aims, a two stage non-experimental research was designed. The first stage consisted of preliminary studies and the second stage of the main study (See Figure 3.1).

**Figure 3.1 Two stage non-experimental research design**



The first stage included an exploratory qualitative study, i.e. Study 1, and a cross-sectional descriptive survey, i.e. Study 2. The second stage, i.e. Study 3, was a methodological research design within which four tests, i.e. Test 1, Test 2, Test 3 and Test 4, were designed using the technique of psychometrics. Methodological research here refers to “the development and evaluation of data-collection instruments, scales or techniques” (LoBiondo-Wood & Haber, 2002a, p. 231).

An overview of the above studies/tests is given in Table 3.1 (See p. 97). It includes a brief description of the research design, objectives, the strategies which were used to establish reliability and validity of the research, the strategies which were used to reduce the threat of response biases, and methods of sampling, data collection and data analysis, as well as ethical considerations. The following

is the introduction to the aims/objectives of Study 1, Study 2 and Study 3, respectively.

### **Aims/objectives**

#### **Study 1**

As was analyzed in Chapter 2 (See pp. 12, 38), the delivery of MGRC by female nurses was a phenomenon about which there was a lack of knowledge and investigation. Study 1, an exploratory qualitative study, was designed to explore female nurses' experiences of MGRC and the method of interviewing was chosen as the most appropriate tool.

Interviewing is more flexible at knowledge generation in comparison with a questionnaire survey, e.g. the interviewer could explore according to subjects' responses. It is particularly useful when a broad range of research concerns is explored and in depth (Sullivan, 2001).

As a research instrument, Sullivan (2001) considered a 'good interview' to be superior to other research tools in relation to motivating respondents to provide more accurate and complete information. Interviews also allow the interviewer, in this research, the researcher, to explain questions that otherwise might be misunderstood, and to analyze subjects' verbal and nonverbal responses (Halcomb & Davidson, 2006; Sullivan, 2001). Such an explanation of questions and the combined analyses of both verbal and non-verbal expressions during interviews could facilitate the understanding and interpretation of subjects' meanings (Sullivan, 2001).

#### **Study 2**

Although the interview has advantages in generating rich information in

the specific area of inquiry, it is not an appropriate tool to use when the information sought is the distribution of female nurses' perceptions of MGRC, or the extent to which nurses' demographic factors and nurses' experience of MGRC influenced their perceptions. The aims of Study 2 thus were to investigate female nurses' perceptions of MGRC, and the influence of nurses' demographic factors and their experiences of MGRC on their perceptions, and a cross-sectional descriptive survey was designed in order to answer the above concerns.

### **Study 3**

While a questionnaire survey has advantages in gathering information and examining the influence of various factors over the dependent variables (Mitchell & Jolley, 2004), it was not an appropriate tool with which to measure the latent construct of FNS-MGRC. Study 3, methodological research, was therefore designed using the technique of psychometrics so as to achieve the above aim, i.e. the measurement and analysis of the latent construct of FNS-MGRC.

The development of the FNS-MGRC scale with reliability and validity testing was central to Study 3. The FNS-MGRC scale was generated from the operationalized FNS-MGRC which had a two dimensional structure, i.e. 2-dimensional FNS-MGRC, and was developed on the basis of the conceptual model of FNS-MGRC. This conceptual model of FNS-MGRC was proposed based on the findings from Study 1 and Study 2, in combination with others' research findings of relevance to female nurses' perceptions and responses towards MGRC, and by referring to King's Conceptual Systems (See Chapter 5, pp. 154-173. It was assumed with: a) the conservative sexual culture in mainland China, and b) King's Conceptual Systems and Goal Attainment Theory (Carter &



Dufour, 1994; Fawcett, 2001, 2005; Frey, 1995, 2005; King, 1981, 1995a, 1995b, 1997, 1999, 2006; Sieloff, 1995; Whelton, 1999) (See Chapter 5, pp. 154-173). The FNS-MGRC scale was used to examine hypotheses derived from the 2-dimensional FNS-MGRC. The confirmation of these hypotheses would suggest the appropriateness of this 2-dimensional structure and the conceptual model of FNS-MGRC.

In this way, Study 1 and Study 2 laid the foundation for the building-up of the conceptual model of FNS-MGRC and the operationalization of FNS-MGRC, whereas Study 3 used the technique of psychometrics to test the 2-dimensional structure of FNS-MGRC, and to examine the hypotheses derived from the operationalized 2-dimensional FNS-MGRC. The confirmation of hypotheses in Study 3 would suggest not only the validity of the conceptual model of FNS-MGRC, but also the validity of the results from Study 1 and Study 2.

Before discussing the methods which were selected in relation to sampling, the collection of data and the analysis of data, it is necessary first to discuss the issues surrounding the reliability and validity of this research.

### **Reliability and validity**

In this section the consideration and establishment of reliability and validity for a qualitative study and quantitative study are discussed separately. This is because the qualitative and quantitative approaches use different criteria and different terms to define these criteria so as to reflect fundamental philosophical differences underpinning these two approaches.

#### **Qualitative study**

To distinguish from that in the quantitative approach, different terms, i.e.

credibility, transferability, dependability, confirmability, were introduced by Lincoln and Guba in 1985 (Tobin & Begley, 2004). These terms are used in relation to evaluation of the trustworthiness of qualitative research, in comparison to the criteria used in evaluation of the rigour of quantitative research (Tobin & Begley, 2004). These terms have been well defined and remain widely used presently (Tobin & Begley, 2004).

Credibility (comparable to internal validity) is thought to be enhanced when the researcher's(s') experiences of conducting the research are described, or when the constructions derived from subjects' descriptions are read and discussed with the subjects themselves (Koch, 1994, 2006).

Transferability (comparable to external validity) refers to the generalizability of the research (Tobin & Begley, 2004). However, the generalizability of a qualitative study is different from that of a quantitative study. In comparison with the findings from a quantitative study, research findings from a qualitative study cannot be generalized to a larger population of similar characteristics to the sample. Furthermore, there is no single appropriate interpretation of the findings of a qualitative study (Tobin & Begley, 2004). Transferability in essence reflects the degree of similarity between different contexts, while this similarity may influence the degree to which the findings from one context could be similar to that from other contexts (Koch, 1994; Tobin & Begley, 2004). Therefore, adequate description about the context within which the research was conducted can facilitate readers' interpretation and judgment about the findings of the study, suggesting good transferability (Koch, 1994).

Dependability (comparable with reliability) can be achieved through

auditing. The research process for a qualitative study should be logical, traceable and clearly documented (Lincoln & Guba, 1985; Tobin & Begley, 2004). An audit trail, which documents methods, data, decisions made and end products, plays an important role in demonstrating the dependability of a qualitative study (Lincoln & Guba, 1985). Reflexivity is central to the audit trail in which researchers record their own reflection and critique of the research process and different decisions which they made during this process (Koch & Harrington, 1998).

Confirmability (comparable with objectivity or neutrality) relates to the establishment that the interpretations are derived from the data (Koch, 1994, 1996, 2006). Confirmability is said to be established when credibility, transferability and dependability have been achieved (Koch, 1994; Tobin & Begley, 2004).

In Study 1, the strategies of prolonged engagement, peer debriefing, member checking and journal writing were used to establish the trustworthiness of Study 1. Prolonged engagement refers to the investment of sufficient time in pursuit of adequate and appropriate understanding and interpretation of the context and subjects' meanings (Lincoln & Guba, 1985). It took approximately one and a half years for the researcher to collect and analyze the data, and it took approximately three to four hours for the researcher to transcribe 20 to 30 minutes of interview, demonstrating the prolonged engagement.

Peer debriefing refers to a process in which the researcher continually exposes herself/himself to a 'disinterested peer' during the whole process of data analysis (Lincoln & Guba, 1985, p. 308). Lincoln & Guba (1985, p309) warn that the debriefer should not be someone "in an authority relationship" to the

researcher. Nevertheless, the researcher's supervisor was an experienced qualitative researcher with expertise in critical hermeneutics, whereas the researcher had a propensity to description and hesitated to question or criticize the local MGRC practice. This created a situation whereby the supervisor as a debriefer was able to play the role of an 'experienced protagonist', i.e. debriefer, by continually questioning the analysis of data, the labelling of themes and sub-themes, the identification of subjects' statements, examples and the interpretation of data. The researcher was thereby able to bring to the surface and face her assumptions, biases and ambiguity, contributing to the clear interpretation of the data.

Member checking refers to the strategy whereby the data, analytic categories, i.e. themes and sub-themes in this research, and interpretation were examined by a group of people from whom the data was collected (Lincoln & Guba, 1985). However, member checking was only conducted between two of the eight subjects and the researcher. This was because one subject was unavailable because of holiday leave and the other five subjects did not validate the findings from their own interviews for a variety of reasons. Of these five, two subjects had little experience of MGRC provision. One appeared very shy about talking of her feelings and thoughts about male external genitalia and MGRC. The Third appeared displeased at being requested to explain more about her reluctance to provide MGRC and showed resistance when being questioned about how she knew about the hospital policy which stated that it was doctor who should perform MGRC. The fourth, a head nurse, did not agree to be approached as "there was nothing more to say", whereas the fifth did not directly refuse the

proposition of being approached again, but replied that “it [to perform MGRC] is nothing serious for me, just do it if it is a must”. This was an indirect refusal according to the communication style in the local culture. In addition, one of the two subjects who validated the findings from their own interview data commented that “If I were you, I would not ask them again. No one would tell you anything more unless they are good friends of you. That’s Chinese.” This subject had been working together with the researcher for over three years. She commented when the researcher expressed to her, her concerns over the above subjects’ attitudes, i.e. their dislike about being approached again.

As to journal writing, it is the strategy used to develop an audit trail (Lincoln & Guba, 1985). The researcher took notes during member checking, writing down her responses to subjects’ verbal and nonverbal expressions during transcribing interviews and recording her reflection upon the data, answers to the supervisor’s questions, the clarification of the ambiguous views, as well as the changes in her understanding of the data.

However, Study 1 was an exploratory qualitative inquiry and further investigation may be carried out to overcome its limitations and to achieve deeper and richer description and interpretation of female nurses’ experiences of MGRC. The local culture restricted the openness and depth of interviews, as probing questions about sexuality, intimate relationships, life events such as the breaking of an intimate relationship and subjects’ own conduct of MGRC which appeared to be in conflict with the codes of ethics (International Council of Nurses [ICN], 2006; Pang et al., 2000; SN, 2000) were unwelcome. The researcher was very careful when attempting to investigate further into a subject’s inner world as this

sometimes evoked discomfort for both subject and researcher. Establishing rapport with the subjects contributed to their comfort and disclosures, but this took time to reach. For example, before interviews, the researcher spent approximately five minutes talking about casual matters, e.g. news, family. During interviews, sometimes the researcher shared her experience of MGRC provision with subjects, and echoed when subjects disclosed similar feelings and thoughts to her. Nevertheless, only three of eight subjects developed such relationships with the researcher. The fact that they had been working together with the researcher for two to three years may have contributed to this.

Another issue in Study 1 deserving clarification is the purposeful avoidance of any detailed description about the context, i.e. the wards and the hospital. To include such description would have made it easy for the reader to identify the subjects, the wards and the hospital. To make such identification possible would have broken the promise of confidentiality that the researcher gave to subjects, prior to interviewing them, i.e. that their personal information and their affiliations would not be identified.

### **Quantitative studies**

In quantitative research, reliability and validity are the criteria upon which the veracity and credibility of research findings are judged. Reliability is a prerequisite for the achievement of validity (Carter & Porter, 2000; Mitchell & Jolley, 2004). Therefore, in this section, issues and considerations related to reliability are discussed first, followed by a discussion on validity.

#### ***Reliability***

In quantitative studies, reliability refers to the degree of consistency or

accuracy between one's responses to the same instrument under similar conditions (Carter & Porter, 2000; LoBiondo-Wood & Haber, 2002b). According to LoBiondo-Wood and Haber (2002b), a reliable scale possesses three main attributes, i.e. stability, homogeneity and equivalence.

Stability refers to the extent to which repeated measurements using the same instrument generate the same result on each occasion (LoBiondo-Wood & Haber, 2002b). It is often determined by the correlation coefficient between the test score and the retest score, i.e. test-retest reliability. The higher the coefficient, the higher the stability. An interval of two weeks between the two tests is considered as adequate, while a reliability coefficient of  $>0.70$  is generally accepted as satisfactory (Carter & Porter, 2000; LoBiondo-Wood & Haber, 2002b).

Internal consistency, or homogeneity, is concerned with the extent to which all items within an instrument actually measure the same construct (LoBiondo-Wood & Haber, 2002b). It can be assessed by item-total correlation, split-half reliability, Kuder-Richardson coefficient (KR-20) or Cronbach's alpha ( $\alpha$ ).

Equivalence is considered to be reached when two or more observers have a high percentage of agreement on an observed variable or construct using the same instrument. This is often referred to as inter-rater reliability (LoBiondo-Wood & Haber, 2002b). The other type of equivalence is parallel or alternative form reliability (LoBiondo-Wood & Haber, 2002b). Parallel or alternative forms of the same instrument consist of items which measure the same underlying construct, whereas the wordings are different from that in one form to that in the other form (LoBiondo-Wood & Haber, 2002b).

For the FNS-MGRC scale in Study 3, internal consistency reliability, i.e. item-total correlation, Cronbach's  $\alpha$ , and stability, i.e. test-retest reliability, were calculated. The lack of an alternative form to measure the FNS-MGRC and the lack of observations of the FNS-MGRC made by two or more observers made the assessment of equivalence impossible. The answer format of the FNS-MGRC scale is a 5-point scale so that there is no need to calculate KR-20. This is because KR-20 is calculated as an estimate of homogeneity when the response format of an instrument is dichotomous, e.g. yes, otherwise no (LoBiondo-Wood & Haber, 2002b).

In contrast with the methodological research design, i.e. Study 3, Study 2 was a cross-sectional descriptive survey design without resorting to the technique of psychometrics. This type of survey is a relatively inexpensive way to collect data about people's opinions, perceptions, attitudes, beliefs and behaviours (Mitchell & Jolley, 2004). It is valuable, as a lot of information can be collected on a large sample in a short period of time (Mitchell & Jolley, 2004).

The questionnaire (See Appendix B, pp. 303-304) which was used to collect data in Study 2 was established with content validity and face validity. The questionnaire was developed on the basis of findings from Study 1 and an extensive literature review so as to establish content validity. Two of the eight subjects who were interviewed in Study 1 reviewed the content of this questionnaire to establish face validity, i.e. seeming relevance of all questions to MGRC (Bryant, 2000). Four Year4 nursing students examined the clarity of meaning of the questionnaire.

The temporal stability, i.e. test-retest reliability, of the questionnaire in



Study 2 was not determined because of the implicit refusal for the second access from nursing managers in targeted hospitals. Issues regarding this are discussed later in this chapter (See pp. 81-82) and in Chapter 7 (See p. 291).

### ***Validity***

In quantitative studies, validity is important throughout the research process and is also relevant to the overall research design. Both internal and external validity has to be considered in any experimental design. Internal validity is of more concern in experimental studies which place emphasis on the extent to which effects are truly caused by the interventions, rather than the result of extraneous variables (Carter & Porter, 2000). External validity refers to the generalizability of research findings beyond the sample from which they were derived (Carter & Porter, 2000). It reflects the extent to which a relationship, once identified, can be expected to recur at other times and places under different environmental conditions (Crano & Brewer, 2002). However, as the designs of both Study 2 and Study 3 were non-experimental, it was the reliability and validity of the instrument which became the centre of consideration about the reliability and validity of the studies (Carter & Porter, 2000). Validity in this case refers to the degree to which an instrument accurately measures what is supposed to be measured (Carter & Porter, 2000; LoBiondo-Wood & Haber, 2002b).

For a methodological research design, as used in Study 3, in which a scale was developed and applied, the following types of validity were considered, i.e. content validity, criterion-related validity and construct validity. Content validity is concerned with the extent to which the scale adequately measures the various dimensions/domains of the latent construct which is proposed to be measured

(Carter & Porter, 2000; Crano & Brewer, 2002; LoBiondo-Wood & Haber, 2002b). A 3-expert panel was used to establish the content validity of the item pool of the FNS-MGRC from which the FNS-MGRC scale was generated.

There are two types of criterion related validity, i.e. concurrent validity and predictive validity. When an existing scale measures the same construct, concurrent validity can be determined by examining the correlation between the proposed scale and the existing scale, but these two scales have to be administered to the same sample at the same point in time (Carter & Porter, 2000; Crano & Brewer, 2002; LoBiondo-Wood & Haber, 2002b). The existing scale is a criterion which has been established with satisfying validity and reliability as a measure of the construct.

Predictive validity is concerned with the capability of the proposed scale to predict the occurrence of other behaviours which are regarded as constructs and can be measured by scales. The existing scale, which measures the predicted behaviour, is referred to as a criterion, implying that it has been established with acceptable reliability and validity, and very possibly has been widely used (Carter & Porter, 2000; Crano & Brewer, 2002; LoBiondo-Wood & Haber, 2002b). However, given that no scale was found which measured the same construct as the FNS-MGRC scale, i.e. FNS-MGRC, nor did any instrument exist which measured an event or behaviour which could be predicted by the FNS-MGRC scale, it was thus impossible to examine the predictive validity of the FNS-MGRC scale in this research.

The third type of validity, i.e. construct validity, deals with the theoretical foundations of the construct under study. Construct validity tests the link between

a scale and its underlying theory (LoBiondo-Wood & Haber, 2002b). It is conducted by examining the logical relationships derived from the theory underpinning the scale. The confirmation of these relationships suggests the establishment of construct validity of the scale. A total of four approaches can be taken to examine the construct validity, i.e. the hypothesis-testing approach, convergent and divergent approaches or the multitrait-multimethod approach, contrast-groups approach or known-groups approach, and the factor analytical approach (LoBiondo-Wood & Haber, 2002b). In Study 3, the hypothesis-testing approach and the factor analytical approach were used. The lack of an existing scale which measured FNS-MGRC, and the lack of identification of contrasting groups, i.e. a group with high FNS-MGRC scale score in contrast with a group with low FNS-MGRC scale score, made it impossible to examine construct validity through the other two approaches, i.e. multitrait-multimethod approach or contrast-groups approach.

For a hypothesis-testing approach, the theory or conceptual model underlying the scale was used to validate the instrument. Hypotheses about the logical relationships between this construct, which is measured by this proposed scale, and other constructs, which are measured by well-established existing scales, were tested (LoBiondo-Wood & Haber, 2002b). These relationships are derived from the theory underlying the scale. If they are not falsified by test outcomes, it suggests the establishment of construct validity. In the opposite case, the success of falsifying these relationships suggests that there is a lack of construct validity in the scale. The rationale underpinning the above hypothesis-testing approach is termed as falsification (Allmark, 2003).

In the factor analytical approach, the degree to which a series of items truly cluster together and measure a construct, single dimension or multiple dimensions, is assessed through exploratory factor analysis (EFA) or confirmatory factor analysis (CFA) (LoBiondo-Wood & Haber, 2002b; Thompson, 2004). Items designed to measure a construct or dimensions of a construct should load significantly on one single factor, while those designed to measure different dimensions should load significantly on other single different factors (LoBiondo-Wood & Haber, 2002b; Thompson, 2004). The analyses about the concept of EFA and CFA, and the analyses about their application are presented in detail in Chapter 6 (See pp.200-202, 213-218).

### ***Response biases***

Whatever efforts are made, many factors, e.g. environmental factors, subject-related factors, instrument-related factors, researcher-related factors, can threaten the achievement of accuracy or consistency, i.e. reliability, leading to the generation of error, i.e. the difference between the true value/score and the observed/measured value/score (Carter & Porter, 2000). Error threatens the reliability and validity of a study.

Random errors are those which occur randomly and thereby are unable to be controlled (LoBiondo-Wood & Haber, 2002b). This type of error is chance occurrences so that theoretically, the chances for all subjects to provide inaccurate responses are the same (Carter & Porter, 2000; Crano & Brewer, 2002). By contrast, some errors, i.e. systematic or constant errors, are induced by some relatively stable characteristics of subjects which can systematically bias these subjects' behaviours, leading to the incorrect or faked measure results

(LoBiondo-Wood & Haber, 2002b). Social desirability response bias (or response style) and response sets are the most common sources of systematic error.

A response set refers to a particular way of responding to any question (Pettit, 2002). Paulhus (2002) distinguished response style from response set. He defined response style as consistent bias across time and instrument, while short-lived biases caused by some temporary factors, e.g. distraction, are referred to as response sets (Paulhus, 2002).

#### 1) Response style: social desirability

Social desirability response bias typically refers to the tendency to give positive self-description, i.e. faked goodness (Barger, 2002; Crowne & Marlowe, 1960; Paulhus, 2002; Sullivan, 2001). This status could be identified through the measurement of its underlying psychological construct, i.e. social desirability (Paulhus, 2002). The Social Desirability Scale (SDS) developed by Crowne and Marlowe (1960), which contains 33 items, is the most widely used scale to measure SD.

The full length SDS (Crowne & Marlowe, 1960) was found to be multidimensional with satisfying and virtually identical internal-consistency reliability. By contrast, all of the other short SDSs were found to be not sufficiently adequate to capture all aspects of SD (Barger, 2002; Loo & Thorpe, 2000). Therefore, the 33-item SDS developed by Crowne and Marlowe (1960) was used to measure the influence of a possible social desirability response bias on the self-reported answers to the FNS-MGRC scale in Test 4.

In particular, the influence of social desirability response bias over the validity of a self-reported study may be more complicated in a Chinese sample. It

was found that, in a Chinese college student sample, subjects were found to give more honest responses to undesirable items than to desirable ones (Liu, 2001; Liu, Xiao, & Yang, 2003). This suggests that Chinese students may not overestimate their good characteristics, nor underestimate their undesired characteristics. For Chinese people, although they had the need for self-enhancement, i.e. to present themselves in good ways, they also regarded honesty as a virtue, i.e. to admit their weakness honestly (Liu et al., 2003). It appeared that Chinese students may make an intelligent compromise between self-enhancement and honesty (Liu, 2001; Liu et al., 2003). This reflects a possible complicating effect of social desirability response bias in Chinese subjects, suggesting the necessity to examine the influence of subjects' social desirability response bias on the FNS-MGRC scale in this research. A high correlation coefficient between the FNS-MGRC scale score and SDS score would suggest the strong influence of the SD response bias on the FNS-MGRC, reflecting a threat of SD over the validity of Study 3.

## 2) Response sets

A number of response sets may affect the validity of a self-reported study. The most common include random responding, response errors, item non-response, acquiescence responding, extreme responding, central tendency responding and framing effect (Pettit, 2002; Smith et al., 2005; Sullivan, 2001).

Random responding occurs when subjects haphazardly provide responses without reading the question (Pettit, 2002). Response errors happen when the answer provided can not be used (Pettit, 2002). Some subjects may agree with any question regardless of its content, i.e. acquiescence, or always choose the

answer corresponding to the same extreme anchor of a scale or the end-points, e.g. always strongly disagree or strongly agree, i.e. extreme responding (Crano & Brewer, 2002; Pettit, 2002; Smith et al., 2005; Sullivan, 2001).

Central tendency is often referred to as end-aversion tendency bias. It occurs when subjects avoid using the end-points of a scale (Pettit, 2002). Framing effects refer to how a question is phrased and how the information is presented in the preceding questions which may influence the response to the following question (Smith et al., 2005).

Last but not least in relation to response set is item non-response, i.e. missing response (Pettit, 2002; Smith et al., 2005; Sullivan, 2001). A number of reasons may lead to non-response, e.g. subjects may not find an appropriate answer, may dislike answering the question, or may skip the question out of carelessness (Mitchell & Jolley, 2004).

### 3) Strategies to reduce response biases

In order to minimize the effects of these response sets, the below strategies were used in this research.

a) The items in the item pool of FNS-MGRC were a mix of positive and negative statements. This was thought to be effective at avoiding acquiescence bias (Sullivan, 2001).

b) The items in the item pool or the scale of FNS-MGRC were arranged in ascending order according to the degree of sensitive nature (Michel & Jolley, 2004; Waltz et al., 1991, 2005). The items at a similar level of sensitivity were randomly ordered with the help of an online randomizer (Urbaniak & Plous, 2005).

c) All subjects were informed before the administration of the questionnaires in Study 2, Test 1, Test 2 and Test 3 that they could withdraw\* at any time for any reason, but that they were expected to provide honest answers in a careful manner once they decided to complete the questionnaires. These orientations were thought to be able to reduce the bias of response error. In Test 4, this information was given in the invitation letter (See Appendix M, p. 319).

d) Purely as a strategy to try to reduce missing responses, a group of four Year4 nursing students helped subjects check their answers to the questionnaires before their questionnaires were returned. This strategy was applied in Test 1, Test 2 and Test 3, but not in Study 2 and in Test 4. For Study 2, subjects returned questionnaires quickly as some were expecting to go back home as soon as possible, whereas others were eager to start their work as soon as possible (See Chapter 7, pp. 292-294). Under these conditions, the strategy used to reduce the non-response bias was that all questionnaires in which questions of special concerns, e.g. perceptions of MGRC, were not answered were excluded, i.e. not used. For Test 4, subjects returned their questionnaires to the researcher through Chief Nurses in target hospitals. In this situation, it was impossible to use this strategy to reduce the non-response bias.

e) For Test 1, Test 2, Test 3 and Test 4, all questionnaires were examined by the researcher and four Year4 nursing students. Those in which all questions were answered with the middle point (e.g. “3”), or end-point (e.g. “1” or “5”) were not used. This was to reduce the occurrence of end-aversion response/central tendency and extreme responding.

Strategies ‘c’ and ‘d’ were thought to be able to reduce the occurrence of

\* The phrase “without incurring any penalty” which is commonly used in some countries, e.g. UK, is not used in mainland China.



non-response, but they may not have been able to reduce the occurrence of acquiescence bias and framing effect.

Given that no research conducted with mainland Chinese people on the concept of response set has been found, it is difficult to know how all of the above response sets may influence the reliability and validity of this research, or how these biases could be effectively decreased. This suggests an area requiring further investigation in the future.

In comparison, studies (Liu, 2001; Liu et al., 2003) were found which investigated the social desirability response bias in mainland China. Through the SDS (Liu, 2001), adapted from Crowne and Marlowe (1960), Chinese college student subjects were found to make an intelligent compromise between self-enhancement, i.e. presenting well, and honesty (See pp. 74-75). The strategy of 'a' (See the above) could not successfully reduce the risk of social desirability response bias if nursing student subjects and female nurses made such a compromise, even although they had been asked to be honest in their responses.

Additionally, Michel and Jolley (2004) proposed that demographic questions should be listed at the end of survey questions. However, this positioning would seem very odd to Chinese subjects as they are used to completing any questionnaire in which questions about demographic information always came at the beginning.

Before describing the methods used in each study in this research, it is necessary to discuss the issues related to ethics. The next section explains the considerations which were given to the maintenance of ethical conduct in research. Maintenance of ethical conduct was necessary to respect and to protect

human subjects' rights as human beings.

### **Ethical considerations**

Ethical approval for this research was sought from the following four perspectives. Firstly, permission to conduct the research was sought from the Human Subjects Ethics Sub-committee, The Hong Kong Polytechnic University.

Secondly, permission to access the organizations was obtained from the five university teaching hospitals, with the help of Chief Nurses, and from the head of the university school of nursing.

Thirdly, all subjects were informed of the purpose of the research, the freedom to withdraw (See p. 77), and the maintenance of confidentiality and anonymity.

Fourthly, the approval to use the various existing scales was obtained from the original authors. These scales were: brief Fear of Negative Evaluation Scale (bFNES) (Leary, 1983), Approval Motivation Scale (AMS) (Martin, 1984), Self Construal Scale (SCS) with 15 items measuring Interdependent Self Construal (DSC) and 15 items meaning Independent Self Construal (ISC) (Singelis, personal communication, March, 2005), Susceptibility to Embarrassment Scale (SES) (Kelly & Jones, 1997), Embarrassability Scale (ES) (Miller, 1996) and SDS (Crowne & Marlowe, 1960).

In summary, several issues were considered before deciding which methods and strategies would be appropriate in order to achieve the purpose of this research. These issues included the background of this research, the consideration about reliability and validity of study, the threat and reduction of response biases, and ethical considerations. In the next section, the methods used

in each of the three studies in the research will be briefly described. Details will be reported in Chapter 4 (See pp. 101-103, 125-130) and Chapter 6 (See pp. 195-202, 210-220).

## **Methods**

All the methods used in Study 1, Study 2 and Study 3 were summarized in Table 3.1 (See p. 97). Several additional issues are highlighted in this section.

### **Sampling**

#### ***Target population***

Target population refers to the specific pool of individuals whom the researcher(s) wants to study, and from whom a sample is drawn (Neuman, 2000). In this research, the desired target population from which the sample was to be derived was Chinese nurses. However, as this was pioneering research, under restrictions of time, funding and nurses' accessibility, the target population was then narrowed down to Chinese nurses working in the five teaching hospitals affiliated to the same university and in these hospitals' speciality wards where MGRC was relatively common. This strategy was practical and feasible.

Given that no more than five male nurses worked in the relevant specialty wards in the five hospitals, the target population was once again narrowed down to female nurses only. The purposefully selected specific population therefore cannot be assumed to reflect the perceptions and responses to MGRC in the entire Chinese nurse population.

#### ***Sampling methods***

In the qualitative study, i.e. Study 1, a purposive sampling strategy was used in order to collect sufficient data in the areas of interest (Coyne, 1997;

Tuckett, 2005). Eight subjects were purposefully chosen who had experience of providing MGRC and who each had different demography and clinical nursing working experiences.

In Study 2, female nurses working at 8 a.m. in the target specialty wards were sampled. These wards were: a) urology, b) general surgery, c) cardiothoracic surgery, d) neurosurgery, e) orthopaedics, f) neurology, and also g) intensive care unit (ICU), h) accident and emergency unit (A&E), and i) operating theatre. Usually, the operating theatre was regarded as associated with surgical specialties, while urology, general surgery, cardiothoracic surgery, neurosurgery, orthopaedics, intensive care, accident and emergency medicine were often referred to as ‘a specialty’ in each of the targeted hospitals. For convenience in this research, all of the above hospital units, including the operating theatre, were referred to as speciality wards.

In particular, when approaching subjects in Study 2, three head nurses informed the researcher that nursing staff did not undertake any MGRC. One of them refused to permit the researcher to go into the operating theatre to collect data. She herself collected data for the researcher, and then voiced her criticism of nursing research, particularly that which used questionnaires which required approximately 15 minutes for completion. The study design of Study 2 and Test 4 was cross-sectional. Where it was difficult to access female nurses in three of the five operating theatres, it was decided that there was no need to approach female nurses working in the other two target operating theatres. This is because data from the two instead of five theatres would make impossible the analysis of similarities or differences, comparisons across hospitals or specialities. Therefore,

in Test 4, female nurses working in operating theatre were not approached.

Given the researcher's concern over the potential future development of an education programme focussing on MGRC, it was not ideal to study only female nurses. Furthermore, nursing students will grow up to be nurses and may have to confront providing MGRC or dealing with issues related to MGRC in hospital someday. Therefore, nursing students' FNS-MGRC should also be of concern and evaluated in order to assess the degree to which their knowledge and skills related to MGRC might have changed their negative perceptions, responses and attitudes towards MGRC after undergoing an education programme. Therefore nursing students were also considered as the target population of the FNS-MGRC scale.

It was assumed that the development of a professional nurse in a specialty area started from her/his professional socialization in relation to nursing (Blais, Hayes, Kozier, & Erb, 2006; MacIntosh, 2003). In the target university 5-year Bachelor nursing programme, undergraduates do not study any nursing subject during the first two years of their programme, and do not have any clinical nursing work experiences before their final year, which is totally devoted to hospital practice. Study foci for different years of students varied:

a) Year1 students focused on studying fundamental knowledge and skills in natural science, e.g. advanced mathematics, physics, chemistry, and in health science, e.g. anatomy, embryology;

b) Year2 nursing students' study focused on essential knowledge and skills in all areas related to health, e.g. biology, immunology, parasitology, genetics, physiology, biochemistry, pathology, and advanced knowledge in natural science,

e.g. advanced lineal algebra, biophysics;

c) Year3 students began to study advanced knowledge and skills in health science, e.g. biophysiology, pharmacology, health assessment and diagnosis, epidemiology, infectious diseases, nursing fundamentals, statistics in health science;

d) Year4 students mainly studied courses related to nurses' clinical work, e.g. Surgical Nursing, Internal Medical Nursing, Gynecological and Obstetrical Nursing, A&E, Paediatric Nursing, Stomatology Nursing, Ophthalmic Nursing and Otolaryngology Nursing; and

e) All Year5 students were in clinic, which entailed more issues to be considered. To successfully approach them is not feasible as a result. The related issues are discussed later in this section.

It was thereby assumed that Year3 and Year4 nursing undergraduates could be considered as at the pre-stage of nursing professional socialization.

Furthermore, as was analyzed in the previous two chapters (See pp. 3, 51-52), the conservative sexual culture in mainland China may influence female nurses' practice of MGRC. If this is the case, all Chinese female adults should be able to perceive the issues embedded in MGRC, even if they do not have any experience of MGRC. Those, e.g. Year3, Year4 and Year5 nursing students, who have been exposed to the theoretical knowledge of MGRC, may be able better to perceive the issues associated with MGRC, in comparison with those who have not been exposed to such knowledge, e.g. Year1 and Year2 nursing students.

Year5 nursing undergraduates, who have had experience of MGRC, might think more similarly to those nurses with no more than two years of nursing work

experience in hospital. However, at the time when the research was being conducted, the Year5 students were working in different hospitals in different regions. It was therefore impossible to bring them together to conduct any investigation. To conduct a postal survey was a possible option. However, the expense, the complications of collecting data, e.g. the difficulty for the mailed letters to reach those students who changed working units every one or two weeks together with the fact that no pigeon holes were provided for their mail, and the time required would escalate considerably. Because of these factors, Year 3 and Year4 students in the university school of nursing were chosen to be the second target population of the FNS-MGRC scale.

It might have been better, when reducing the item pool (i.e. Test 1), examining the correlation between the FNS-MGRC scale and the existing scales (i.e. Test 2), and examining the test-retest reliability (i.e. Test 3), to administer the item pool of the FNS-MGRC, or the FNS-MGRC scale among nurses, rather than among nursing students. However, resistance and refusal for the necessary repeated access was expressed implicitly by nurse managers in the five targeted hospitals. This posed a challenge to the ethical approach to institutions and nurses working there. Furthermore, if the sample for item reduction in Test 1 was nurses, samples for the determination of test-retest reliability, i.e. Test 2 and Test 3 with a 2-week interval, and of the correlation between the FNS-MGRC scale and other existing scales, i.e. Test 2, must also be nurses. To achieve this would require a further three episodes of ethical access to these hospitals and their staff in addition to the two episodes of indispensable access for Study 2 and for Test 4 in Study 3. Therefore, for nurses in the five teaching hospitals to be the target

population for Test 1, Test 2 and Test 3 was not feasible.

As to the sampling methods in Test 1, Test 2 and Test 3, convenience sampling was used because of the comparative ease with which this could be organized. In order to reduce the threat of recall bias, a different sample was used. In Test 1, this was all Year3 and Year4 students in a 5-year Bachelor nursing programme. One semester later, the Year4 students in this group were unavailable as they had become Year5 students and started their whole year of clinical practice in hospitals across regions. Given that the Year3 students in the sample of Test 1 had been tested for one time, to reduce the threat of recall bias, they were not tested in Test 2. The Year2 students when Test 1 was conducted had become Year3 students when Test 2 was conducted. This group of nursing students was not tested in Test 1 thereby they met the criteria, i.e. not tested for more than one time and to be Year3/Year4 nursing students, to be sampled and tested in Test 2, and then Test 3 so as to determine the test-retest reliability of existing scales.

The sampling in Test 4 was different from that used in any of the other tests, i.e. within the five teaching hospitals, all female nurses working in the specialty wards where MGRC was relatively common were tested.

### **Data collection**

In Study 1, semi-structured interviews were conducted in order to collect information in the specific areas (Bernard, 2000; Burnard, 2005), that is, subjects' perceptions, psychological, emotional, physical and sexual responses, attitudes, behaviours and reflections related to their own practice of MGRC. To maintain these interview foci (Bernard, 2000), an interview guide was used which



contained three questions (See Chapter 4, p. 101). However, the wording and ordering of questions in the interview guide allowed for changes in response to subjects' expressions (Halcomb & Davidson, 2006).

To control the directiveness, the researcher used the scale of directiveness (Britten, 1995; Whyte, 1982) (See Chapter 4, p. 102) to keep alert to and control her interviewing style. The directiveness deals with issues related to how directive the researcher was during interviews, whether leading questions were asked, whether cues were noticed or ignored, and whether subjects were given enough time to explain their meaning (Britten, 1995). In this way, subjects would be encouraged to speak, think and reflect in a comfortable and natural way and the researcher's influence over subjects' expression would be reduced.

Each subject was interviewed for approximately 20 to 30 minutes during the first time of interviewing. Two subjects were involved in the follow-up face-to-face interviews which were conducted in order to validate the themes and representative statements identified from the first series of interviews. The follow-up interviews lasted for approximately 30 to 40 minutes.

The first series of interviews was conducted in each ward's rest room where the ward nurses took their break, had lunch/dinner or had a short sleep before or after their night shift. During the follow-up interviews, one of the two subjects was interviewed in the ward rest room just before she commenced her night shift. The other was interviewed in her home. This subject said she would like to be interviewed in her home, as this would make her feel comfortable and relaxed. Furthermore, she wanted to invite the researcher to visit her new house, because they had had a good relationship when they were colleagues. However,

the interview was discontinued because of her husband's unexpected return. An explanation regarding the discontinuity is provided in the form of a note in Chapter 4 (See p. 102).

In Study 2, the survey was conducted as planned in the ward office during the regular morning meeting. It took approximately 30 minutes for subjects to complete the survey questionnaires. This method of data collection ensured a sufficiently large sample size (See Chapter 7, p. 291) and the collection of subjects' perceptions of MGRC based on their experiences of MGRC or by imagination. However, it had limitations in terms of the consequence of subjects' eagerness to leave or to start their working shift (See Chapter 7, pp. 292-294), which may have contributed to a high number of questions without answers or with more than one answer. In particular, during Study 2, it was found that only one male nurse was working in the targeted specialty wards in the five targeted hospitals. This suggested that narrowing the entire nurse sample population to female nurses only was appropriate.

In Test 1, Test 2 and Test 3, all nursing students were together in the same lecture room. It took them approximately 20 to 30 minutes to complete and return the questionnaires.

In Test 4, all nurse subjects working in the target speciality wards were provided with three days to answer the questionnaires. These questionnaires were sent to Chief Nurses in the five target hospitals, and they were responsible for their distribution to targeted speciality wards, and then the ward head nurses were responsible for the administration of questionnaires among subjects. An invitation letter (See Appendix M, p. 317) was attached to inform subjects of the

purpose of the test and the rules of ethics. However, possible collaboration between subjects in relation to their answers could not be detected or avoided, leading to a limitation of this method of data collection.

In addition, this method of data collection was used in the first place to ensure that the sample size would not be too small to perform CFA. In the second place, three days were thought to give sufficient time for subjects to recall their experiences and issues related to MGRC. As the FNS-MGRC scale was proposed to measure the latent construct of FNS-MGRC, the more and deeper the subjects recalled their experiences and issues related to MGRC, the more possible it should be to detect variance and nuances of FNS-MGRC across subjects, and the more accurately the scale could measure subjects' actual personality traits.

Study 3 firstly required the development of an instrument, i.e. the FNS-MGRC scale, before it was used to examine the hypotheses related to FNS-MGRC. This necessitated the psychometric technique for the purpose of yielding the FNS-MGRC scale. The following section introduces the systematic approach to and the underlying rationales for developing a scale so that the procedures conducted in Study 3 could be understood easily and clearly.

### *Scale development*

The following steps, as recommended by the experts (DeVellis, 2003; Netemeyer, Bearden, & Sharma, 2003), were taken to measure the latent construct of FNS-MGRC. Details related to the operationalization of FNS-MGRC can be found in Chapter 5 (See pp. 174-187), while details regarding scale development and model examination can be found in Chapter 6 (See pp. 195-202, 210-224).

### 1) Construct operationalization

The definition of FNS-MGRC, its dimensions and the aspects in every dimension were proposed on the basis of the findings derived from Study 1 and Study 2. Relevant references enriched and corroborated these propositions with persuasive evidence.

### 2) Item pool generation

Three procedures were undertaken in this step. Firstly, two or three statements were proposed to measure every aspect of FNS-MGRC. All statements measuring all aspects constituted the initial item pool. As a result, this item pool was approximately three times as large as the final scale, as was suggested by DeVellis (2003, p. 66). Secondly, the format for measurement was determined, i.e. a 5-point scale (See Chapter 6, pp. 198-199). Thirdly, the initial item pool was refined. An expert panel approach was followed to achieve this purpose. According to the references, at least three experts should review the instrument in order to establish content validity (Lynn, 1986). These experts were required to have relevant training, practice, research or publications relevant to psychometrics and/or the phenomenon under study, i.e. MGRC (Davis, 1992; Grant & Davis, 1997). A 3-expert panel was then organized to review the initial 58-item pool of FNS-MGRC (See Appendix D, p. 307). These experts were recommended by the researcher's supervisor, based on her understanding about their competency in respect of the above aspects, because she had been working with these experts for over five years. On the basis of these experts' evaluation and advice, only 38 items remained and these were modified in the refined item pool (See Appendix E, p. 308) which was approximately three times as large as

the final 13-item FNS-MGRC scale (See Appendix F, p. 309) suggesting the sufficiency of this item pool (DeVellis, 2003, p. 66).

### 3) Scale reduction

As was suggested by Netemeyer et al. (2003), a test is the best way to shorten an instrument. In this study it was desired to test the 38-item refined pool of FNS-MGRC among female nurses who were working in the specialty wards in the five target teaching hospitals. It was considered possible that female nurses might dislike answering the instrument more than once, and also that their answers to the 38-item pool might influence their answers if these same nurses were involved for a second time in answering the shortened FNS-MGRC scale, which would contain some items which were the same as those in the 38-item item pool. This would increase the possibility of the occurrence of recall bias.

Therefore, instead of nurses, a sample of Year3 and Year4 female nursing students was tested. As explained above (See pp. 82-85), Year3 to Year4 nursing students were assumed to respond towards the FNS-MGRC items in a way similar to those newly employed staff nurses, i.e. their years of nursing work were less than two. Year5 female nursing students would have been the ideal alternative, but, as noted previously, they were not available, as they were practising in different hospitals across different regions. As a result, for convenience and accessibility, all available Year3 and Year4 (N=151) female nursing students in the target university school of nursing were tested.

### 4) Construct validity establishment

As no scale to measure FNS-MGRC existed, it was impossible to establish concurrent validity (Kline, 2000). As Kline (2000) pointed out, a moderate or

high correlation between a proposed scale and any existing scales measuring the relevant aspects of the proposed measure was the evidence of construct validity.

According to the operationalized 2-dimensional FNS-MGRC (See Chapter 5, pp. 174-187), five scales were found to measure several important aspects of FNS-MGRC. These scales were bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005), SES (Kelly & Jones, 1997) and ES (Miller, 1996). The establishment of moderate to high correlation between FNS-MGRC and the above scale constructs would support the proposed 2-dimensional construct, i.e. FNS-MGRC.

Test 2 was designed to examine the correlations between the above scales' scores, and the influence of SDS over FNS-MGRC. For the scale of bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005), SES (Kelly & Jones, 1997), ES (Miller, 1996) and SDS (Crowne & Marlowe, 1960), the techniques of translation and back-translation were used to establish equivalence between the original scales and the back-translated, i.e. translated from Chinese to English, scales (Beck, Bernal, & Froman, 2003; Bowden & Fox-Rushby, 2003; Brislin, 1970; da Nobrega & Gutierrez, 2000; Herdman, Fox-Rushby, & Badia, 1998; Maneesriwongul & Dixon, 2004). In this study, only semantic equivalence, i.e. the meaning of each item is the same after translation to the target language of another culture, was reached between the original English scales and the translated Chinese scales. Issues related to the technique of back-translation are discussed in Chapter 6 (See pp. 212-213) and Chapter 7 (See p. 288).

#### 5) Time stability determination

Test-retest reliability is one of the criteria suggesting a good or efficient instrument (Kling, 2000). This was determined through examining the correlation between the scale scores obtained following two administrations, with a 2-week interval between the first and second administration, i.e. Test 2, Test 3. Sixty five Year3 nursing students were tested. This sample was chosen for convenience and accessibility. As explained above (See pp. 82-85), these Year3 students were a different group from those tested in Test 1. Each of the above five scales, i.e. bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005), SES (Kelly & Jones, 1997), ES (Miller, 1996) were established with test-retest reliability together with the FNS-MGRC scale (See Appendix F, p. 309) and SDS (Crowne & Marlowe, 1960).

#### 6) Model fit examination

Test 4 was designed to examine the proposed 2-dimensional structure of FNS-MGRC, i.e. 2-factorial model, with female nurses' data through CFA using AMOS6.0. The acceptable or good model fit would support the proposed model, i.e. demonstrate the establishment of structural construct validity of FNS-MGRC scale.

#### **Data analysis**

Data analysis was another complicated and important issue to be considered, given that both qualitative and quantitative approaches were used in this PhD research.

#### ***Study 1***

The researcher selected the method of thematic analysis proposed by Fleming, Gaidys and Robb (2002) which was underpinned by Gadamer's

hermeneutic philosophy. Gadamer's philosophy provided answers as to how a phenomenon under study could be understood, how shared meaning could be reached, and how one's initial background, i.e. prejudice or pre-understanding, might influence the subsequent understanding of the phenomenon of interest (Fleming et al., 2002; Geanellos, 1998; Jones, 2001; Koch, 1996; Malpas, 2003; Nyström & Dahlberg, 2001; Rossi, 2002). In this study, the researcher's personal experience of reaching her understanding about the phenomenon of interest, i.e. MGRC, was consistent with Gadamer's philosophy on the process of understanding.

Furthermore, in comparison with other methods of thematic analysis (e.g. Graneheim & Lundman, 2004; Miles & Huberman, 1994; Van Manen, 1990), Fleming et al. (2002) not only persuasively argued the philosophical foundation underlying their method of thematic analysis, but also provided a step-by-step method to conduct data analysis. This was important for the researcher who intended to achieve a true understanding of subjects' experiences of MGRC. This is consistent with the aim of Gadamer's hermeneutics.

In Study 1, some subjects talked about their experience, i.e. thoughts, feelings, perceptions and responses, attitudes, behaviours during MGRC, and their reflection on the practice of MGRC, in natural and comfortable ways. Although the directiveness scale (Britten, 1995; Whyte, 1982) was used to control the researcher's interview technique and to maintain the openness of interview, the researcher's echoing to subjects by disclosing her own experiences may influence the flow of subjects' thoughts and expressions when similar experiences were recalled. This might be caused by the fact that the researcher



had worked together with three of the eight subjects. However, on the other hand, this influence stimulated subjects to recall and disclose more and deeper information.

The strategies of member checking, peer briefing and journal writing were found helpful for the researcher to identify and clarify subjects' meanings, which may contribute to the reduction of the influence on subjects of the researcher's self disclosure. The strategy of verbatim transcription was also found to be helpful in decreasing this influence.

Transcription is a process of reproducing spoken words into written text (Halcomb & Davidson, 2006), but this is an understanding about this concept in a narrow sense. Ideally, subjects' verbal and nonverbal expressions including, e.g. sighs, laughs, the speed and tone of speech, length of pauses, mannerisms, facial expressions, gestures, body movements, should be transcribed so as to achieve real and complete understanding of subjects' meanings (Kowal & O'Connell, 2004; Wellard & McKenna, 2001). This method is usually used when conversation discourse requires to be analyzed (Kowal & O'Connell, 2004; Wellard & McKenna, 2001).

Verbatim transcription is a process of a "word-for-word reproduction of verbal expressions", whereas the written text is an "exact replication" of recorded words (Halcomb & Davidson, 2006, p. 38). However, to achieve complete accuracy of transcription is challenging and difficult, given that a variety of errors may occur during the process of transcription, e.g. typographical errors, punctuations, misinterpreted words (Easton, McComish, & Greenberg, 2000; Halcomb & Davidson, 2006). Nevertheless, it enables the researcher to be more

engaged with the transcribed text, i.e. transcript, leading to the higher possibility to reach real understanding of subjects' true meanings (Halcomb & Davidson, 2006).

This method of verbatim transcription was used to analyze the first series of interviews, which were recorded with a digital recorder. In addition, the researcher recalled and typed subjects' responses and her own reflections about these responses. As a result, it took three to four hours to transcribe an interview which had lasted for 20 to 30 minutes. This method of verbatim transcription and note-taking was beneficial to the identification of subjects' true meanings. Repeated examination between parts of the transcript and the whole transcript, as was proposed by Fleming et al. (2002), was also found helpful to achieve these identifications.

In contrast with the use of a digital recorder during the first series of interviews, only field notes were taken during the follow-up interviews with 2 of 8 subjects. The major purpose of the follow-up interviews was to ask subjects to check the themes, sub-themes and representative statements. However, subjects were found to like sharing more with the researcher, e.g. one of the subjects described her husband's strong opposition to her provision of meatal cleansing. The researcher had not considered that it was possible that subjects would like to disclose more during the follow-up interview so that she did not bring a digital recorder to record this interview. The use of note-taking might have made the researcher forget some key elements, which constituted a limitation of this study.

## ***Study 2***

In this study both numeric and textual data were collected. Programmed

statistical analyses procedures in SPSS14 .0 For Windows were used to analyze the numeric data. The details about these analyses are reported in Chapter 4 (See pp. 127-128). As to the textual data, the researcher followed the thematic analysis developed by Boyatzis (1998) (See Chapter 4, pp. 128-130). This method was selected because of the explicit and logical arguments about the strength of this method provided in the literature, and because of the ease of conducting it in comparison with the other methods of content analysis (e.g. Kondracki, Wellman, & Amundson, 2002; Neuendorf, 2002). Other considerations are discussed in Chapter 4 (See pp. 128-130).

### ***Study 3***

A total of four tests were designed in Study 3. Programmed statistical procedures in SPSS14.0 were used to analyse data. As to CFA, this was processed through AMOS6.0, following the standard procedure. The methods of data analyses are reported in detail in Chapter 6 (See pp. 200-202, 213-220).

### **Conclusion**

In summary, this chapter firstly introduced the researcher's stance towards the qualitative and quantitative approaches to nursing research, and the considerations which she took into account before the decision was made about study design. Following this, an overview of the study design and of the methods used for each study was presented. The next chapter reports the two studies, i.e. Study 1 and Study 2, which were conducted in the preliminary stage of the research.

**Table 3.1 Overview of research design and methods**

Aspects	Preliminary study stage		Main study stage (i.e. Study 3)			
	Study 1	Study 2	Test 1	Test 2	Test 3	Test 4
Aims/ Objectives	To explore female nurses' experiences, perceptions, responses, attitudes in their practice of MGRC.	To investigate female nurses' perceptions of MGRC, and to analyze the influence of nurses' demography and their experience of MGRC on their perceptions.	To develop an item pool and to reduce it to become the FNS-MGRC scale	To determine the correlation between FNS-MGRC and existing scale. *	To determine the test-retest reliability of all scales.	To examine the 2-factorial structure of FNS-MGRC, and to analyze the influence of nurses' demography and their experience of MGRC on their FNS-MGRC.
Design	Exploratory qualitative study design	Cross-sectional descriptive survey	Methodological research design**			
Ethics	Informed oral consent	Access approval Informed consent	Access approval Informed consent	Access approval Informed consent	Access approval Informed consent	Access approval Informed consent
Sampling Methods	Purposive	Convenience	Convenience	Convenience	Convenience	Convenience
Sample	Female nurses working in one of the five teaching hospitals.	Female nurses working in the specialty wards in the five teaching hospitals where MGRC was common.	Year3 & Year4 female nursing students	Year3 female nursing students	Year3 female nursing students	Female nurses working in the specialty wards in the five teaching hospitals where MGRC was common.
Size (n)	8	312	151	70	65	588
Data collection						
Instruments	The researcher Interview guide	Appendix B	Appendix E	Appendix F, G, H, I, J, K, L	Appendix F, G, H, I, J, K, L, M.	Appendix M
Setting	Ward rest room	Ward office	Lecture room	Lecture room	Lecture room	Self-selected venue
Duration	20-30 min. each interview	Approximately 30min.	20-30min.	20-30min.	20-30min.	3 days
Data analysis	Fleming et al.'s thematic analysis (2002)	Statistical analysis with SPSS14 Boyatzis's thematic analysis (1998)	Statistical analysis with SPSS14	Statistical analysis with SPSS14	Statistical analysis with SPSS14	Statistical analysis with SPSS14 Confirmatory factor analysis with AMOS6
Reliability & validity	(1) Long engagement; (2) Journal writing; (3) Member checking; (4) Peer briefing.	(1) The influence of response set was reduced. (2) The questionnaire was established with content validity and face validity.	(1) The influence of response set was reduced. (2) The influence of social desirability response bias was examined. (3) All instruments were established with reliability and validity.			

\* A total of six existing scales were used, i.e. bFNES, AMS, SCS, SDS, SES and ES. Their backtranslations are listed in Appendix G, H, I, J, K and L, respectively.

\*\* "The development and evaluation of data-collection instruments, scales or techniques" (LoBiondo-Wood & Haber, 2002a, p. 231).

## **Chapter 4 Preliminary study stage**

This chapter reports the preliminary studies, i.e. Study 1 and Study 2, respectively. Each study consists of five sections: objectives, subjects, procedures, results and discussion. A brief introduction starts this chapter, which sets the stage for the particular inquiry concern over female nurses delivering MGRC. An overall discussion about all findings from Study 1 and Study 2 concludes this chapter.

### **Introduction**

The traditional Chinese culture related to sexuality is characterized by many constraints and taboos which were intended to regulate and suppress female sexual attractiveness, sexual expression, sexual activities and physical contacts between female and male (Ren, 2005; Ruan & Lau, 1997; Zhao & Li, 2003). These constraints and taboos aimed to extinguish inappropriate female sexual conduct so as to make females maintain proper sexual demeanours. Given that these regulations had little influence over male sexual conduct, they were actually a cruel oppression of Chinese females (Ren, 2005).

During the delivery of MGRC, the female nurse care provider requires to expose and/or touch male external genitalia. This could be viewed as in direct conflict with the traditional culture, namely, Chinese females older than seven years should not have physical contact with a male, and Chinese females should not appear to be sexually attractive or enticing (Ren, 2005; Zhao & Li, 2003). For a female nurse to deliver MGRC therefore appeared to be socially, sexually and morally inappropriate in the eyes of the majority of Chinese people.

Shadowed by the above interpretations centering around impropriety, the

performance of MGRC by female nurses became a sensitive topic, which has been discussed in Chapter 3 (See pp. 51-52). However, a dearth of knowledge was found which explored the phenomenon of female nurses delivering MGRC, especially from the perspective of female nurses. The aim of the preliminary studies in the research was to develop such a knowledge base, i.e. which paid particular attention to female nurses' experiences of MGRC delivery in Study 1 and female nurses' perceptions of MGRC in Study 2.

Study 1 explored eight female nurse subjects' experiences of MGRC delivery. Findings of Study 1 contributed to the development of the questionnaire which was used to collect data in Study 2. Study 2 investigated 312 female nurse subjects' perceptions of MGRC and the effects of a variety of factors on these nurses' perceptions. Findings from Study 1 and Study 2 inspired and laid the foundation of the proposition of a conceptual model of FNS-MGRC which is to be discussed in Chapter 5 (See pp. 157-173).

### **Study 1: Female nurses' experiences of MGRC delivery**

#### **Aim and objectives**

This study aimed to explore female nurses' experiences in their practice of MGRC. Its objective was to identify female nurses' perceptions, attitudes and responses during the delivery of MGRC.

#### **Setting**

The hospital, over 100 years old, was equipped with 1,400 beds and employed 912 nurses, of whom 99.5% (n=907) were female. No male nurses worked in any other speciality wards, except in the Operating Theatre. Generally, a total of 40 inpatient beds were equipped in each speciality ward, of which six

were positioned in the Critical Care Unit (CCU). Each room within the wards or CCU usually had beds for six inpatients.

In CCU there were usually two nursing aides who had been trained for approximately two months before obtaining the license to work as a nursing aide in hospital. Approximately 15 nurses, exclusively female, were employed in every specialty ward. In general, 8 to 10 nurses worked during the daytime shift, two to three worked during the night shift, and one RN was responsible for all skilled nursing tasks in CCU during the daytime or night shift.

The setting for interview was the rest room located in each speciality ward. It was approximately 30 m<sup>2</sup> and was the room in which nurses changed dresses, locked personal belongings, or took a short sleep just after or before the late night shift, i.e. from around midnight to 8 a.m.

### **Subjects**

Eight female nurse subjects, aged from 19 to 40 years (mean $\pm$ SD, 27.0 $\pm$ 7.76) were interviewed. Four were married, and three had a child each. Of these eight subjects, two were head nurses and six were staff nurses. Four staff nurse subjects and the two head nurse subjects were studying Bachelor courses. The other two were at the educational level equivalent to Associate Degree. Seven subjects had been working in the teaching hospital for 2 to 22 years (8.38 $\pm$ 7.58). The eighth subject had been working in a small hospital as a staff nurse for two years, and had then worked in the teaching hospital for nearly one year.

The speciality wards in which subjects were working or had worked included urology & nephrology (n=4), ICU (n=2), neurosurgery (n=3), A&E

(n=1), cardiothoracic surgery (n=1), chemotherapy (n=1), general surgery (n=1), haematology & bone marrow transplantation unit (n=1), orthopaedics (n=2) and paediatrics (n=1).

## **Methods**

Purposive sampling was used. Female nurses with experience of delivering MGRC and who were prepared to be interviewed were invited to become a subject in the study. Oral consents were obtained after the introduction about the purpose of the research and the ethical principles, i.e. confidentiality, anonymity and the freedom to withdraw for any reason at any time.

During the first series of interviews, each of the eight subjects was approached during their lunch break or before their night shift commenced. An interview guide was used which contained the following questions: 1) Have you delivered MGRC (e.g. perineal hygiene, meatal cleansing)? 2) How did you feel during delivering MGRC? 3) What did you think about MGRC?

Each interview was carried out with foci on subjects' thoughts, feelings, perceptions, attitudes and responses during their provision of MGRC. The interview was stopped when there was repetition or redundancy about subjects' experiences in MGRC, i.e. the achievement of saturation (Bergsjø, 1999; Tuckett, 2004). Each interview lasted approximately 20 to 30 minutes. These interviews were recorded with a digital recorder. It took approximately three to four hours to transcribe each interview as the researcher made efforts to recall and take note of subjects' verbal (e.g. laugh) and non-verbal (e.g. eye expressions, face expressions) responses during the interview. She also wrote down her own reflections upon subjects' verbal and non-verbal expressions so as to seek to find



out the real meaning for subjects. This method of transcription was regarded as verbatim transcription which aimed to provide more complete and appropriate interpretation of interviews (Halcomb & Davidson, 2006).

Two of the eight subjects agreed to be interviewed for the second time in order to validate the themes and the representative statements identified from the first of their own interviews. The other six subjects were not approached for various reasons, which have been discussed in Chapter 3 (See pp. 65-66). Each interview lasted for approximately 30 minutes. Notes were taken. In particular, one subject was interviewed immediately before her night shift commenced. The other interview was carried out in the subject's home. However, this interview had to be stopped because of the unexpected return of the subject's husband. When the subject told the researcher that "you may ask him [whether] he would let me deliver MGRC", the couple and the researcher blushed and appeared instantly to be embarrassed \*.

**Table 4.1 Directiveness scale for controlling the interview technique**

Directiveness	Scale	Criteria
least	1	Making encouraging noises
	2	Reflecting on remarks made by the informant
	3	Probing on the last remark by the informant
	4	Probing an idea preceding the last remark by the informant
↓	5	Probing an idea expressed earlier in the interview
most	6	Introducing a new topic

The style of these interviews was semi-structured (Bernard, 2000). Probing questions were avoided in case subjects felt uncomfortable and exploited. Whyte's directiveness scale (See Table 4.1) (Britten, 1995; Whyte, 1982) was used by the researcher to monitor and control her own interview technique. Mostly the directiveness of questioning varied between the level of '1' and of '4', while the questions on sexuality could reach the level of '6' (See Table 4.1, p.

\* This was caused by a shared understanding about the husband's negative attitude, i.e. he would not allow the subject to deliver MGRC. The researcher was informed of this attitude by the subject when scheduling this interview. The subject disclosed her worry over the husband's responses, which made all three persons feel that MGRC was an unwelcome topic and that it was impolite to continue the talk.

102).

### **Data analysis**

A well justified thematic analysis method (Fleming et al. 2002) was followed. Interview transcripts were read and examined repeatedly so as to identify expressions reflecting the fundamental meaning. Each individual section was analyzed to expose its real meaning, when compared with that of the entire text. Those statements with shared meaning were selected and labelled as themes. Representative statements were then identified and translated. Representative statements are also called exemplars, which refer to those “salient excerpts that characterize specific common themes or meanings” across subjects (Crist & Tanner, 2003, p. 204). They were parts of subjects’ verbal expressions and were regarded as being able to appropriately reflect the shared meaning among subjects (Crist & Tanner, 2003). Themes and representative statements were discussed with the researcher’s supervisor until agreements were reached between them. This method is peer debriefing. The selection of this thematic analysis method, i.e. Fleming et al. (2002), and the strength of peer debriefing were discussed in detail in the previous Chapter 3 (See pp. 64-65).

### **Findings**

Two themes emerged from interviews, i.e. ‘association with sexuality’ and ‘consequences’. The former, i.e. ‘association with sexuality’, comprised three sub-themes, i.e. ‘being sexual’, ‘impact on intimate relationship’, ‘emotional responses’, which reflected the influence of male external genitalia as sexual organs over female nurses’ perceptions, attitudes and responses towards MGRC. The latter, i.e. ‘consequence’, was constituted by the following three sub-themes:

‘care with preconditions’, ‘unavoidable responsibilities’, ‘limited involvement with implicit approval’. This theme reflected that female nurse subjects made more or less efforts to avoid MGRC. These themes, sub-themes and representative statements are reported in detail below.

### **Association with sexuality**

#### ***Being sexual***

The genital area was “private” (Nurse #2, #3, #6, #8) and “mysterious” (Nurse #2). “Wicked thoughts” (Nurse #2), i.e. relating MGRC with sexual activities, were thought to arise easily in the male patient’s mind. A female nurse’s physical contact with the penis was sexually stimulating for the male patient.

“Cleansing needs [the penis] to be exposed without any cover... You have to touch it... Seeing and doing is different ... Swabbing it in person is another thing. Swabbing, it seems, is like a stimulus for [male] patients ... It would be really different for him when a man swabbed it than when a woman did...” (Nurse #2)

However, such an interpretation of the female nurse’s physical contact with the penis as sexual stimuli was emphasized to be understandable only “for those married” (Nurse #2). It seemed that unmarried female nurses had not been fully aware of the sexual function of the penis.

“...I didn’t take it [penis] as a sexual organ ... It seemed that I was totally unaware of it. In my mind it was but a organ for urination ...”.  
(Nurse #1)

Erection was possible even when the performer was a male, suggesting that

the erection might be a neuronal reflex act. Sometimes doctors, usually male, intentionally moved the shaft back and forth, which looked like masturbation, so as to make the penis erect and thus ease the insertion of a urinary catheter.

“... That patient’s penis erected after the [male] doctor cleansed his meatus. It’s true! It didn’t mean he was intentional... It is a kind of stimulus, for him!” (Nurse #2)

This statement documents how the physical contact with the patient’s penis by a male doctor, which caused an erection, was considered by the subject as a non-sexual interaction. By contrast, it appeared that the same type of activity, if carried out by a female nurse, may be considered both by female nurses and other hospital staff as potentially sexual in nature.

Additionally, subjects distinguished the physical contact with a male patient’s penis from that with the husband’s.

“Such sexual physical contact can only occur between the beloved or [between the woman and] the husband. It should not involve any other man...” (Nurse #3)

The above description regarding the physical contact with the penis reflected well the traditional conservative sexual beliefs rooted in Chinese female nurse subjects’ minds, i.e. sexual exclusion and sexual faithfulness. The acceptable physical contact with the penis by a female was limited to that with her husband, and it was natural and obligatory to touch the husband’s penis.

“... That’s husband! I should do (touch the penis). I must look at it. [You] cannot look at it, can you? But if it’s another man, I feel, definitely, I don’t want to touch/look at it ...” (Nurse #2)

This belief is conveyed as one of the elements in the conservative sexual culture. It may have a strong influence over female nurses, their husbands, or in a broad sense, the men they may marry, i.e. potential husbands. Also, it may influence the male patient who requires MGRC and his wife.

***Impact on intimate relationship***

Upon reflection, one subject recalled a painful experience of when she broke up with her boyfriend of 10 years. He was serving in the army and strictly trained with Chinese Communistic asceticism.

“... It hurt me very much... during those days, his friend was treated in an army hospital where those tasks [meatal cleansing, male catheterization] were done by [female] nurses. He cannot understand it at all. He lost his temper. He asked about it. I answered, ‘Yes. In hospital there is no gender difference. It should be [female] nurses who do it’. He was so displeased...” (Nurse #2)

The married subjects’ husbands appeared also to be averse to their wives performing MGRC. One subject described her husband’s responses as follows:

“Don’t do that [meatal cleansing]. I would talk with her [head nurse] if she insists that you have to do that. Otherwise, you [tell her that you] would transfer to the other ward [where you don’t need to perform MGRC.].” (Nurse # 1)

Subjects did not disregard their husbands’ responses, but showed serious concern over those negative responses.

“You may ask him [the husband] whether he would let me perform MGRC... Definitely [he] would not...” (Nurse #3)

The above descriptions recorded how subjects' provision of MGRC may negatively impact their personal lives, i.e. intimate relationships, and how responses from their husband or boyfriend may negatively influence subjects' responses and attitudes towards MGRC provision. Subjects also analyzed the attitudinal differences between the unmarried and the married female nurses which reflected that female nurse subjects' own concerns over intimate relationships and/or intimate touch might prevent them from performing MGRC.

“There's nothing [on the male body] we [~ 40 years] haven't seen ...

For the married [female nurses], the man [whose penis was looked at or touched by her] must be her husband. She [physically] contacts with the male quite closely. She doesn't regard this area as mysterious. If, before I got married, you had told me to do it [i.e. look at or touch the penis], [it would be] impossible!” (Nurse #3)

Therefore, it could be considered that female nurse subjects associated the physical contact or exposure to the penis with intimate relationship. According to the traditional conservative sexual culture, the unmarried and the young Chinese female are usually forbidden to physically contact or expose the penis (Zhao & Li, 2003). It was thereby understandable for female nurse subjects that: a) to ask the unmarried and the young to perform MGRC was regarded as inhumane and immoral, and b) it was desirable for a male to provide MGRC.

“[MGRC is about] male patients, [and] female nurses. It is nothing else but a problem of gender distinction. It is worse for female nurses, especially the unmarried, to perform [MGRC]. ” (Nurse #1)

“... It might be more convenient for a male to do that. It is ideal to

have male nurses, or male nursing aides. It is better for the married [than for the unmarried]. As to the unmarried, [or] the young, [to ask them to do MGRC] was a bit inhumane and immoral...” (Nurse #2)

Furthermore, the physical contact between the unmarried and young male and Chinese female is often associated with intimate relationships in the conservative sexual culture (Zhao & Li, 2003). The age of the male patient who required MGRC was also a factor which was found to influence female nurse subjects’ perceptions and responses towards MGRC. It was thought especially difficult for the delivery of MGRC between the “young of similar age” (Nurse #1, #2, #3). Male patients who were described as “stubborn”, “feudalistic” or “shy” (Nurse #3) were considered as other difficult cases to be dealt with during the provision of MGRC.

“Some male patients disliked female nurses doing that. For example, especially some young adults...He didn’t let you do, didn’t let you touch [the penis]. The elderly and the children are better. Some elderly were very stubborn. He didn’t let you touch it. He felt it very disgraceful. He didn’t want others to look at it. So are some young males.” (Nurse #2)

All of the above descriptions reflected the consistency between the sexual stereotyping of a female nurse and that of a desirable Chinese female, i.e. with sexual propriety, according to the conservative sexual beliefs, i.e. restriction of any sexual contact with any other man but the husband, restriction of any sexual activities before getting married, and restriction of any sexual expression in public (Ren, 2005; Zhao & Li, 2003). These restrictions constituted the female

sexual propriety which is the product of the long history of female sexual suppression in mainland China. The beliefs in the maintenance of female sexual propriety had influenced subjects' verbal expressions. Only Nurse #3 could talk about sexuality naturally and in depth. "It" or "that object" instead of "the penis" or "the sexual organ" was the term used by the majority of subjects to refer to the penis.

### ***Emotional responses***

Conservative sexual beliefs may be contributory to female nurse subjects' emotional responses towards MGRC. These responses were exclusively negative and associated with psychological discomfort.

"I was uncomfortable anyway during the delivery of MGRC. It's aversive. After all, it [the penis] was a sexual organ. If the area was dirty, I feel distasteful too. It is associated with sex." (Nurse #1)

The most frequently mentioned emotional response was the feeling of embarrassment, which could arise when the penis was fully exposed.

"...He uncovered it [the penis] and the catheter... I told him to cover them with the quilt... He said "no need" ... Until the third time I said that, he's aware of it [the inappropriate and unnecessary exposure of penis]". (Nurse #3)

The above embarrassing situation was tolerable as the male patient was not regarded as intending to embarrass nurses. In the other situation, female nurse subjects experienced embarrassment because of the male patient's responses.

"[I have] no special feeling during performing MGRC except when the patient was very bad\* [i.e. behave in unwelcome sexual ways or

\* Being "bad" implies that a person especially a male behaves or speaks in sexually improper ways for the majority of ordinary Chinese in mainland China (Ruan & Lau, 1997). However, no definition or complete explanation regarding "bad" was found. Being 'bad', i.e. any verbal and non-verbal expression containing a sexual element which makes the target victim feel very uncomfortable, is thought of as indicators of 'sexual harassment' in mainland China (Shen, 2004).



humiliating ways]. I then felt very uncomfortable, and didn't want to do MGRC for him... In general I gave a brief explanation like that '[I] just cleanse it. It's beneficial.' If he understood that, I then felt comfortable. Some young adults, once they looked uneasy, I felt uneasy too." (Nurse #2)

Female nurse subjects' uneasiness was also under the influence of situational factors during the provision of MGRC, e.g. whether someone on the spot talked about it, or whether the male patient expressed anything sensitive to the subjects.

"[Women's external genital area is] very dirty! But it doesn't matter anyway. It is horrible that someone ... They cannot talk about it [i.e. female nurses performing MGRC]. Nothing could be said. It's alright if it's quiet. Just do what should be done." (Nurse #1)

Furthermore, the discomfort was found to be especially strong for the unmarried female nurses.

"For the unmarried, she definitely felt embarrassed... If asking me to do meatal cleansing before I was married, absolutely I would not!" (Nurse #3)

Subjects clearly expressed their reluctance to perform MGRC, and one subject even hesitated at disclosing her reluctance and regarded it as secret.

"Whenever I am thinking that I need to do [MGRC] again - it's so scaring!" (Nurses #1)

The association between MGRC and sex was considered as the major source of the discomfort and the reluctance.

“[I was] reluctant to do it [i.e. meatal cleansing] because it [i.e. the penis] was a sexual organ. [Female nurses] disliked to contact it physically, disliked to touch it.” (Nurse #1)

Nevertheless, subjects thought that they would deliver MGRC when it was necessary, even though they were really reluctant to do it. They perceived the provision of MGRC as tolerable after having performed MGRC for a long period of time. By contrast, it was perceived as intolerable if the male patient behaved in sexually unacceptable ways, i.e. appeared ‘bad’ (See p. 111).

“You did it in that way?! ... We didn’t think in that way ... Maybe his body is ill, but his mind [is normal]... At that moment, we felt stigmatized, insulted! ... Nurses felt afflicted.” (Nurse #3)

All of the above responses reflected subjects’ negative perceptions, attitudes and responses, e.g. sexual, inhumane, immoral, discomfort, reluctance. These perceptions and responses could entail negative coping towards MGRC, e.g. active avoidance of MGRC, justification for the avoidance by referring to hospital policy which was assumed to exist, inappropriate delegation of MGRC to others, classification of male patients who require MGRC by their conditions. These coping actions constituted the second theme ‘consequences’.

## **Consequences**

### ***Care with preconditions***

Subjects did not think that female nurses had to perform any type of MGRC, especially perineal hygiene and meatal cleansing, without any restriction. This was because nurses had already been “overly heavily work loaded” (Nurse #8), and their time and energy should be spent on “health education and health

counseling” (Nurse #8), whereas it [meatal cleansing] was “daily trivial” which required little skill (Nurse #2).

Male patients’ conditions which required MGRC appeared to be classified by subjects according to their technical difficulties and according to whether the penis and/or the scrotum required to be touched and/or exposed. It was interns, surgical residents or visiting surgeons, all of whom were male, who performed male catheterization, genital wound care, bladder washout and pubic area shaving.

“Nowadays, it is [male] interns, male doctors and [male] visiting surgeons who shaved [male patients’] pubic area.” (Nurse #2)

“As to male patients... [Female] nurses could guide [interns, novice doctors], assist in or facilitate [male] doctors to do them [meatal cleansing, perineal hygiene].” (Nurse #8)

The male patient’s wife or male relatives were often asked by nurses or doctors to perform pubic area shaving. The penis and the urinary catheter were mostly swabbed by this group of people too, or by the male patient himself. Male nursing aides in CCU performed such tasks for critically ill or post-operative patients. An exception was a trained member of the cleaning staff who had routinely cleansed the meatus and the urinary catheter for over six years in one specialty ward in the targeted hospital.

“We don’t do it [e.g. meatal cleansing, perineal hygiene] because we depend on the [male] patient’s family members to do that.” (Nurse #3)

“When the cleaning staff\* member is unavailable [e.g. during Chinese Spring Festival], we taught male patients’ family members

\* He had been trained as a nursing aide for approximately two months in a local profitable organization, but he failed to obtain the license to practise as a nursing aide because his education did not reach high school level. This training ensured his employment in this hospital.

to do it [meatal cleansing].” (Nurse #1)

Subjects emphasized that MGRC should always be provided to those male patients who were critically ill, e.g. had suffered serious trauma, were in coma. This provision should not be restricted by anything, e.g. gender, age, marriage. Nurse #3 illustrated this by referring to a young muscular male patient of her age who was seriously injured. During a traffic accident, a sharp pole (1m long, 4cm round) had penetrated into his abdomen directly through the area between the anus and the scrotum.

“... So horrible! It was impossible for the doctor himself to change the dressing alone...No one else [i.e. female nurses] came to help the doctor [as it was genital area]... No one could bear the heavy load [the patient’s legs had to be lifted on the arms of the female nurse who was helping the doctor] ...” (Nurse #2)

Male patients with paralysis were also considered as receivers of MGRC under any condition. It seemed that the insensitivity of the genital area played an important role.

“...For paralyzed patients... or if the [genital] area is not that sensitive... Perhaps [I] feel better... If patients are clear minded ... young and strong ... it is different ...” (Nurse #2)

The above evidence suggests that female nurses may not perform MGRC regularly, especially meatal cleansing, perineal hygiene. The delivery of MGRC might be undertaken by a variety of care providers, i.e. doctors, interns, family members, patients themselves, nursing aides, or a cleaning staff member. In particular, the delegation to family members, patients themselves and the

cleaning staff could be risky and therefore female nurse subjects did not feel completely comfortable about such delegation.

### *Unavoidable responsibilities*

Subjects recognized their nursing role responsibilities from the following perspectives: concerns over and worries about the quality of delegated MGRC, and the cognition of the unavoidability in terms of the exposure of the penis in many nursing situations. They considered that the delegation of meatal cleansing and perineal hygiene to the cleaning staff and family members was not a satisfying choice.

“Sometimes he [the cleaning staff member] is careless. He pulled out the catheter a bit more. The patient felt it painful. [The patients sometimes complained.] There’s no alternative way [to deal with the complaint]. [We] had to apologize [for those complaints], or asked [male] interns to do that for male patients.” (Nurse #1)

Nursing aides’ work may create uncommon medical complications e.g. penis edema, as was disclosed in the following case.

“... He [the cleaning staff member] just told him [the nurse aide in ICU] to retract the prepuce and then to clean it [the penis], but forgot to tell him to position it [prepuce] back ... All patients [in ICU] developed [penis] edema... A urologist in our ward [i.e. ward of urology] was consulted in the end [so to solve the problem]...”  
(Nurse #1)

In the above scenario, it was apparent that nurses failed to identify the cause which led to the occurrence of penis edema, and they failed to solve the

problem by themselves but by resorting to doctors. This occurrence may intensify the stereotyping of nurses among doctors, nurses themselves, nursing aides and the cleaning staff that nurses were incapable of solving difficult situations, including those situations which were the responsibility of nurses. That is, firstly, nurses should be aware that the failure to return the prepucis to its normal position could induce the edema of the penis, a fact of which nurses in ICU did not appear to be aware; secondly, nurses in ICU were expected to be able to work out the reason for the penis edema, however, they failed to demonstrate this competency. Doctors in ICU must therefore have been alerted by the nurses to a patient's penile edema, otherwise a urologist from the urology ward would not have been consulted in ICU. Doctors in ICU rather than nurses were responsible for requesting a consultation by doctors from other specialty wards in the targeted hospital.

In addition, subjects admitted that although the majority of types of MGRC were performed by doctors or someone other than nurses, nurses still held their responsibility for the maintenance of optimal MGRC.

“During daily morning care, [I] am used to have a look at the genital area or the bottom. It's not a mindful but a casual look. It's like a habit. I check all patients with a [urinary] catheter to see whether the catheter and the genital area are dirty. Sometimes, when changing the linen, [I] find that the bottom is bloody or dirty, then [I] clean it. Sometimes I ask the nursing aide [to clean it], or [I] work together with the patient's family members to make it clean.” (Nurse #2)

However, other subjects appeared rarely to check the male patients' genital

area for the purpose of monitoring the outcome of MGRC. This negligence may lead to life-threatening situations, especially when the male patient himself was the care performer. For example, the failure to notice skin injuries at the genital and anal areas may lead to the failure of identification of the early signs of graft versus host reaction, caused by heterogeneous stem cell transplantation. One subject defended this failure, giving the reason that patients themselves could perform some types of MGRC, e.g. sitz bath, perineal hygiene.

“...Even when white blood cell count was zero, patients [after the high-dose/intensive chemotherapy and/or radiotherapy are administered and before the transfused peripheral blood or bone marrow stem cells propagate to be more enough] still can move around. He usually did it [sitz bath] by himself...” (Nurse #3)

In fact, patients who required heterogeneous stem cell transplantation often developed oral mucositis soon after their course of intensive chemotherapy (Bergmann, Ellermann-Eriksen, Mogensen, & Ellegaard, 1995). They felt fatigue, vomited frequently, and experienced intolerable mouth-throat pain. It is clear that such patients' capability to conduct self care of MGRC, such as sitz bath, was overestimated.

Furthermore, even if delivery of any type of MGRC was no longer considered to be the nurses' duty, complete avoidance of naked male genitalia, i.e. the penis, was impossible. For instance, when making the bed, changing linen, positioning the urinal or bedpan, transferring post-operative patients, a male patient's penis might be seen accidentally. This suggests that efforts should be made to prepare female nurses, so that they know the appropriate ways to deal

with MGRC and associated concerns, which may be caused by the direct conflict between traditional beliefs about female sexual propriety and the physical contact/exposure of the penis during the provision of MGRC. However, it seems that nursing managers had not been aware that they should help female nurses to develop competency in tackling the consequences of the above conflict.

*Limited involvement with implicit approval*

Subjects believed that there was a policy in the hospital which protected female nurses from delivering MGRC.

“We do have a policy in the hospital that [male] doctors catheterize male patients...No documentation... It is implicit. No one forces [female] nurses to catheterize male patients.” (Nurse #3)

However, subjects appeared to have generalized this policy on male catheterization to all MGRC which involved physical contact with the penis, and no one questioned this overgeneralization. Upon reflection, subjects revealed that policy and practice relating to female nurses performing MGRC was different across hospitals and over time.

“Many years ago, it was [female] nurses who catheterized male patients. No one felt discomfort, [they catheterized male patients] very naturally.” (Nurse #8)

Subjects were also aware that head nurses’ attitudes had a strong influence over staff nurses’ attitudes toward female nurses delivering MGRC. It was believed that it was very important for head nurses to develop the belief that “gender makes no difference” (Nurse #2). Head nurses were found not to be consistent in requiring staff nurses to deliver MGRC.



“... [Staff nurses] did do it but did carelessly...It seems that when [senior] managers or external visitors didn't come, we didn't do it carefully...” (Nurse #1)

Subjects realized that even during the period of audit, inspection or visiting, female nurses rarely cleansed the penis and the surrounding areas. Usually such types of MGRC, i.e. meatal cleansing, perineal hygiene, were ignored and avoided.

In summary, it seems that subjects had overgeneralized the undocumented hospital policy (i.e. male doctors catheterize male patients), whereas this overgeneralization appeared not to be disapproved of by head nurses and hospital managers. Therefore, it could be regarded that for female nurses not to perform MGRC was at least not disapproved of, i.e. there was implicit approval.

## **Discussion**

The above findings from interviews with eight female nurse subjects suggest that MGRC practice in mainland China may be different from that in Western countries. This section focuses on the following four aspects: a) the diversity of care providers of MGRC, b) risks in the local MGRC practice, c) negative perceptions, attitudes and responses among female nurses, and d) factors which may influence female nurses' subjective experiences of MGRC. A detailed discussion will follow.

### **Diversity of MGRC providers**

In the local practice it appeared that MGRC was performed mainly by doctors, interns or non-professionals instead of by nurses. MGRC providers could be male interns, male surgeons, male visiting doctors, male nursing aides, the

male patient and his family members, or even a male cleaning staff member who had been trained in a similar way to a nursing aide before his employment.

The most controversial practice of MGRC seemed to lie in male catheterization, pubic area shaving, meatal cleansing and perineal hygiene. According to subjects, perineal hygiene was out of the range of nursing tasks, given that none of them mentioned any experience of dealing with perineal hygiene. In comparison, meatal cleansing appeared to be carried out mainly by the male patient himself, his family, nursing aides and/or the cleaning staff member. Sometimes the male patient's family member was asked to shave his pubic area. Pubic area shaving was mainly performed by medical interns, always male, whereas, male catheterization was performed predominately by medical professionals.

The above findings suggest that nurses, exclusively female in the targeted specialty wards in five teaching hospitals, may play a very limited role in the practice of MGRC.

#### **Risks in the local MGRC practice**

From subjects' descriptions, it was difficult to detect any danger or risk in the provision of MGRC by doctors or interns. By contrast, subjects noticed a number of problems or risks in the practice of some types of MGRC, i.e. meatal cleansing, perineal hygiene, which were supposed to be the responsibility of nurses. The delegation of such MGRC to the cleaning staff member, the male patient, his family members or nursing aides was found to be a potential threat to the quality of such MGRC. For example, the male patient may suffer from unnecessary pain, or medical complications, e.g. penis edema, might occur.

Considering the high prevalence of urinary catheter related UTI and the high cost of UTI (See Chapter 2, pp. 17-18), the poor outcome of meatal cleansing, which may be caused by female nurses' avoidance of conducting meatal cleansing and/or the careless performance of that procedure by untrained care providers, may increase the occurrence and cost of UTI. Although the available evidence from the western world (Bardwell, 1999; Koskeroglu, Durmaz, Bahar, Kural, & Yelken, 2004; Webster et al., 2001) does not support the contention that the provision of meatal cleansing before or after the positioning of a urinary catheter could significantly reduce the occurrence of UTI, it could not be assumed that the lack of such provision would not increase the occurrence of UTI in the local practice. The occurrence of UTI would prolong patients' stay in hospital and significantly increase their physical discomfort as well as the cost of their care, all of which may increase male patients' complaints.

#### **Subjects' negativity towards MGRC**

As was revealed from subjects' description and reflection upon their experiences of MGRC, the majority of female nurses' perceptions, attitudes and responses related to certain types of MGRC, i.e. male catheterization, pubic area shaving, perineal hygiene, meatal cleansing, were negative. The physical contact with or exposure of the penis was perceived as sexually stimulating for the male patient. It was embarrassing, distasteful or they were averse to such contact and exposure. These negative perceptions might be intensified if the male patient was of a similar age to the nurse, unmarried, and muscular. Female nurse subjects could be extremely uncomfortable when encountering 'bad' male patients, or when someone else nearby discussed the matter of a female nurse delivering

MGRC during their provision of MGRC. Subjects' provision of MGRC appeared to have influenced and be influenced by their boyfriends' or husbands' attitudes, and vice versa. It was regarded as natural and obligatory to physically contact or expose the husband's penis, but not other men's.

All of the above negative perceptions, attitudes and responses may contribute to subjects' reluctance, avoidance and delegation of some types of MGRC, e.g. meatal cleansing, perineal hygiene, pubic area shaving. Subjects also grouped male patients who required MGRC by referring to their physical conditions. Only those male patients who were seriously ill, in coma or were paralysed were thought to be MGRC receivers unrestricted by any factor, e.g. gender, age, marriage. Furthermore, it appeared that head nurses and hospital nursing managers did not disapprove of the above negative responses, attitudes and behaviours.

Subjects' negative perceptions, attitudes and responses to MGRC were found to be consistent with the traditional conservative sexual culture. That is, the physical contact with or exposure of the penis between a female and a male who was not her husband is regarded as improper and should not occur (Zhao & Li, 2003). These beliefs may make subjects perceive the physical contact with a male patient's penis as improper, and may associate this contact with negative evaluation.

#### **Factors influencing subjects' negativity**

A few factors were found to be noticeable in terms of their negative influence over female nurse subjects' negative perceptions, attitudes and responses towards MGRC.

First and foremost, it was the boyfriend's and the husband's attitudes towards a female nurse providing MGRC. One subject's intimate relationship was broken, which was partly caused by her insistence on performing MGRC and her refusal to transfer to another ward. Two subjects clearly demonstrated their conformity to their own husbands' rejection of their performance of MGRC.

Age was the second factor which played an important role in deciding female nurses' negative perceptions, attitudes and responses towards MGRC. Not only the nurses' age, but also the male patients' age had an effect. It was considered as inhumane and immoral for nurse managers to demand that young female nurses deliver MGRC, and it was thought to be extremely uncomfortable for young female nurses to provide MGRC for male patients of a similar age to their own.

Nursing managers' attitudes were viewed as influential too. It was thought, not only by staff nurse subjects, but also by head nurse subjects, that there existed a policy in the hospital that female nurses did not need to perform male catheterization and meatal cleansing. Further inquiry suggested that this policy was not formally documented, and was different from the original one which was verbally informed to head nurses by the previous Chief Nurse Managers. The original policy was that it was [male] doctors who performed male [urinary] catheterization. None of the other types of MGRC, e.g. meatal cleansing, was mentioned in this policy. Nevertheless, none of the 8 subjects, including 2 head nurse subjects, questioned their practice of MGRC, i.e. their limited involvement in the provision of MGRC.

Considering one's perceptions play important roles in regulating his/her

responses, attitudes and behaviours in the society (King, 1981), Study 2 focused further inquiry on female nurses' negative perceptions of MGRC and the influence of a variety of factors over their perceptions. This was expected to be able to bring to the surface the issue, i.e. female nurses' sensitivity towards MGRC, in general and in usual practice. Details of Study 2 are reported below.

### **Study 2: Female nurses' perceptions of MGRC**

#### **Aims and objectives**

Study 2 was a cross-sectional descriptive survey design. It aimed to: 1) investigate female nurses' perceptions of certain types of MGRC; and 2) analyze the influence of nurses' demography and their experience of MGRC delivery over their perceptions.

Study 1 suggested that some demographic and other factors, e.g. age, marriage, years of nursing experience, motherhood, working environment, technical difficulty in MGRC, may influence female nurses' perceptions of MGRC. The following hypothesis was proposed and examined in Study 2: 3) Female nurses' perceptions of MGRC are different between groups by age, years of nursing work experience, marriage, motherhood, education level, position, speciality and hospital.

In addition, Study 1 suggested that local female nurses may perform few types of MGRC and they may prefer not to perform any MGRC which required physical contact with or exposure of the penis and/or scrotum. It also suggested that, according to subjects' reports, MGRC which required physical contact with or exposure of the penis and/or scrotum may be performed by males, and these types of MGRC may be preferred by subjects to be performed by a male, if the

care provider was not the male patient's wife. To examine these conjectures, Study 2 was also anticipated to: 4) identify the shared characteristics among the different types of MGRC which were frequently delivered by female nurses, and 5) identify the shared characteristics among the types of MGRC which subjects preferred to be performed by female nurses. The identification of these shared characteristics was thought to be able to bring to the surface local female nurses' inner concerns over MGRC.

### **Subjects**

A total of 378 female nurses working in specialty wards where MGRC was relatively common were surveyed. These specialties were urology, A&E, ICU, cardiothoracic surgery, neurosurgery, neurology, general surgery, orthopaedics and operating theatre.

In particular, people's experiences were always influenced by their social and cultural environments (Bergsjø, 1999; Carr, 1994; Monti & Tingen, 1999; Playle, 1995). To reduce the influence of these factors over female nurse subjects' perceptions of MGRC, targeted hospitals for this study were limited to all of the five teaching hospitals of the same university which were located in the same city, i.e. the capital of Shandong Province, mainland China. It was thought that the social and cultural influences over female nurse subjects who were working in all of the above nine specialty wards in these five hospitals would be similar. That is, the homogeneous social and cultural environmental influence was achieved. Issues about this sample and sample population are also discussed in Chapter 3 (See pp. 65-66, 81) and in Chapter 7 (See pp. 291-292).

## **Instrument**

The questionnaire (See Appendix B, pp. 303-304) consisted of four sections:

1) Demography:

2) Practice of MGRC:

This section was designed to collect information on whether subjects had delivered the listed 10 MGRC actions, i.e. perineal hygiene, pubic area shaving, meatal cleansing, genital wound care, urinary catheterization, urinary catheter removal, bladder washout, bladder irrigation, intravesical therapy and suprapubic catheterization. The answer format was dichotomous, i.e. “yes” or “no”.

3) Perceptions of MGRC:

Perceptions of MGRC were classified into four groups:

a) The level of technical difficulty in the 10 MGRC (See the above second section). A 5-point scale was used ranging from 1= “extremely low” to 5= “extremely high”.

b) Preference for MGRC providers. The listed 10 MGRC were the same as those listed in the second section of the questionnaire. Multiple choice questions were used and alternative answers included “doctor”, “nurse”, “family member”, “nurse aide” and “others”.

c) Preference for male MGRC providers. The listed 10 MGRC were the same as that in “a” in this section. The answer format was dichotomous, i.e. “yes” meant that subjects preferred a male to provide the indicated MGRC, while “no” meant that subjects did not have this preference.



d) Emotional responses to MGRC. A total of seven statements were provided which described seven types of perceptions of emotional responses towards four MGRC actions, i.e. perineal hygiene, pubic area shaving, meatal cleansing, urinary catheterization. These emotional responses comprised: MGRC was embarrassing, awkward, sexual, dirty, stigmatizing, privacy intrusive and had an impact on the male patient's sexual health. A 5-point scale was used ranging from 1= "strongly disagree" to 5= "strongly agree".

4) An open-ended question:

This question was designed to invite subjects to express their concerns over MGRC.

Study 1 suggested that four types of MGRC, i.e. perineal hygiene, pubic area shaving, meatal cleansing, urinary catheterization, might be of most concern among local female nurses. Those emotional responses (See the third section of the questionnaire) which were identified from Study 1 were about these four types of MGRC. Therefore, in the part of "d" in the third section of the questionnaire, only four MGRC were listed for subjects to report their perceptions, i.e. their degree of agreement with these emotional responses.

In addition, two female nurses, who were interviewed in Study 1, and two Year5 nursing students in a 5-year bachelor nursing programme evaluated the content and the wording of the above questionnaire, respectively. Both content validity and face validity were established therefore (DeVellis, 2003; Kline, 2000; Netemyer et al., 2003; Sapp, 2002).

## **Procedures**

The access to the hospitals and the specialty wards was approved by Chief

Nurses in the five teaching hospitals, respectively. Before the administration of questionnaires, all subjects were informed of the purpose of the research. Ethical rules in respect of confidentiality, anonymity and the freedom to attend or withdraw for any reason at any time were explained.

Convenience sampling was used. The five teaching hospitals were surveyed one by one on five consecutive days, i.e. from Monday to Friday. Subjects were approached in ward offices during the regular morning meeting at around 8am. It took about 30 to 40 minutes for them to answer the questionnaire. Issues and limitations associated with the access to hospitals are discussed in Chapter 3 (See p. 81) and Chapter 7 (See p. 292).

## **Data analysis**

### **Selection of usable questionnaires**

All questions in the second section, i.e. 'practice of MGRC' and in the fourth group about perceptions of MGRC had to be answered. If these were not answered, the questionnaire was considered unusable and then excluded.

With the exception of the textual answers to the fourth section of the questionnaire, other answers were numeric data. Numeric data were inputted into SPSS14.0 for Windows (Norušis, 2006). Textual data, i.e. comments on female nurses delivering MGRC, were inputted into Microsoft Excel for convenience.

### **Statistical analysis**

Numerical data were analyzed with SPSS14.0 at the significance level of 0.05. Descriptive analysis was used to analyze all variables (See Table 4.2, p. 131; Table 4.4, p. 133). Chi-square ( $\chi^2$ ) test was used to analyze the distribution of demographic variables across hospitals (Norušis, 2006) (See Table 4.2, p. 131).

The total score of perceptions of MGRC was the summed scores of seven statements (See Appendix B, pp. 303-304) about emotional responses towards MGRC, i.e. 'd)' in the third section of the questionnaire. The total perceptions scores were normally distributed (Shapiro-Wilk=0.993,  $P>0.05$ ). ANOVA was used (Field, 2000; Sheskin, 2004) to analyze perceptions score differences between groups by demographic variables (See Table 4.2, p. 131).

Nonparametric analysis was employed when data were nominal or ordinal (Field, 2000; Sheskin, 2004). Therefore, Wilcoxon Signed Ranks Test was used to analyze the differences between the levels of technical difficulty between the listed 10 types of MGRC (See Table 4.3, p. 132). Friedman Test was used to analyze seven perception score differences between groups by the four types of MGRC (See Table 4.5, p. 134).

### **Thematic analysis**

Textual data was analyzed using Boyatzis's thematic analysis (1998). Of most note, this method of thematic analysis "allows for the translation of qualitative information into quantitative data" (Boyatzis, 1998, p. 4). 'Theme' in this method is not defined as shared meaning among subjects, rather, a theme refers to "a pattern found in the information that at minimum describes and organizes the possible organizations and at maximum interprets aspects of the phenomenon" (Boyatzis, 1998, p. 4).

Given that the answers which were provided by subjects were short and simple, it was impossible to analyze the latent and shared meanings because of the lack of any tracking of subjects' verbal and nonverbal expressions, together with their situations. Therefore, the analysis of the textual data in this study was

conducted at the manifest level, i.e. the information which was directly observable was analyzed.

All text data were read repeatedly until sample texts with rich information were selected out for the formulation of codes which included themes, sub-themes, their descriptions and example texts. Themes and sub-themes were mutually exclusive. The code was discussed between the researcher and her supervisor in respect of the accuracy of themes/sub-themes and the appropriateness of description, labelling and examples texts. After the achievement of agreement about the code between the researcher and her supervisor, the code was finalized. The complete code is presented in Appendix C (See pp. 305-306).

Two Year3 Bachelor nursing students who were involved in a summer exchange programme in The Hong Kong Polytechnic University were approached for convenience for the purpose of determining the inter-coder reliability of the code. The researcher introduced all basic knowledge about MGRC and the purpose of this study. Students then independently applied the code to all texts. The inter-coder reliability indices, i.e. percentage agreement, percentage agreement on presence, were calculated according to the following equations (Boyatzis, 1998, pp. 154-155) (See Figure 4.1, Figure 4.2).

**Figure 4.1 The equation to calculate percentage agreement**

$$\text{Percentage agreement} = \frac{\text{no. of times both coders agreed}}{\text{no. of times coding was possible}}$$

**Figure 4.2 The equation to calculate percentage agreement on presence**

$$\text{Percentage agreement on presence} = \frac{2 \times (\text{no. of times both coders saw it presented})}{(\text{no. of times Coder A saw it presented} + \text{no. of times Coder B saw it presented})}$$

After the determination of inter-coder reliability, the code was applied to all texts by the researcher. Descriptive analysis was conducted to analyze the presence frequency of every theme.

## **Results**

A total of 378 questionnaires were administered with 100% returned. Of them 82.5% (n=312) was usable. One hundred and thirty eight subjects (44.2%, 138/312) provided textual comments on MGRC.

### **Demography**

The subjects were aged from 18 to 50 years ( $28.4 \pm 8.86$ ). They had been working as a clinic nurse for less than one year to 21 years ( $9.0 \pm 6.78$ ). Nearly 60% were married. About half were mothers. Less than 10% had obtained a degree. Nearly 13% were head nurses. There were 20 to 50 subjects who were investigated in each of the speciality wards. Details are showed in Table 4.2 (See p. 131).

With the exception of motherhood ( $P < 0.05$ ), speciality wards ( $P < 0.05$ ) and years of nursing work ( $P < 0.05$ ), no other significant differences were found across hospitals with respect to the distribution of demographic variables (See Table 4.2, p. 131).

### **Quantitative outcomes**

#### ***Experience of MGRC delivery***

The majority had performed bladder irrigation (84.3%, n=263), bladder washout (74.7%, n=233) and urinary catheter removal (69.6%, n=217). By contrast, most had never performed suprapubic catheterization (86.9%, n=271), genital wound care (77.2%, n=241), urinary catheterization (76.6%, n=239),

pubic area shaving (73.1%, n=228), and perineal hygiene (61.9%, n=193). Approximately half of the subjects had conducted intravesical therapy (48.1%, n=150), or had performed meatal cleansing (48.4%, n=151). Only approximately 2% (n=7) had delivered all 10 types of MGRC, whereas approximately 6% (n=20) had delivered none of them.

**Table 4.2 Demography of subjects and the ANOVA results on scores of perceptions of MGRC by demography (N=312)**

Demography	n	%	$\chi^2$	ANOVA
Age				
18-30	180	57.7		
31-40	78	25.0	15.262	2.949
41-50	13	4.2		
Marriage				
Never married	125	40.1	2.476	5.591*
Married	185	59.9		
With child				
Yes	148	47.4	10.852*	6.849**
No	156	50.0		
Education level				
Secondary	142	45.5		
Associate	138	44.2	12.713	1.729
Bachelor	30	9.6		
Master	1	0.3		
Registered nurse				
Yes	285	91.3	3.159	1.132
No	22	7.1		
Years of nursing work				
≤10	192	61.5		
11-20	91	29.2	16.013*	2.826
21 or above	19	6.1		
Position title				
Staff Nurse	253	86.9	9.616	5.627*
Head Nurse	41	13.1		
Specialty ward				
Urology	28	9.0		
A& E	47	15.1		
ICU	20	6.4		
Cardiothoracic surgery	42	13.5		
Neurosurgery	30	9.6	46.717*	1.280
Neurology	28	9.0		
General Surgery	39	12.5		
Orthopaedics	28	9.0		
Operating theatre	49	15.7		
Hospital				
#1	53	17.0		
#2	67	21.5		
#3	81	26.0	N/A	1.498
#4	39	12.5		
#5	72	23.1		

\*  $P<0.05$ ; \*\*  $P<0.01$ ; N/A=not applicable.

### ***Level of technical difficulty in MGRC***

On average, the level of technical difficulty in MGRC ascended from perineal hygiene ( $2.4 \pm 1.02$ ), pubic area shaving ( $2.6 \pm 1.03$ ), meatal cleansing ( $2.8 \pm 1.09$ ), urinary catheter removal ( $3.0 \pm 1.11$ ), genital wound care ( $3.2 \pm 1.11$ ), bladder washout ( $3.3 \pm 0.99$ ), bladder irrigation ( $3.4 \pm 0.97$ ), intravesical therapy ( $3.6 \pm 1.17$ ) urinary catheterization ( $3.7 \pm 1.14$ ) to suprapubic catheterization ( $4.1 \pm 1.33$ ).

Wilcoxon Signed Ranks Tests showed that no significant differences were found between the levels of technical difficulty in the following pairs of MGRC: meatal cleansing *vs.* pubic area shaving ( $P > 0.05$ ), meatal cleansing *vs.* urinary catheter removal ( $P > 0.05$ ), bladder washout *vs.* intravesical therapy ( $P > 0.05$ ). Other details are shown in Table 4.3.

**Table 4.3 Comparison of the level of technical difficulty in MGRC (N=216)<sup>a</sup>**

MGRC	Technical difficulty	Perineal hygiene	PAS	MC	UCR	GWC	BW	BI	IT	UC
Pubic area shaving (PAS)	Lowest	-4.753 <sup>†</sup>								
Meatal cleansing (MC)		-7.134 <sup>†</sup>	-1.548							
Urinary catheter removal (UCR)		-6.773 <sup>†</sup>	-3.725 <sup>†</sup>	-2.811						
Genital wound care (GWC)		-7.762 <sup>†</sup>	-5.855 <sup>†</sup>	-4.489 <sup>†</sup>	-2.481**					
Bladder washout (BW)		-9.443 <sup>†</sup>	-7.697 <sup>†</sup>	-7.200 <sup>†</sup>	-5.846 <sup>†</sup>	-2.183*				
Bladder irrigation (BI)		-10.031 <sup>†</sup>	-8.668 <sup>†</sup>	-8.264 <sup>†</sup>	-7.330 <sup>†</sup>	-2.459*	-1.330			
Intravesical therapy (IT)		-10.166 <sup>†</sup>	-9.145 <sup>†</sup>	-8.398 <sup>†</sup>	-8.365 <sup>†</sup>	-7.241 <sup>†</sup>	-4.969 <sup>†</sup>	-4.280 <sup>†</sup>		
Urinary catheterization (UC)		-10.415 <sup>†</sup>	-9.868 <sup>†</sup>	-8.982 <sup>†</sup>	-9.175 <sup>†</sup>	-8.070	-6.250 <sup>†</sup>	-5.419 <sup>†</sup>	-2.516*	
Suprapubic catheterization (SC)	Highest	-10.100 <sup>†</sup>	-9.493 <sup>†</sup>	-8.506 <sup>†</sup>	-9.364 <sup>†</sup>	-8.827	-6.678 <sup>†</sup>	-6.085 <sup>†</sup>	-5.373 <sup>†</sup>	-3.786 <sup>†</sup>

a. Wilcoxon Signed Ranks Test was used.

\*  $P < 0.05$ ; \*\*  $P < 0.01$ ; <sup>†</sup>  $P < 0.001$ .

### ***Preference for MGRC providers***

More than half of the subjects preferred nurses to perform bladder washout (59.6%, n=186) and bladder irrigation (75.3%, n=235). Less than half preferred a male to perform these procedures, i.e. bladder washout: 46.5%, n=145; bladder

irrigation: 37.2%; n=116, respectively. By contrast, more than half of the subjects preferred a male to perform the other eight types of MGRC (See Table 4.4).

**Table 4.4 MGRC providers in usual practice and according to subjects' preference (N=312)**

MGRC	Care providers								Male provider			
	Doctor		Nurse		Nurse Aide		Others		Yes		No	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>Usual practice</b>												
PH	92	29.5	124	39.7	52	16.7	58	18.6	164	52.6	127	40.7
MC	92	29.5	155	49.7	38	12.2	35	11.2	153	49.0	137	43.9
BW	82	26.3	246	78.8	4	1.3	-	-	77	24.7	211	67.6
BI	36	11.5	280	89.7	5	1.6	-	-	70	22.4	220	70.5
UCR	133	42.6	200	64.1	3	1.0	-	-	127	40.7	164	52.6
IT	159	51.0	163	52.2	1	0.3	-	-	131	42.0	153	49.0
PAS	228	73.1	69	22.1	13	4.2	6	1.9	231	74.0	64	20.5
GWC	260	83.3	50	16.0	4	1.3	-	-	214	68.6	72	23.1
UC	272	87.2	43	13.8	3	1.0	-	-	254	81.4	38	12.2
SC	281	90.1	20	6.4	1	0.3	-	-	192	61.5	90	28.8
<b>Preferred practice</b>												
PH	111	35.6	61	19.6	85	27.2	62	19.9	223	71.5	79	25.3
MC	119	38.0	75	24.0	83	26.6	39	12.5	219	70.2	80	25.6
BW	130	41.7	186	59.6	11	3.5	-	-	145	46.5	157	50.3
BI	69	22.1	235	75.3	18	5.8	-	-	116	37.2	185	59.3
UCR	169	54.2	124	39.7	32	10.3	3	1.0	186	59.6	115	36.9
IT	209	67.0	104	33.3	1	0.3	-	-	189	60.6	111	35.6
PAS	209	67.0	37	11.9	50	16.0	14	4.5	269	86.2	33	10.6
GWC	269	86.2	33	10.6	8	2.6	1	0.3	246	78.8	55	17.6
UC	267	85.6	40	12.8	6	1.9	-	-	272	87.2	29	9.3
SC	285	91.3	19	6.1	-	-	-	-	227	72.8	74	23.7

PH=perineal hygiene; MC=meatal cleansing; UCR=urinary catheter removal;

BW=bladder washout; BI=bladder irrigation; IT=intravesical therapy; PAS=pubic area shaving;

GWC=genital wound care; UC=urinary catheterization; SC=suprapubic catheterization.

More than half of the subjects found that nurses administered intravesical therapy (52.2%, n=163) and removed a urinary catheter (64.1%, n=200) in usual practice. In comparison, more than half preferred that doctors deliver these two MGRC procedures (intravesical therapy: 67.0%, n=209); removal of a urinary catheter: 54.2%, n=169), and pubic area shaving (67.0%, n=209), genital wound care (86.2%, n=269), urinary catheterization (85.6%, n=267) and suprapubic catheterization (91.3%, n=285).

### ***Perceptions of MGRC***

The mean scores for the statements about privacy intrusion, embarrassment



and awkwardness were greater than ‘3’ representing agreement with these perceptions of MGRC. The mean scores for the statements about being sexual, dirty and stigmatising and about having an impact on sexual health were smaller than ‘3’, representing disagreement with these perceptions of MGRC (See Table 4.5).

Frideman Test showed that the perceptions about embarrassment ( $P>0.05$ ) and awkwardness ( $P>0.05$ ) were not significantly different from each other. It suggests that the level of technical difficulty in the four types of MGRC, i.e. perineal hygiene, pubic area shaving, meatal cleansing, urinary catheterization, may not have a significant influence over the perception of MGRC as embarrassing and awkward. However, other perception scores about being stigmatizing, being dirty and about privacy intrusion were found to be significantly different between different types of MGRC, suggesting that the level of technical difficulty may significantly influence other perceptions, with the exception of the perception of MGRC as embarrassing and awkward (See Table 4.5).

**Table 4.5 Description of the perceptions of MGRC scores and comparison by MGRC (N=312)**

Perceptions of MGRC	Pubic area shaving		Perineal hygiene		Meatal cleansing		Urinary catheterization		Frideman
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Impact on sexual health	2.8	1.09	2.7	1.11	2.8	1.10	2.9	1.14	42.725 <sup>†</sup>
Being sexual	2.3	1.04	2.3	1.05	2.3	1.06	2.3	1.08	16.642 <sup>†</sup>
Privacy intrusion	3.1	1.23	3.0	1.22	3.1	1.22	3.0	1.26	13.527**
Being embarrassing	3.4	1.17	3.4	1.15	3.4	1.17	3.5	1.16	4.100
Being awkward	3.4	1.23	3.4	1.24	3.4	1.24	3.4	1.27	2.153
Being dirty	2.0	0.75	2.2	0.75	2.2	0.76	2.1	0.75	36.898 <sup>†</sup>
Being stigmatizing	1.9	0.72	1.9	0.74	1.9	0.73	1.9	0.74	17.316 <sup>†</sup>

\*\* $P<0.001$ ; <sup>†</sup>  $P<0.001$ .

The total scores of perceptions of MGRC ranged from 28 to 128, with the mean score of 75.9 and SD of 18.91. ANOVA results showed that significant

differences were found only between those scores of perceptions of MGRC by marriage ( $P<0.05$ ), motherhood ( $P<0.01$ ) and position ( $P<0.05$ ). Details are shown in Table 4.2 (See p. 131).

### **Qualitative outcomes**

Four themes were identified and labelled as ‘gendered work’ (Theme #1), ‘measures to improve MGRC’ (Theme #2), ‘negative factors intervening with female nurses delivering MGRC’ (Theme #3) and ‘adverse effects of female nurses delivering MGRC’ (Theme #4), respectively.

The percentage agreement for the above four themes was: Theme #1: 0.96; Theme #2: 0.90; Theme #3: 0.97 and Theme #4: 0.97, respectively. The percentage agreement on presence was: Theme #1: 0.99; Theme #2: 0.89; Theme #3: 0.86 and Theme #4: 0.93, respectively. All these indices were greater than 0.70, suggesting satisfying inter-coder reliability (Boyatzis, 1998, p. 156). Detailed descriptions of these themes, sub-themes and examples texts are shown in Table 4.6 (See p. 135) and in Appendix C (See pp. 305-306).

Ninety two subjects (66.7%) thought that at least certain types of MGRC ought to be delivered by a male. Ninety eight (71.1%) proposed that some measures could be taken to improve the practice of MGRC, e.g. protecting patients’ privacy, excluding some types of MGRC from nurses’ duties, a third party being present while the nurse was providing MGRC such as the male patient’s family member, doctor, another nurse. It was thought by 21.0% ( $n=29$ ) subjects that age ( $n=7$ ), marriage ( $n=5$ ), nurses’ family members’ opinion ( $n=5$ ) and traditional Chinese beliefs ( $n=11$ ) may influence female nurses delivering MGRC.

Fifty three subjects (38.4%) stated that some negative effects may be caused by female nurses delivering MGRC. Fifty one (37.0%) emphasized that MGRC was embarrassing. Four subjects were worried about the potential threats to female nurses' personal lives. Two mentioned the influence on the public image of nurses (See Table 4.6, Appendix C, pp. 305-306).

**Table 4.6 Themes, sub-themes and examples**

Themes/sub-themes	Examples
<b>Gendered work</b>	
Male work	"For the benefit to patients, and for the smooth MGRC delivery, it is better for male doctor/nurse to do it." [Nurse #34]
Partly male work	"Catheterization should be done by doctor or male nurse; pubic shaving can be done by nursing aides..." [Nurse #5]
<b>Measures to improve MGRC</b>	
Include a third party	"Nurses may ask doctor to give a hand in male catheterization. Other MGRC ought to be done when a male or the patient's family is present." [Nurse #18]
Protect privacy	"To protect patients' privacy, personality, and to show respect to him, the same-sex ought to do MGRC. Male nurses/nursing aides should be employed." [Nurse #28] "...Curtain ought to be used to prevent patients from exposure." [Nurse #8] "...MGRC should be performed in the treatment room instead of ward room." [Nurse #20]
Teach self-care skill	"If his state permits, nurses should teach the patient to do MGRC by himself through health education." [Nurse #120]
Show respect	"For the care having negative psychological impact, nurses should respect patients' wishes and permit him to select capable person to do it." [Nurse #13]
<b>Negative factors intervening female nurses delivering MGRC</b>	
Age	"As to catheterization, for young and clear-minded male patients, it is very embarrassing; and is very difficult for the patient and the nurse (particularly young nurses) to adapt to it." [Nurse #73]
Marriage	"It is difficult not only for the unmarried female nurse, but also for the male patient's wife to accept it [i.e. female nurse delivering MGRC]". [Nurse #1]
Chinese culture	"... In this sexually conservative country, it is really a predicament for both patients and nurses to do MGRC." [Nurse #76]
Patients' expressions	"Some male patients, awfully immoral, may use very dirty words so I insist a male should do MGRC." [Nurse #74]
<b>Adverse effects of female delivering MGRC</b>	
Discomfort	"MGRC is important for health. However, they are embarrassing indeed, not only for the nurse, but also for the patient." [Nurse #12]
Negative impact on nurses' life	"Doing MGRC for a long period may have a negative impact on the married nurse's mental health and private life. It also influences the unmarried nurse's mental health, the choice for getting married and their married life". [Nurse #22]
Negative impact on nurse image	"... In order to improve the nurse-patient relationship, to reduce embarrassing situations, to decrease the social bias about nursing, it is better for female nurses to avoid such tasks, unless in life-saving emergency care." [Nurse #41]

## Discussion

Study 2 revealed that local female nurses may practise in only a limited

area of MGRC. In usual practice, the majority reported that it was nurses who delivered those types of MGRC considered to be at a low level of technical difficulty, e.g. perineal hygiene, and at a middle level of technical difficulty, e.g. bladder irrigation, and MGRC which did not require physical contact with and/or full exposure of the penis, e.g. catheter removal.

The above pattern was consistent with subjects' experience of MGRC delivery and their preference for MGRC providers. The majority of subjects had never delivered perineal hygiene (61.9%), pubic area shaving (73.1%), genital wound care (77.2%), urinary catheterization (76.6%) or suprapubic catheterization (86.9%). Suprapubic catheterization is at the highest level of technical difficulty and is the practice domain of urologists, whereas pubic area shaving, perineal hygiene and genital wound care require exposure of and/or physical contact with the penis.

Furthermore, subjects appeared to prefer those types of MGRC which were of a low level of technical difficulty to be performed by doctors, nursing aides, or the male patient's family members, e.g. meatal cleansing, perineal hygiene. In comparison, subjects appeared to prefer all other MGRC, except bladder irrigation (75.3%) and washout (59.6%), irrespective of the level of technical difficulty, to be performed predominantly by doctors. Similarly, all of the other types of MGRC, except bladder irrigation (37.2%) and washout (46.5%), were preferred by more than half of subjects to be delivered by male care providers.

Therefore, it could be inferred that local female nurses may not hold negative perceptions about those types of MGRC at the middle level of technical difficulty and about those which do not require physical contact with and/or

exposure of the penis. Typical examples are bladder irrigation and bladder washout.

Similar to western nurses (Lawler, 1991; Norton, 2004; Pomfret, 1993, 1994, 1999, 2000; Seed, 1995; Wolf, 1993, 1997), Study 2 suggests that local female nurses may perceive certain types of MGRC, i.e. perineal hygiene, male catheterization, pubic area shaving, meatal cleansing, as embarrassing. Also similar to western nurses' views of bathing, toileting assistance as privacy intrusive (Bäck & Wikblad, 1998; Lemonidou et al., 2002; Schopp et al., 2003; Scott et al., 2003a), Study 2 suggests that local female nurses may also regard such MGRC as privacy intrusive. However, caution is required when interpreting subjects' perceptions of MGRC as privacy intrusive. In Study 2, almost the same number of subjects was found to disagree (38.8%, n=121), or agree (43.3%, n=135) that MGRC was privacy intrusive. It seems that a number of local female nurses may have not recognized the issue of privacy intrusion which is associated with MGRC. This suggests that local female nurses may not adequately protect the male patient's privacy during the provision of MGRC.

However, in contrast to findings from western research (Jervis, 2001; Seed 1995; Lawler, 1991) (See Chapter 2, pp. 25-44), Study 2 suggests that local female nurses may not regard some MGRC, i.e. perineal hygiene, male catheterization, pubic area shaving, meatal cleansing, as dirty or stigmatizing. Also in contrast with western findings that tasks which included physical contact with the penis and/or scrotum were considered as sexual and intimate (Lawler, 1991; Milligan, 1999; Seed, 1995; Twigg, 2000b; Williams, 2001b), Study 2 suggests that a majority of local female nurses did not consider that MGRC, i.e.

pubic area shaving, perineal hygiene, meatal cleansing and male catheterization, was sexual. Only 13.4% (42/312), 14.4% (45/312), 16.6% (52/312) and 16.3% (51/312) agreed that pubic area shaving, perineal hygiene, meatal cleansing and male catheterization were sexual. In addition, although subjects in Study 1 and subjects who provided textual comments in Study 2 indicated that intimate relationships may influence a female nurses' practice of MGRC, whereby a female nurse's practice of MGRC may influence the intimate relationship with her boyfriend/husband or her own sexual life, none of these subjects thought that a female nurse delivering MGRC was intimate. Instead it was thought of as improper and in conflict with the traditional Chinese belief about the restriction of physical contact between female and male.

Furthermore, subjects tended to disagree that some MGRC, e.g. perineal hygiene, pubic area shaving, male catheterization and meatal cleansing, had influences over the male patient's sexual health, although male catheterization was found to have negative influences over the male patient's sexual health (Albaugh & Kellogg-Spadt, 2003; Hampton, 2005; Milligan, 1999). It suggests that subjects may lack the knowledge that some MGRC, e.g. male catheterization, might have a negative impact on the male patient's sexual health.

Another issue, i.e. sexual harassment, which is closely related to sexuality, although atypical and elusive, could be identified from subjects' descriptions (in Study 1) or comments (in Study 2). Typically, sexual harassment is defined as "unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct" when: a) submission to such conduct is required in order to be employed; or b) an intimidating, hostile or offensive environment or climate was

created which unreasonably interferes with the victim's work or study (Plaudi & Barickman, 1998, p. 1; Robinson, Franklin, Tinney, Crow, & Hartman, 2005, p. 502; "Sexual harassment", 2006). However, in mainland China, any conduct with an unwelcome sexual element is considered as sexual harassment, which is beyond the scope of the typical sexual harassment situations as defined in developed countries (Shen, 2004). Given that in mainland China, sexual harassment was not fought against, under the protection of law provisions, and not openly discussed until 2005 (Jing, 2005; Meng, Chen, & Tan, 2004; Parish, Das, & Laumann, 2006), it is not surprising that none of the subjects in Study 1 and Study 2 described the occurrence of sexual harassment as 'sexual harassment', even although the indicators of its occurrence were perceivable. That is, 'bad' male patients' expressions, verbal and/or nonverbal, e.g. lewd eye expressions, derogatory words, had created unwelcome situations, i.e. situations which made it difficult for female nurse subjects to perform MGRC smoothly, and which caused them to experience aversive feelings such as disrespect, insult and stigmatisation. All of the above findings suggest that local female nurses may lack knowledge of sexuality, sexual health and sexual harassment, and therefore they may not have developed the necessary competencies in dealing with sexuality issues associated with the delivery of MGRC by female nurses.

In addition, although it was found in Study 2 that many demographic variables may influence female nurses' perceptions of MGRC, statistical analysis showed that, of these variables, only motherhood, marriage and clinical position may significantly influence subjects' perceptions of MGRC. These three factors reflect the two major living social environments for a female nurse, i.e. family

and working place. In other words, nurses' roles as a wife, mother or head nurse may have strong influences over their perceptions of MGRC.

Being a wife and a mother means that the nurse is required to perform more and different roles in comparison with those who are unmarried and who are not mothers. The nurse who is married and/or a mother is expected to behave as a wife and/or a mother. The culture in Shandong Province in China values a mother who behaves, in all aspects, in the most appropriate ways, so that her children will grow up to be desirable members of society, through learning from their mother. Simultaneously, both the wife and the husband have concerns over whether the wife behaves in sexually proper ways, lest the family be devalued and shown lack of respect through gossip. Findings from Study 1 and Study 2 suggested that Chinese female nurses may confront conflicts between being a desirable female, i.e. girlfriend, wife, mother, and carrying out their role as a nurse. The above culture about fulfilling their role as a wife, potential wife, i.e. girlfriend, or a mother with sexual propriety may contribute to role conflicts.

As a desirable female, the woman must be sexually exclusive, i.e. have no sexual interaction with any man other than her husband or, at most, a husband candidate, i.e. boyfriend. Given this cultural constraint, a Chinese female person is not expected to deliver MGRC, as this requires exposure to and/or physical contact with a male patient's penis. However, as a nurse, she is required to perform MGRC without any restriction of, e.g. gender (ICN, 2006; Pang et al., 2000; SN, 2000). The requirements to be a desirable Chinese female person and to be a nurse are thus in direct conflict with one another. This therefore suggests a direction which deserves attention and effort, i.e. to promote self care among



nurses and nursing students so that they can maintain their mental and physical health while coping with the role conflicts inherent in providing optimal nursing care (Douglas & Willis, 2005).

In addition, being a head nurse meant having more and different role expectations in comparison with being a staff nurse. Usually, there is only one head nurse in each ward, who is the unique authority figure with power over the nurses in the ward. The head nurse has to deal with all ward affairs and has to make efforts to figure out solutions to any problem and/or conflict between different people and between different hospital units. She is also expected to be a role model for staff nurses and to develop a positive ward image in the hospital. Otherwise, the head nurse might have to face patients' and/or their family's complaints, ward colleagues' dissatisfaction and have to cope with (Associate) Chief Nurses' questioning and blame. All of the above role expectations in the targeted hospitals may influence head nurse subjects' perceptions of MGRC.

Therefore, being a wife, a mother and/or a head nurse imply even more role expectations and the higher possibility of role conflicts. To be overly taxed by a variety of role expectations, especially role conflicts, may lead to role strain and even burnout, a state of mental and physical exhaustion (Blais, et al., 2006; Hardy, .M.E & Hardy, W.L., 1988).

In particular, very few subjects (n=4) mentioned that delivering MGRC might negatively impact a nurse's personal life, especially their sexual life, and that a female nurse delivering MGRC may influence the public image of nurses (n=2). Nevertheless, it suggests that public education might be required so as to increase public awareness of the significance of nurses' work. On the other hand,

nurse managers are required to pay more attention to occupational health among female nurses who are required to perform MGRC frequently. Although not many subjects (N=11) mentioned the negative influence of the conservative sexual culture over female nurses' perceptions of MGRC, this influence should not be ignored.

In the next section, there is an overall discussion about all findings from Study 1 and Study 2, in order to produce a more complete reflection of female nurses' practice of MGRC and female nurses' subjective experiences of MGRC delivery.

### **Overall discussion**

Findings from Study 1 and Study 2 were consistent, as are qualitative findings and quantitative findings in Study 2. This consistency is reflected by the following aspects: a) MGRC which required physical contact with the penis, e.g. male catheterization, meatal cleansing, were found to be embarrassing, and b) many factors, especially age and marriage for the female nurse MGRC provider and the male patient MGRC receiver, were found to influence the smooth provision of MGRC.

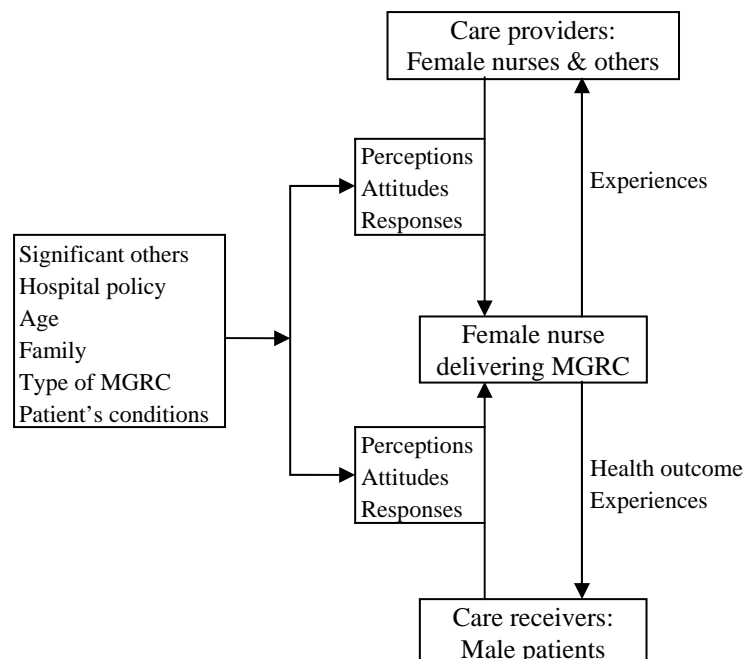
On the other hand, findings from Study 2 bring to the surface additional dimensions of local female nurses' perceptions of MGRC, whereas findings from Study 1 suggest possible explanations of some quantitative findings of Study 2. For example, the added dimensions included: a) the sexual life of a female nurse MGRC provider may be influenced by her frequent practice of MGRC over a long period of time, and b) the delivery of MGRC by female nurses may threaten the nurses' public image. On the other hand, although female nurse subjects in

Study 2 tended to disagree that MGRC procedures were sexual, no details could be identified concerning what 'being sexual' really meant to subjects. By contrast, Study 1 suggests that 'being sexual' may refer to the perception that female nurses' physical contact with and/or exposure of the penis was sexually stimulating, and may mean that the delivery of MGRC by female nurses is improper and in direct conflict with traditional sexual beliefs concerning female sexual propriety.

In addition, findings from Study 1 and quantitative findings from Study 2 appear to suggest that subjects' perceptions, attitudes and responses towards MGRC and their behaviours during the delivery of MGRC might be totally negative. For example, the majority of subjects preferred nurses not to perform certain types of MGRC which required physical contact with or full exposure of the penis. On average, subjects perceived MGRC as embarrassing. However, considering that nearly 100 subjects proposed a number of measures and strategies, it seems that subjects would like to make efforts to improve the practice of MGRC, suggesting a positive attitude towards the practice of MGRC. Therefore, it could not be arbitrarily concluded that local female nurses' attitudes toward MGRC were completely negative. If nurse subjects' attitudes were completely negative, they would not recommend alternative and complementary ways to improve the practice of MGRC purely by female nurses, but simply complain or criticize the practice, or disregard it. The proposition of a number of measures and strategies by subjects suggest their concerns over the practice of MGRC, whereas these concerns demonstrate a positive attitude towards the practice of MGRC.

As a summary or an inference from the findings from Study 1 and Study 2, Figure 4.3 was generated, in which these findings were simplified. The core content in Figure 4.3 is a female nurse MGRC provider's subjective experiences, which mainly consist of her perceptions, attitudes and responses related to MGRC delivery. The majority of these perceptions, attitudes and responses during MGRC delivery may be negative, as was discussed earlier in this chapter. For example, female nurses may view MGRC as embarrassing, privacy intrusive or awkward. She may be reluctant to deliver MGRC and make efforts to avoid performing MGRC. Her boyfriend or husband may prevent her from delivering MGRC, or her practice of MGRC may influence her sexual life and the relationship with her husband or boyfriend. Details about these aspects have been discussed in this chapter.

**Figure 4.3 Summary of findings from Study 1 and Study 2**



Furthermore, it is clear (See Figure 4.3) that the male patient MGRC receiver's and the female nurse MGRC provider's perceptions, attitudes and

responses may influence each other during the provision of MGRC. The direct and anticipated outcome of MGRC was the improved health of the male patient. The indirect outcome of MGRC was the experience of MGRC for the male patient and for the female nurse. These experiences may in turn influence their perceptions, attitudes and responses during the provision of MGRC.

In both Study 1 and Study 2, it was found that a number of factors might contribute to female nurses' perceptions, attitudes and responses when performing MGRC. These factors could be: a) significant others, such as boyfriend, husband or a head nurse, b) the female nurse's and the male patient's age, c) the female nurse's family, which mainly refers to her marital status and motherhood, d) type of MGRC, which mainly refers to the level of technical difficulty and whether the penis requires to be physically contacted and/or fully exposed, e) environmental factors, which refer to the existence of a specific policy in the hospital which can protect female nurses from delivering MGRC, and f) the male patient's condition. The male patient's condition is of particular concern for the female nurse MGRC providers in the view of subjects in Study 1 and Study 2. Female nurse subjects' negativities towards MGRC may be strongly influenced by the male patient's level of consciousness, sensual astuteness and injury severity. Male patients who were in coma, sensually insensitive, e.g. suffering paralysis, or with serious trauma, would be provided with MGRC, which would not be influenced by any of the above factors or the factor of gender.

There always exist latent concerns underlying people's perceptions, attitudes and responses towards a matter of concern, e.g. MGRC delivery. Latent concerns, which constitute an unobservable construct, as discussed in psychology

and sociology, were thought to latently control and influence one's perceptions, attitudes and responses in social activities. In this research, the latent concern underlying female nurses' responses are referred to as 'female nurse' sensitivity towards MGRC', i.e. FNS-MGRC, which was further investigated and analyzed in Study 3. This sensitivity implies that female nurses' perceptions, attitudes and responses related to MGRC are not completely negative. For example, on average subjects disagreed that certain types of MGRC were sexual, stigmatising or dirty. The use of the word 'sensitivity' implies that Chinese female nurses may be aware of the potentially negative evaluations, in terms of impropriety, in relation to female nurses delivering MGRC, and may be aware of female nurses' possibly negative perceptions, attitudes and responses during their provision of MGRC.

## **Conclusion**

This chapter reported Study 1 and Study 2 from the perspective of aims and objectives, methods, data analysis, findings and discussion. Findings from the two studies were discussed respectively and as a whole. Findings from Study 1 and Study 2 were consistent and complemented each other. The proposition of a new concept, i.e. FNS-MGRC, concluded the overall discussion. The next chapter focuses discussion on the explication of the conceptual model and the operationalization of FNS-MGRC, which laid the foundation of the measurement research design in Study 3.

## **Chapter 5 Conceptual model of FNS-MGRC**

This chapter firstly states assumptions related to the conceptual model of FNS-MGRC, and then describes the model in respect of definitions of major concepts and propositions regarding the relationship between these concepts. This will be followed by a discussion on the operationalization of FNS-MGRC according to the proposed conceptual model of FNS-MGRC, including definition of FNS-MGRC, dimensions and aspects of FNS-MGRC, influential factors of FNS-MGRC, and hypotheses which are derived from this operationalization. In conclusion, it introduces six existing scales which have been established with validity and reliability and were used to examine their relationships with the FNS-MGRC scale.

### **Introduction**

Conceptual frameworks are defined in two different ways (Catanzaro, 1988). A conceptual framework can refer to “broad but distinct views of the discipline of nursing” (Catanzaro, 1988; Frey, 1995, p. 4), e.g. King’s Conceptual Systems (King, 1981, 1995a, 2006). It also can refer to a group of related concepts which is used to provide an organized explanation of the focus under study in a particular research project (Catanzaro, 1988). Therefore, a good conceptual framework can guide the research in moving forward (King, 1995a; Liehr & Smith, 2002). When the relationships between concepts are depicted and indicated with symbols, the symbolic representation is called a model (Liehr & Smith, 2002). The conceptual framework of FNS-MGRC therefore is referred to as a conceptual model in this research, given that different symbols are used to represent different concepts, e.g. nursing environment, general environment,

whole person with a dual identity, communication, and to represent the relationships between the above (See Figure 5.1, p. 158). A conceptual model requires, first and foremost, the description of the assumptions upon which the model is developed.

### **Assumptions**

An assumption is “a statement or principle which is accepted as true on the basis of logic or reason” (Catanzaro, 1988, p. 68; Sieloff, 1995, p. 48). Assumptions related to the conceptual model of FNS-MGRC can be categorized into two groups. The first group consists of those assumptions which may originate from the traditional conservative sexual culture in mainland China. These assumptions defined an environment within which female nurses delivering MGRC is distinguished from other areas of nursing practice in terms of its sensitivity (See Chapter 3, pp. 51-52).

The major source of the second group of assumptions is King’s Conceptual System and Goal Attainment Theory (Fawcett, 2005; King, 1981, 1995a, 1997, 2006). The researcher found that her worldviews, beliefs, values and views about human beings, health, environment and nursing were consistent with King’s, according to King’s works (King, 1981, 1995a, 1995b, 1997, 1999, 2006), and by referring to others’ analyses of King’s works (Carter & Dufour, 1994; Fawcett, 2001, 2005; Frey, 1995, 2005; Sieloff, 1995; Whelton, 1999). Furthermore, both qualitative and quantitative methodologies in research were thought to be consistent with King’s underlying worldviews (Frey, 2005). This then has no conflict with the methodology underpinning this research design, in which both qualitative and quantitative approaches were used (See Chapter 3, pp. 48-49). In



addition, the researcher considered that the systematic approach to nursing occurrences, the key to King's Conceptual System (Fawcett, 2001, 2005; Frey, 1995, 2005; King, 2006), could enable the structuring, simplification and operationalization of the construct of FNS-MGRC. In particular, as was depicted in King's Goal Attainment Theory, nurses' and patients' perceptions of any given situations were valued equally (Fawcett, 2005). The researcher treasured this stance as nurses' perceptions can influence their attitudes and activities during the provision of nursing care.

Therefore, it was feasible to achieve "philosophical-theoretical-methodological consistency" (Frey, 2005, p. 231) by referring to the well developed King's Conceptual Model and Goal Attainment Theory (Fawcett, 2005; Frey, 2005). This consistency was crucial to science development (Frey, 2005). The researcher thus was not required to continually contemplate upon and explicate the philosophical, methodological and theoretical inconsistencies between the researchers' stances and views and the theories which were referred to.

The following sections describe these two groups of assumptions in detail, i.e. specific assumptions on sexual propriety and general assumptions about open systems, human beings, health and nursing.

#### **Specific assumptions on sexual propriety**

The first assumption is that coitus sex, i.e. penile-vaginal sex, is the center of sexual life in mainland China, and only heterosexual activities within monogamous marriage are socially and morally proper (Evans, 2002; Gallagher, 2001; Ruan & Lau, 1997). In both historical and present China, coitus sex is

consistently the centre of sexual life. Other modalities of sexual intercourse, e.g. penile-anal sex, oral sex, are often hidden and rare occurrences, except during the period of the Tang Dynasty (618 - 907), i.e. a period of relative sexual openness, and the Qing Dynasty (1644 - 1911), i.e. a period of prevailing homosexual activities (Cui, 2004; Gallagher, 2001; Giskin & Walsh, 2001; Ruan & Lau, 1997).

The second assumption is that the delivery of MGRC by female nurses is improper, in the view of ordinary Chinese. It is morally required that physical contact is restricted to taking place between a married couple (Ren, 2005; Ruan & Lau, 1997; Zeng, 2004; Zhao & Li, 2003; Zhang, 1995), and only within-marriage heterosexuality is legalized and morally permitted (Ruan & Lau, 1997). From the era of Confucius (551 B.C. - 479 B.C.) (Tu, 1990; Ruan & Lau, 1997) until the Republic of China (1911 - 1949) (Giskin & Walsh, 2001), females of seven years old or above were physically segregated from males (Zhao & Li, 2003). The initially explicit restriction gradually evolved to be an implicit restriction of any physical contact between female and male adults who were neither close friends nor spouses (Ren, 2005). This physical restriction aimed to avoid sexual seductions which were thought to be triggered mainly by females and to avoid the occurrence of improper sexual activities between those who were not couples (Ren, 2005; Zhao & Li, 2003). Although the influence of this restriction is no longer as strong as it was in the old China, i.e. before the establishment of People's Republic of China (1949 - present) (Giskin & Walsh, 2001), ordinary Chinese in the present day are usually very careful about any physical contact with the opposite sex, unless they have an intimate relationship

or are married. In fact, physical contact with any sexual implication, e.g. kiss, exposure of or physical contact with the penis, is often regarded as the most private matter for Chinese. Sexuality remains a taboo topic and, in any period in China, is always viewed as mysterious (Ren, 2004; Zhao & Li, 2003). The interpretation of the delivery of MGRC by a female nurse as improper therefore implies an association between MGRC provided by female nurses and a negative evaluation, while the evaluation could be implicit or explicit.

The third assumption thus is that a female nurse delivering MGRC is potentially associated with female nurses', male patients', others' or socially negative evaluations. That is, delivering MGRC may make a female nurse MGRC deliverer undervalued or unwanted. This association may be caused by the following two reasons, related to traditional sexual beliefs about female sexual propriety in mainland China.

Firstly, the performance of MGRC by a female breaks the generally accepted social rules, i.e. social norms, concerning the restriction of physical contact between males and females. The breaking of social norms often entails negative evaluation (Lawler, 1991; Miller, 1996), which was found to be the first source of embarrassment (Miller, 1996). Available research findings suggest the association between negative evaluation and a female nurse delivering MGRC. These findings are about female nurses' (Ding, 1998; Xiang et al., 2004) and male patients' (Ding, 1998; Xiang et al., 2005) psychological and emotional responses towards female nurses delivering meatal care (Ding, 1998), or about care of the private parts of the male body (Xiang et al., 2004, 2005) (See Chapter 1, pp. 4-5; Chapter 2, pp. 25-44). Findings from Study 1 and Study 2 in this

research also support the association between negative evaluation and a female nurse delivering MGRC (See Chapter 4, pp. 103-123, 130-147).

Secondly, in mainland China, the female is always expected and motivated to maintain virginity before marriage, to maintain chastity after being married or after her husband has died, by keeping sexual faithfulness to the (potential) husband and behaving in a sexually exclusive manner, i.e. ensuring a lack of any activity which could have the potential to be interpreted as sexual (Ebrey, 1990; Gallagher, 2001; Ruan & Lau, 1997; Zhan, 2002). That females physically contact or expose the male external genitalia, other than those of their (potential) husband's, actions which are indispensable during the delivery of MGRC, is therefore viewed as undesirable and is often negatively evaluated by ordinary Chinese, both male and female. Furthermore, the behaviours of physical contact with or exposure to the external genitalia of the opposite sex are often related to the behaviours of prostitutes, who are lowly valued and negatively evaluated (Ruan & Lau, 1997). Although the above female sexual propriety rules, in the name of female sexual virtues, are being challenged nowadays with the increasing popularity of the open and individualistic living philosophy from the western world, they still take dominance in regulating female sexual conduct in mainland China (Evans, 2002; Gallagher, 2001).

The above three assumptions define the society in mainland China as having a culture of sexual conservativeness. The next section discusses general assumptions about open systems, human beings, health and nursing in the discipline of nursing in accordance with King's Conceptual System and Goal Attainment Theory. Without an understanding of these assumption and concepts,

the interaction and relationships between the nursing profession and society in general, and between nurses, patients and other society members, cannot be appropriately defined and interpreted. Given that King (1981, 1995a, 1995b, 1997, 1999, 2006) and other nursing scholars (Carter & Dufour, 1994; Fawcett, 2005; Frey, 1995, 2005; Sieloff, 1995) have discussed these concepts and the relationships between these concepts in detail, the following discussion will be relatively brief.

### **General assumptions**

This group of assumptions builds a platform for the interpretation of the encounter between a female nurse and a male patient during the delivery of MGRC. This encounter can be a real or an imagined situation.

### ***Assumptions about open systems***

Human society consists of a variety of open systems. An open system is an “organized whole” (Fawcett, 2005, p. 91) which is composed of a set of elements connected by communication links. These links allow the continuous exchange of energy and information, whereas the exchange is goal oriented. The goal for individuals, groups or communities is health (Fawcett, 2005; King, 1997, 1999, 2006).

In dealing with health related concerns, human society can be viewed as organized wholes which consist of three interactive open systems: a) personal systems, b) interpersonal systems, and c) social systems (Fawcett, 2005; Frey, 1995, 2005; King, 1981, 1995a, 1997, 1999, 2006; Sieloff, 1995). Human beings are expected to function well in organized wholes so as to attain, maintain and restore health, i.e. the achievement of “maximum potential for daily living” (Frey,

2005, p. 227; King, 1981, p. 5).

Individuals are personal systems. A nurse or a patient is an open system and acts as a whole within his/her own environment, respectively (Fawcett, 2005; Frey, 2005; King, 1981, 1999, 2006; Sieloff, 1995). Interpersonal systems refer to the groups which include two or more interacting individuals, forming dyads, triads, and etc. (King, 1981). The size of an interpersonal system could be small or large. So too a social system could be small, e.g. family systems, or large, e.g. health systems. A social system is an organized system of social roles, behaviours and practice with a permeable boundary which allows the exchange of energy and information (King, 1981, p. 115; Sieloff, 1995). Social systems serve to meet the needs and goals of both individuals and groups, which are influenced by political, cultural and economic factors (Frey, 2005). An individual functions as a whole person in their social systems through continuous interpersonal relationships to achieve shared goals with their relations (Sieloff, 1995).

This structure of open systems, i.e. permeable boundaries between open systems which allow the exchange of energy and information, make it possible that one open system influences and is influenced by other open systems (King, 1981; Fawcett, 2005; Frey, 2005). Key concepts in personal systems, e.g. perception, space, coping, body image, self, interpersonal systems, e.g. interaction, role, stress, and social systems, e.g. power, status, authority, are important for the understanding of different systems (Fawcett, 2005; Frey, 2005). Definitions and explanations about those key concepts can be found in King's (King, 1981, 1995a, 1995b, 1997, 1999, 2006) and others' writings (Fawcett, 2005; Frey, 1995, 2005; Sieloff, 1995). As these three systems are open to and

interact with each other, these concepts are related and applicable in each of the three dynamic whole systems (Frey, 2005). These concepts provide a framework for nurses to organize information according to these major concepts and to facilitate their decision-making in concrete nursing situations (King, 2006). Examples regarding this can be found in King's (1981, pp. 24-47; 1995a, pp. 18-20) and Frey's (2005, pp. 233-234) writings.

### ***Assumptions about human beings***

Human beings and human acts are the centre of human society and the foci in nursing (Fawcett, 2005; King, 1981). Human beings are unique and holistic individuals who have their own needs, goals and values. These needs, goals and values vary from person to person. Every human being is able to perceive information by means of sensory and intellectual tools, i.e. ears, eyes, skin and membrane, mouth and tongue, and brain (Sieloff, 1995). Perception is a means by which an individual experiences direct contact with objects, human beings, various symbols, situations or abstract ideas (Frey, 2005; King, 1981, 1999; Sieloff, 1995). It represents one's image of reality and influences one's attitudes and behaviours (King, 1981; Sieloff, 1995).

Human beings have some intrinsic attributes which can influence their subjective experiences and their reactions across environments and situations. For example, a pessimist often negatively perceives, interprets and responds to a situation with unclear cues. However, it is difficult to limit influences caused by such attributes, e.g. pessimism, to certain matters, situations or environments. That is, it is extremely challenging to delineate in which situations these attributes influence one's perceptions, interpretations and responses to one

situation, but not to other situations.

### ***Assumptions about health and nursing***

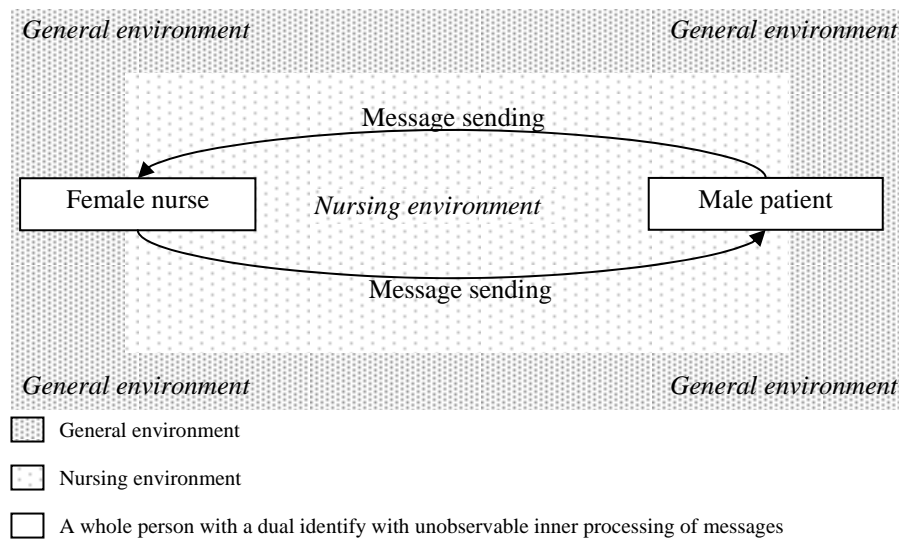
The goal for nursing is to attain, maintain and restore health (Fawcett, 2005; King, 1981; Sieloff, 1995). Health is also the common goal for all open systems, i.e. personal systems, interpersonal systems and social systems (Fawcett, 2005; Frey, 2005; King, 1981). Human beings and their activities, i.e. continuous interactions with environments, constitute the foci of nursing (Fawcett, 2005; King, 1981). Therefore, “health is defined as dynamic life experiences, which implies continuous adjustments to stressors” in environments “through optimum use of one’s resources to achieve maximum potential for daily living” (Frey, 2005, p. 227; King, 1981, p. 5). However, the meaning of health varies from person to person. It is multi-dimensional, e.g. genetic, subjective, functional, cultural. Many factors can influence people’s understanding of health, for instance, past experiences, standards of living, culture, diseases and illness (Frey, 2005).

### **Conceptual model of FNS-MGRC**

All of the above assumptions laid the philosophical and theoretical foundations for the conceptual model of FNS-MGRC (See Figure 5.1, p. 158). Upon these assumptions, the researcher proposed three key concepts for the conceptual model of FNS-MGRC: a) environment, i.e. physical versus non-physical environment, internal versus external environment, nursing versus general environment; b) human being, i.e. whole person with a dual identity; and c) interaction, i.e. female nurse-male patient interaction.



**Figure 5.1 Conceptual model of FNS-MGRC**



These three concepts and their relationships constitute the main body of the conceptual model of FNS-MGRC. They are closely related to the particularity of a female nurse delivering MGRC, i.e. sensitivity (See Chapter 3, pp. 51-52) and the interpretation of sexual impropriety (See Chapter 4, pp. 101-123). This particularity was considered to originate from and have been shaped into being by the longstanding conservative sexual culture in mainland China (See pp. 51-52, 98-99, 150-154). No inconsistency was found between the researcher's opinions and King's Conceptual Systems and Goal Attainment Theory. Rather, the researcher's opinions may expand the applicability of King's theories to the specific area, i.e. a female nurse delivering MGRC in social systems which have been influenced by a long and strong conservative sexual culture.

### **Key concepts**

#### ***Environment***

An environment consists of two elements, i.e. physical and non-physical environment. Physical environment is defined as the physical and touchable characteristics of objects and human beings which define a place. Non-physical

environment refers to the total of observable human activities and abstract ideas, e.g. the style of communications, cultural beliefs/values, social rules, which define a social situation. In particular, abstract ideas can regulate or influence individuals', groups' and communities' activities. Individuals', groups' and communities' activities may in turn influence the non-physical environment within which those people live, work and play.

The clarification about physical and non-physical environment is necessary as, in King's Conceptual Systems, these concepts, i.e. 'environment', 'physical environment', 'social environment', are not clearly defined (Fawcett, 1995; King, 1981, 1995a, 2006; Sieloff, 1995). The concepts of 'internal environment' and 'external environment' in King's Conceptual Systems are also vague, although King (1988) stated that an environment could be both external and internal (Sieloff, 1995).

For the researcher, physical and non-physical environments are external environment as they locate out of the body of interacting individuals, groups or communities, whereas internal environment refers to those elements, physical and/or untouchable, located within a personal system, an interpersonal system and a social system. In this way, an environment could be both external and internal, as was stated by King (King, 1981; Sieloff, 1995). For example, the internal environment of a community, e.g. culture, may be the external environment of an interpersonal system, e.g. three community residents who interact with each other.

However, internal environment for a personal system has a different meaning. The genetic, physiological, chemical, neurological and physical

relationship and interaction between genes, cells, tissues, organs and systems within an individual's body are defined as internal environment. Dynamics in the internal environment of an individual are unobservable until changes in physical, mental, social and sexual functions are detectable and/or physically observable. This contributes to the hidden nature of the internal process of interpreting/decoding and encoding messages. Encoding and decoding are necessary to communication and interaction (Lucas, 1994; Michener, DeLamater, & Myers, 2004). In other words, the hidden nature of communication refers to the process of interpreting/decoding and encoding messages and symbolic systems, which are used to process messages, and are unobservable. By contrast, only the outcomes of message processing, i.e. the message which is sent and the action of sending the message, are observable (See Figure 5.1, p. 158).

In addition, both the internal and external environment can influence one's perception and interpretation of his/her interactions with others and/or with environments, and vice versa. The following examples, derived from findings of Study 1 and Study 2 (See Chapter 4, pp. 101-123, 130-143), could support this statement. The accidental presence of audiences and/or audiences' discussions during MGRC delivery about a female nurse delivering MGRC may induce or intensify the female nurse's embarrassment. The male patient's and/or the female nurse's beliefs about the restriction of physical contacts between female and male can influence the interaction between them during the provision of MGRC. In addition, the male patient's and the female nurse's age and/or marital status may influence their perceptions and responses to the provision and acceptance of MGRC.

In particular, the delivery of MGRC occurs in an environment within which the male patient and/or the female nurse recognize that the patient has the need for MGRC, while the nurse is responsible for providing MGRC. This external environment is defined as 'nursing environment'. It could be physical, e.g. the use of a curtain, and non-physical, e.g. supporting attitudes among nurses towards the male patient and his family members, and towards colleagues.

To distinguish the nursing environment, the total of other environments is defined as 'general environment'. People in a general environment may define the same action differently from those who are in a nursing environment. For example, the physical contact with the penis by a female can be interpreted as sexual by those who know nothing about MGRC. By contrast, the same action, i.e. the contact with the penis by a female, is interpreted by the female nurse and by the male patient as a necessary caring action for the male patient who requires MGRC.

***Whole person with a dual identity***

'Identity' is used to specify a person who is, and to locate himself/herself relative to others in human society (Owens, 2003, p. 207). The identification of a person therefore is inseparable from his/her social relations and living environment. One's identity is always a social identity thereby (Jenkins, 2004).

In the field of nursing, growing attention has been drawn to the study of professional identity as a nurse. However, few studies have placed emphasis on the conceptual explication of professional identity as a nurse (Fagermoen, 1997; öhlén & Segesten, 1998). Professional identity as a nurse is considered to be shaped and to grow mature in alignment with the process of becoming a nurse

and working as a nurse (Fagermoen, 1997; öhlén & Segesten, 1998), i.e. professional socialization (Blais et al., 2006; Chitty, 2005; MacIntosh, 2003). It implies that a nurse with a professional identity has been equipped with all knowledge, skills, attitudes, norms, values and culture, which are considered to be characteristics for being a nurse in the discipline of nursing (Fagermoen, 1997; MacIntosh, 2003; öhlén & Segesten, 1998). An individual nurse's professional identity is regarded as integral to his/her personal identity, whereas the pre-existence of his/her personal identity is necessary for the development of his/her professional identity (öhlén & Segesten, 1998). The perception of one's professional identity is also considered to be an integral part of his/her self concept (öhlén & Segesten, 1998). One's self concept is thought to be developed gradually in the process of social interaction with others (Blumer, 1969; öhlén & Segesten, 1998).

öhlén and Segesten (1998) made a differentiation, based on available studies, between an individual nurse's professional identity and his/her identity in general. They proposed that a nurse's professional identity and his/her identity in general were "closely interconnected" (öhlén & Segesten, 1998, p. 724), but öhlén and Segesten (1998) did not further define or clarify what one's identity in general was. This leads to the ambiguous use of 'identity in general'. In fact, as a whole person, some attributes, e.g. assertiveness, compassion, must play roles in both their nursing environment and in his/her general environment. For instance, usually a person who is compassionate and assertive when performing nursing tasks is also compassionate and assertive when he/she performs other roles in his/her general environment. This leads to difficulty in separating a nurse's

professional identity and his/her identity in general.

Even 'professional identity' in nursing is not clearly and consistently defined (Cook, Gilmer, & Bess, 2003; Fagermoen, 1997; Gregg & Magilvy, 2001; MacIntosh, 2003; öhlén & Segesten, 1998). Some nursing scholars (Fagerberg, 2004; Grealish & Trevitt, 2005; Roberts, 2000) use the concept loosely, without providing a clear definition or detailed explanation. Additionally, nursing is expanding and professionalizing even in developed societies and countries (Yam, 2004). The degree of professionalization in nursing varies across societies and countries (Keogh, 1997; Oweis, 2005; Yam, 2004). To date, no conclusive and consistent explication could be provided regarding what a nursing professional really is, or what the nursing profession really is. According to Davies (2002), the establishment of professional identity always means the 'playing-up' of one who considers himself/herself as a professional, but the 'playing-down' or devaluing of others who are regarded as a non-professional. This is definitely in direct conflict with the researcher's stance and King's stance, namely, that patients and nurses are regarded as equally valuable (Fawcett, 2005). Therefore, in this research the use of 'professional identity' and 'identity in general' is intentionally avoided.

Rather, it is proposed in this research that a nurse possesses a dual identity as a whole person, i.e. nurse and other. 'Nurse' and 'other' are not defined separately or exclusively to each other. They are simply used to signify one's particular identity existence in his/her non-physical environments, or in human society. In the situation in which a female nurse provides MGRC to a male patient, the female nurse is considered to possess two components which are

located in one identity: one represents the particularity of existence as a nurse, i.e. 'nurse'; the other represents the total of other existences as a society member but a nurse, i.e. 'other'. Therefore, 'nurse-other' is used to refer to a female nurse's dual identity as a whole person. The component of 'nurse' indicates that the nurse possesses the knowledge, skills, attitudes, values and beliefs which are expected to be possessed by a nurse in his/her culture and society. Correspondingly, 'patient-other' in this research is used to refer to a patient's dual identity as a whole person, i.e. 'patient' implies that he/she needs nursing service in a nursing environment, while 'other' implies that he/she has many other needs as a society member but a patient. However, a patient may not fully recognize his/her needs for nursing service and other needs, which requires a nurse to help him/her think these through so that these needs could be maximally met.

In the nursing environment, within which delivery of MGRC by a female nurse occurs, the female nurse has the responsibility to provide MGRC, whereas the male patient requires MGRC. They may share the goal to restore and improve the male patient's health according to King's Goal Attainment Theory (King, 1981), which justifies all of the female nurse's actions if these actions are considered as beneficial to the male patients' health. In comparison, in the general environment, both the female nurse and the male patient are society members, in this respect similar to each other. They have similar human rights and human needs, share similar social responsibilities, and are influenced by similar social, political and cultural factors. Under these conditions, they develop similar cultural beliefs and values about the same thing.

However, it is impossible to separate the identity component of 'nurse' or

‘patient’ from that of the identity component of ‘other’, respectively, since individuals interact with others and with environments as a whole person. These two components within one identity, i.e. ‘nurse’ and ‘other’ in a nurse’s identity, ‘patient’ and ‘other’ in a patient’s identity, co-exist and influence each other. Beliefs and values which are developed in general environments may have an effect on the nurse or the patient’s activities in the nursing environment, and vice versa. This characteristic influences the interaction between the female nurse and the male patient during the delivery of MGRC. The following are some examples from the perspective of the female nurse and of the male patient, respectively.

For the female nurse, she may believe that, according to the codes of ethics for nurses (ICN, 2006; Pang et al., 2000; SN, 2000), it is her obligation to deliver MGRC without any restriction of, e.g. gender, age, religion. This belief can play a role in driving the nurse to provide help to some society members when help is needed in the general environment, e.g. helping disabled people find their way such as in crossing the street. On the other hand, if she believes that, according to the cultural beliefs on female sexual propriety, it is improper to touch the penis of a male who is not her husband, this belief may prevent her from performing MGRC.

In comparison, for the male patient, the cultural belief about sexual propriety which is developed in the general environment may prevent him from comfortably accepting the female nurse’s provision of MGRC. On the other hand, the male patient may develop a belief in the nursing environment, based on his own health benefit from the provision of MGRC, that it is natural for a female nurse to provide MGRC for him. This belief may make his wife uncomfortable,



as she may misinterpret her husband's natural acceptance of a female nurse delivering MGRC as sexual enjoyment for her husband. The wife's responses, which are caused by this uncomfortable interpretation, may in turn influence the female nurse's natural delivery of MGRC to the husband.

Therefore, human beings, both the female nurse and the male patient who are involved in MGRC delivery, are defined as whole persons, each with a dual identity, i.e. 'nurse-other', 'patient-other'. The identity component of 'nurse' and 'other' for a nurse, or the identity component of 'patient' and 'other' for a patient, actually coexist as a whole and cannot be separated into two.

#### ***Female nurse-male patient interaction***

This key concept is explained from three aspects, i.e. definition, interpretation inconsistency and influence of the particularity in a female nurse delivering MGRC.

##### **1) Definition**

Interaction is a process of perception and communication between individuals, and between individuals and environments. It is represented by verbal and non-verbal expressions which are goal directed. The goal of interaction between nurses and patients is health (Fawcett, 2005, p. 97; King, 1981, p. 145). Without communication, no interaction is possible, and as a result the goal of the interaction would never be reached (Michener et al., 2004).

In this research, female nurse/male patient interaction is defined as the interpersonal interaction between the female nurse and the male patient during the whole process of MGRC provision. This process consists of three stages: a) preparatory stage, in which the female nurse not only explains the importance and

the procedures of MGRC to the male patient, but also explores and identifies the patient's concerns and needs, and predicts the patient's possible responses to her provision of MGRC so as to generate appropriate strategies to deal with these responses once they occur; b) performance stage, during which, in addition to the skilful performance of MGRC, the female nurse uses appropriate strategies to control her own verbal and nonverbal expressions in case any negative message is sent, and she also observes any negative responses from the male patient so as to take appropriate actions to deal with these negative responses; and c) post-performance stage, in which the female nurse makes the male patient and his physical environment clean and tidy, informs him of any matters which require the patient's attention and teaches the patient self-care actions so as to facilitate the restoration of health.

## 2) Interpretation inconsistency

Communication has a hidden nature which makes misinterpretation very possible (King, 1981; Sundeen, Stuart, Rankin, & Cohen, 1998). Communication is defined as a process of sending and receiving messages between two individuals. It may occur during face-to-face meetings or through telephone, television, internet or writing. A message refers to the idea, concept or information which one wishes to convey (Fawcett, 2005; Lucas, 1994; Michener et al., 2004).

Given that people cannot share their experiences directly, symbols are developed to facilitate the communication. "Symbols are arbitrary forms that are used to refer to ideas, feelings, intentions, or any other object" (Michener et al., 2004, p. 163). Symbols could be words, e.g. verbal expression and writings,

objects, e.g. a green light in cross-intersections, gestures, and so forth. They represent one's experiences in such a way that others can perceive them through their own sensory organs (Michener et al., 2004). A prerequisite for communication to take place is that the meanings of these symbols are socially shared (Michener et al., 2004). Therefore, communication involves the perceptions of both the message sender and the message receiver. Both the message sender and the message receiver can influence the process of communication.

However, no one can express the same thing with exactly the same words or symbols in exactly the same ways as anyone else, so causing the individualistic communication which varies from person to person (Fawcett, 2005; King, 1981; Lucas, 1994; Michener et al., 2004; Sieloff, 1995). Even when the same words are used in the same ways by the message sender, the message sender and the message receiver may interpret, i.e. decode them differently because they might have developed different symbolic systems for the purpose of interpreting verbal and nonverbal cues (Michener et al., 2004). The receiver may misinterpret the message from the sender as a result.

Furthermore, human beings have limitations in achieving complete congruence between the message which is intended to be sent and the message which is actually sent. This is especially the case when the information is ambiguous (Lucas, 1994; Michener et al., 2004). For example, a novice female nurse tries to perform urinary catheterization for a male patient in a natural way. However, her inexperience, which is demonstrated through awkward performance, may be misinterpreted by the patient as embarrassment. This

perception may in turn intensify the patient's discomfort if he has already been embarrassed by the fact that his penis is touched by one who is not his sexual partner. The intensified discomfort in turn may exacerbate the nurse's awkwardness.

Therefore, the female nurse and the male patient are both message senders and message receivers, respectively, during their interaction. However, the process of encoding, i.e. constructing information into an understandable message for the message receiver, and decoding, i.e. interpreting the received information so as to reach an understanding of the message, occurs within each person's internal environment. The processing of information or messages is hidden in this sense, suggesting that this process may be transparent only for the one who performs this activity, i.e. the message sender, but opaque for the other, i.e. the message receiver. On the other hand, the action of sending the message and the message which is sent, whether it is intended to be sent by the message sender, are observable for the message receiver or by any audience(s) who notice this interaction (See Figure 5.1, p. 158).

The interpretation of perceptions, communications and interactions depends on the situations in which it occurs (Fawcett, 2005; King, 1981; Sieloff, 1995). Many other factors also influence the interpersonal interaction and person-environmental interaction, e.g. values, emotions, distractions, differences between various formats of symbols, closeness between individuals, roles and role expectations of individuals who are involved in the interaction, i.e. interactants (Fawcett, 2005; King, 1981; Lucas, 1994; Michener et al., 2004; Sieloff, 1995). These factors may increase the possibility of misinterpretation

between the message sender and the message receiver.

Therefore, the hidden nature of inner processing of messages during communication makes 'interpretation inconsistency' possible. This inconsistency occurs when there exists a difference between the message which is intended to be sent and the message which is actually sent. It also occurs when there exists a difference between the message which is actually sent by the message sender and the message which is interpreted by the message receiver. Repeated occurrences of these two types of inconsistent interpretation, i.e. misinterpretation, in a process of interaction complicate the understanding between the female nurse and the male patient, leading to the strong possibility of misunderstanding and misinterpretation.

### 3) Influence of the particularity in a female nurse delivering MGRC

The particularity embedded in a female nurse delivering MGRC may increase the possibility of misinterpretation during the interaction between the female nurse and the male patient. As was analyzed previously, the female nurse and the male patient interact with each other as a whole person with a dual identity. Before being involved in the interaction during MGRC delivery in the nursing environment, the female nurse and the male patient may have developed a belief that for a female to deliver MGRC is improper and each may hold a negative evaluation about it, under the strong influence of the prevailing conservative sexual culture. This belief and evaluation may influence the interaction between the female nurse and the male patient during the delivery of MGRC through the following two approaches.

In the first place, both the female nurse and the male patient may feel

embarrassed because of their perceptions of a negative evaluation about female nurses delivering MGRC. They may then make efforts to hide this aversive feeling and their negative perceptions of females delivering MGRC, and/or try to avoid or speed up the delivery of MGRC. These reactions are detrimental to the goal achievement, i.e. restoration of health. The avoidance and/or the speeding up of MGRC performance can lead to compromised quality of MGRC, which was found in Study 1.

In the second place, either the female nurse or the male patient may hold the above negative association between females delivering MGRC and negative evaluation. One's negative association or interpretation may be sensed by the other, which may trigger or intensify the other's negative perceptions and responses. For example, when embarrassment occurs for the nurse, following her perception of the male patient's embarrassment, even though initially the nurse does not feel embarrassed, this occurrence of embarrassment is termed empathic embarrassment (Miller, 1987). Findings from Study 1 and Study 2 suggest the occurrence of embarrassment, including empathic embarrassment, during the female nurse subjects' provision of MGRC (See Chapter 4, pp. 101-123, 130-143).

#### **Summary of the conceptual model of FNS-MGRC**

The female nurse and the male patient who are involved in the delivery of MGRC interact with their own external environment and with each other as a whole person with a dual identity, i.e. nurse-other, patient-other. The female nurse continually interacts with the male patient during the 3-stage process of MGRC delivery, i.e. preparatory stage, performance stage and post-performance

stage.

The female nurse/male patient interaction is subject to misinterpretation, in the same way as in any other interaction which occurs in any other situation. This interaction has a hidden nature. Namely, the process of encoding and decoding a message is unobservable, while only messages which are sent and the actions of sending messages are observable. Interpretation inconsistency occurs when there exist differences between the received messages and the sent messages, and/or between the messages that one wishes to send and the messages that one actually sends. The dual identity for the female nurse and the male patient may increase the occurrence of interpretation inconsistency. Many internal and external environmental factors can influence the female nurse/male patient interaction. On the other hand, this interaction may have an effect on the environment and the female nurse's and/or the male patient's dual identity as a whole person.

The symbols in Figure 5.1 (See p. 158) show the relationships between these key concepts, and also reflect some characteristics of these concepts. For example, the rectangle surrounding the word "female nurse" across the nursing environment, which is represented by the rectangle with fewer dots, and the general environment, which is represented by the rectangle with more dots, indicates that the female nurse is a whole person, i.e. a whole person with a dual identity, 'nurse-other'. The right part of the rectangle is positioned within the symbol representing nursing environment. This part represents the nurse's identity component of 'nurse'. The left part of the rectangle is positioned within the symbol representing general environment. This part represents the nurse's identity component of 'other'. As to the two arrow lines, they reflect the dynamic

process of communication between the two parties: a) the male patient sends a message to the female nurse, b) this message is processed in the female nurse's mind. This process is unobservable so that the arrow stops at the border of the rectangle which represents the nurse; c) after processing this message, the female nurse sends a response to the male patient; d) the patient receives and processes the response message, and then e) he sends the second message to the female nurse. Thus the second run of message transmission commences, i.e. the same process, from 'a' to 'e', is followed again. This process is circular as a result. Also, these two arrow lines reflect that interpretation inconsistency is possible. The processing of encoding and decoding messages, i.e. the above process of 'b' or 'd', is located in the internal environment of the female nurse and the male patient, therefore it is unobservable and no symbols have been developed to indicate this process.

### **Propositions**

Propositions refer to statements which show the logical relationships between key concepts (Fawcett, 2001; King, 1997; Sieloff, 1995). According to the above conceptual model of FNS-MGRC, the following propositions were generated: 1) if a female nurse negatively perceives or responds to MGRC, she also negatively perceives or responds to other negative evaluation clues; 2) if a female nurse is overly concerned over negative evaluations, she negatively perceives and responds towards female nurses delivering MGRC; 3) if a female nurse holds strong beliefs about conservative female sexual propriety, she negatively perceives and actively avoids the provision of MGRC; 4) if a female nurse possesses the personality trait of high embarrassability, her negative



perceptions and responses towards female nurses delivering MGRC is intensive; and 5) if the frequency of delivering MGRC varies, a female nurse perceives and responds differently towards female nurses delivering MGRC.

Although the conceptual model of FNS-MGRC and propositions from this model appear clear, it remains vague as to what constitutes and how to measure FNS-MGRC. A latent construct, e.g. FNS-MGRC, is “a working concept” (“Construct”, 2006), or “a synthesis about a series of impressions” (Kline, 2005, p. 24). In the view of Babbie (2004, p. 123), constructs are “theoretical creations” which are unobservable but can be reflected through observations. For these observations to occur requires the procedure of operationalization so that a construct can be represented by and measured through a series of observable and measurable variables or indicators, i.e. observations (Babbie, 2004; David & Sutton, 2004; Netemeyer et al., 2003).

The conceptual model of FNS-MGRC lays the conceptual foundation for the operationalization of FNS-MGRC. Without the conceptual explication about human beings, environment, interaction and interpretation inconsistency, all ideas related to the operationalized FNS-MGRC would be without ground or roots.

### **Operationalization of FNS-MGRC**

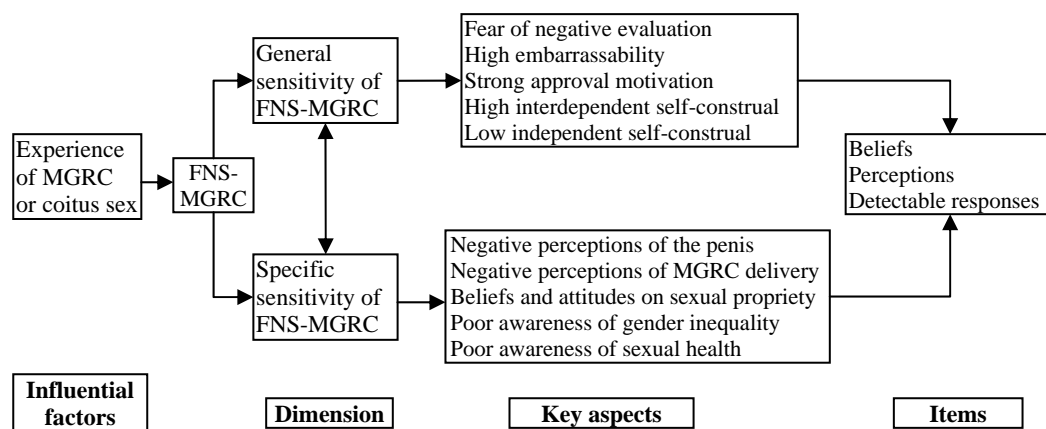
The outcomes of the operationalization of FNS-MGRC are shown in Figure 5.2 (See p. 175). Detailed description and discussion are presented in the following sections which focus on the definition of FNS-MGRC and the identification of dimensions and aspects of FNS-MGRC.

### **Definition of FNS-MGRC**

In the Oxford Advanced Learner’s Dictionary (Hornby, 2003, pp. 1164-

1165), sensitivity is defined as: 1) “the ability to understand other people’s feeling”; 2) “the ability to understand art, music, literature, and the ability to express oneself through them”; 3) “the tendency to be easily offended or upset by something”; 4) “the fact of needing to be treated very carefully because it may offend or upset people”; or 5) “the quality of reacting quickly or more than usual to something”.

**Figure 5.2 Outcomes of the operationalization of FNS-MGRC**



Based on the above definitions, sensitivity in this research is defined as a personality trait which allows people to be able to: 1) astutely perceive interpersonal, situational or one’s own dynamics; 2) quickly react towards the perceived messages; or 3) send verbal or non-verbal messages which may stimulate others to react to the same situation in similar ways.

In brief, ‘sensitivity’ refers to the trait which not only permits the person to identify (potentially) stimulating interactive messages, e.g. thought, value, belief, feeling, attitude, behaviour, but also allows a person to transmit messages which may make others react physiologically, psychologically or emotionally.

Accordingly, ‘FNS-MGRC’ in this research refers to the trait with which a female nurse is able to clearly identify and quickly respond to psychological,

social and sexual concerns and needs associated with male genitalia, MGRC and female nurses delivering MGRC.

### **Dimensions of FNS-MGRC**

According to the above definition of FNS-MGRC, FNS-MGRC can reflect a trait which allows the female nurse to quickly identify and respond to the male patient's concerns and issues related to a female nurse delivering MGRC. These concerns and issues could be that, for a female to deliver MGRC, is aversive, sexual, embarrassing, or improper. The female nurse MGRC provider might be considered to be behaving in sexually improper ways, undesirable, or even be viewed as similar to a prostitute (Ruan & Lau, 1997; Zhao & Li, 2003). The above evidences support the assumption that MGRC is associated with negative evaluations. Therefore, FNS-MGRC could be considered as a trait which allows a female nurse to sense negative evaluation cues, and/or to demonstrate her own negative perceptions and responses during MGRC delivery.

However, as a female nurse is a whole person with a dual identity, the same trait can influence her perceptions and responses not only in the nursing environment, but also in the general environment. If the trait of FNS-MGRC allows a female nurse to sense and respond to negative cues related to a female nurse delivering MGRC, it must also allow her to sense and respond to negative cues which are presented in the general environment. Therefore, FNS-MGRC was proposed to consist of two dimensions: a) specific sensitivity of FNS-MGRC (SS-MGRC), and b) general sensitivity of FNS-MGRC (GS-MGRC).

SS-MGRC was considered to encompass all negative responses and perceptions which were directly related to MGRC, e.g. reluctance to deliver

MGRC, or indirectly related, e.g. conservative sexual beliefs. In comparison, GS-MGRC was considered to constitute those indicators which suggested that the female nurse had concerns over or even fear of others' negative evaluations about her.

As negative perceptions and responses about female nurses delivering MGRC were thought to be rooted in the conservative sexual beliefs in mainland China, which beliefs are passed from generation to generation in a form of culture, a female nurse's initial/primary cognition of those negative evaluations regarding females delivering MGRC, specifically, a female physically contacting the penis, would have been formulated in the general environment before she entered into the nursing environment. If a female nurse has a high GS-MGRC, she must also have a high SS-MGRC because the breaking of traditional female sexual propriety rules is only part of the negative evaluations which one may encounter in the general environment.

On the other hand, a female nurse who has a high SS-MGRC may also possess a high GS-MGRC. Negative perceptions and evaluations which surround female nurses delivering MGRC are complicated. A female nurse may have a high SS-MGRC caused by the following three situations: a) she personally negatively perceives and responds to MGRC delivery; b) she does not personally negatively perceive and respond to MGRC, but significant others, e.g. husband, boyfriend, parents, close friends, negatively perceive and respond to MGRC. Her attitudes are changed accordingly so as to keep her own views and conduct consistent with those of her 'significant others'; c) she feels disrespected or even humiliated by the male patient, the patient's family members or someone else

who is present during her delivery of MGRC.

In the above situations of “b” and “c”, the female nurse shows concern over others’ negative evaluations about her conduct, reflecting a high GS-MGRC. In the situation of ‘a’, the female nurse shows concern over the maintenance of and conformity to female sexual propriety social norms, suggesting that she may also be concerned over the maintenance of other social norms related to appropriate female conduct. Any negative evaluation may threaten her motivation to maintain female appropriateness according to situations, cultures and societies. Therefore, she must have developed a high GS-MGRC so as to avoid negative evaluations and so as to maintain appropriate conduct in front of others.

In summary, FNS-MGRC is proposed to consist of two dimensions, i.e. SS-MGRC and GS-MGRC. These two dimensions have a positive relationship with each other. In other words, the higher the SS-MGRC, the higher the GS-MGRC, and vice versa. This 2-dimensional structure of FNS-MGRC was supported by the outcomes of the CFA which are reported in Chapter 6 (See pp. 224-235). Furthermore, these relationships correspond with the first and the second propositions (See p. 173).

#### **Aspects in dimensions of FNS-MGRC**

##### ***Aspects in SS-MGRC***

SS-MGRC was proposed to consist of negative perceptions and responses to female nurses delivering MGRC. These perceptions and responses may be about male genitalia, MGRC delivery or female nurses delivering MGRC. The following four approaches, which indicated some sources of a female nurse’s negative perceptions and responses toward MGRC, were thought to be

contributory to a female nurse's SS-MGRC: a) during the provision of MGRC, she perceived her own or others' negative perceptions and responses, e.g. the male patient's, the patient's family members', audiences'; b) she was aware of possible negative perceptions and responses after hearing others' description and analysis of their experiences related to female nurses delivering MGRC; c) she perceived those negative perceptions and responses by imagining that others may negatively perceive and respond to her provision of MGRC, as she believed that a female who touched any man's penis other than that of her (potential) husband's, was negatively or lowly evaluated; and d) she perceived those negative perceptions and responses after she learned that her (potential) husband disliked her providing MGRC. All of the above propositions were supported by the researcher's working experiences in hospital (See Chapter 3, pp. 52-55) and research findings from Study 1 and Study 2 (See Chapter 4, pp. 101-123, 130-143).

In particular, as was described in the third proposition derived from the conceptual model of FNS-MGRC (See p. 173), that those who held strong beliefs about conservative female sexual propriety in mainland China had intensive negative perceptions and responses to MGRC. Therefore, strong beliefs about conservative sexual propriety were considered as indicators of SS-MGRC. Typical examples of conservative sexual propriety included: a) no physical contact with the penis which is not her (potential) husband's, and b) no verbal or non-verbal expressions in public which might entail the misinterpretation of sexual impropriety.

In addition, if a female nurse believes that the traditional female sexual

propriety, in the name of traditional female sexual virtues, is sexual oppression upon females, she may not consider that it is improper for a female nurse to touch a male patient's penis. According to some radical feminists, social norms about female sexual propriety in the name of virtues were the product of hierarchical and patriarchal society, which reflected the oppression on females, suggesting strong gender inequality (Baumeister & Twenge, 2002; Ebrey, 1990; Gallagher, 2001). These norms were developed mainly to confine females at home and doing housework, to limit females' freedom and to increase females' obedience to males, so as to strengthen males' control over females (Ebrey, 1990; Gallagher, 2001; Zhao & Li, 2003). Therefore, the awareness of occurrences of gender inequality in mainland Chinese society was thought to be able to decrease a female nurse's negative perceptions and responses to MGRC, leading to low FNS-MGRC. In the opposite case, those who lacked such awareness may have a high FNS-MGRC as they would be more likely to conform to female sexual propriety social norms, given the strong influence of conservative sexual culture.

Nowadays in mainland China, some virtues, e.g. virginity, chastity, are referred to as 'feudal ideas' which mean that they are viewed as outdated and inapplicable in present day modern mainland China. This suggests that mainland Chinese people may have been aware of the gender inequality associated with female sexual propriety in the name of female sexual virtues. It may also suggest that Chinese people may no longer treasure these sexual propriety virtues, as did the older generations (Bu, 2004). Different attitudes towards traditional female sexual virtues between the past and the present were thought to be contributed to by the growing influx of western living philosophy which values and emphasizes

openness and individualism (Bu, 2004; Ebrey, 1990).

The awareness of nurses' roles in sexual health promotion is another aspect which has been considered. There is a lack of promotion and awareness of nurses' roles in sexual health promotion in mainland China presently. The awareness of this role was thought to be able to increase nurses' awareness of the importance and necessity of sexual health promotion for a male patient who required MGRC. The increased awareness of nurses' roles and responsibilities in providing optimal MGRC, which includes the dimension of sexual health, might help a female nurse overcome the restriction over her perceptions and responses about MGRC.

In summary, the SS-MGRC was proposed to consist of negative perceptions and responses about the penis, MGRC and female nurses delivering MGRC. Strong beliefs about and conformity to traditional female sexual propriety virtues were contributory to a high SS-MGRC. The awareness of gender inequality in relation to female sexual propriety and the awareness of nurses' roles in sexual health promotion were considered to be able to lower a female nurse's SS-MGRC. The items which were proposed to measure these aspects were thereby beliefs, perceptions or observable responses.

#### ***Aspects in GS-MGRC***

As was discussed earlier (See pp. 176-178), GS-MGRC was mainly represented by indicators which reflected a female nurse's concerns over others or social negative evaluation cues in the general environment. The personality trait of 'fear of negative evaluation' (Leary, 1983) definitely suggests a high GS-MGRC.



Negative evaluations emerge when a person breaks social norms or does not conform to them. Social norms latently shape people's thinking, attitudes and behaviours (Booth-Butterfield, 2002; Edelman, 1993; Goffman, 1963). Conformity to social norms can optimize one's survival in natural and social environments by minimizing the threats to life and maximizing living resources, both social and material (Baumeister & Leary, 1995; Green & Phillips, 2004; Kurzban & Leary, 2001; Leary, 1990; Singelis, 1994; Tse & Bond, 2003; Twenge, Catanese, & Baumeister, 2003).

Conformity to social norms was thought to be rooted in human beings' fundamental needs for belongingness, i.e. people's interconnectedness within a group or social circle (Baumeister & Leary, 1995). This need can motivate a person to pursue maximum inclusion, to minimize and avoid exclusion, and to seek for approval from the appealing or significant others, e.g. those in authority (Baumeister & Leary, 1995; Kenrick, Neuberg, & Cialdini, 2005; Kurzban & Leary, 2001; Leary, 1990; Martin, 1984; Singelis, 1994; Tse & Bond, 2003; Twenge et al., 2003). Therefore, the personality trait of high 'approval motivation', as was described by Martin (1984), suggests a high GS-MGRC.

By contrast, those who dissent from or do not conform to social norms or group rules will be rejected and excluded (Baumeister & Leary, 1995; Kenrick et al., 2005; Leary, 1990, 2001). Being rejected or excluded may result in negative responses such as embarrassment, stigma, loneliness, jealousy, low self-esteem, social anxiety, social phobia or even inner numbness (Baumeister & Leary, 1995; Bogels & Mansell, 2004; Green & Phillips, 2004; Kurzban & Leary, 2001; Leary, 1990; Rapee, 1997; Singelis, 1994; Tse & Bond, 2003; Twenge et al., 2003).

Consequently, people tend to be concerned over others' evaluations, especially negative evaluations (Leary, 1983), but the degree of such concern varies from person to person.

The need for belongingness was found to be stronger among those who had an interdependent self-construal, in comparison with those who had an independent self-construal (Sharkey & Singelis, 1995). The stronger the need for belongingness, the more likely the person was to conform to social norms, in case of being rejected or excluded. In particular, the collectiveness of group, i.e. every member conforms to social norms in order to achieve shared goals, can lead to gaining more chances to win during the fight against natural threats, e.g. natural disasters, beasts' attacks, or social competitions with other groups or societies (Baumeister & Leary, 1995; Green & Phillips, 2004; Kenrick et al., 2005). People living in the collectivistic societies, e.g. Japan, Korea, China, tend to develop a more interdependent self-construal, whereas people growing up in the individualistic societies, e.g. a number of European countries, USA, often develop a more independent self-construal (Cross & Madson, 1997; Kashima et al., 1995; Markus & Kitayama, 1991; Sharkey & Singelis, 1995; Singelis, Bond, Sharkey, & Lai, 1999; Triandis, Bontempo, Marcelo, Asai, & Lucca, 1988). Those with a strong interdependent self-construal often felt they were part of some groups, had concerns over the integrity of the in-group and had an intense emotional attachment to the group (Kashima et al., 1995; Triandis et al., 1988; Markus & Kitayama, 1991). These people were found to be more concerned over others' evaluations, and were more easily embarrassed (Sharkey & Singelis, 1995; Singelis et al., 1999). Therefore, the stronger the interdependent self-construal,

and the weaker the independent self-construal, the higher the GS-MGRC.

In addition, given that a female nurse delivering MGRC was thought to break social norms related to female sexual propriety virtues, the breaking of social norms was found not only to be contributory to negative evaluations, but also to be contributory to embarrassment (Miller, 1996). MGRC was viewed as embarrassing in western studies (Edwards, 1998; Lawler, 1991; Norton, 2004; Wolf, 1997), in this research (See Chapter 4, pp. 101-123, 130-143) and in others' studies in mainland China (Xiang et al., 2004, 2005), suggesting that MGRC may be viewed universally as embarrassing. A female nurse who had high embarrassability would more readily experience embarrassment, in comparison with those who had low embarrassability.

In the view of Kelly and Jones (1997), people with different dispositional susceptibility to embarrassment, i.e. embarrassability, respond to the same embarrassing situations differently. These situations were described in the ES (Miller, 1996; Modigliani, 1969). Therefore, the personality trait of high 'embarrassability', both situational (Miller, 1996; Modigliani, 1969) and dispositional (Kelley & Jones, 1997), suggests a high GS-MGRC.

In summary, GS-MGRC was proposed to include indicators which suggest a relationship between FNS-MGRC and the personality traits of 'fear of negative evaluation', 'approval motivation', 'interdependent self construal', 'independent self-construal', as well as situational and dispositional 'embarrassability', respectively.

#### **Influential factors of FNS-MGRC**

Findings from Study 1 and Study 2 suggested that many factors, e.g.

marriage, motherhood, years of nursing work, specialty area, hospital, experience of MGRC, technical difficulty of MGRC, may influence female nurses' perceptions and responses towards MGRC (See Chapter 4, pp. 143-147). Further statistical analyses suggested that motherhood, marriage and clinical position might significantly influence female nurses' emotional responses towards MGRC (See Chapter 4, pp. 140-142).

This suggests that two major female role settings, i.e. family, workplace, may play an important role in regulating Chinese female nurses' perceptions and responses towards MGRC. In other words, nurses' roles as a wife, a mother or a head nurse may change a Chinese female nurse's perceptions and responses towards MGRC.

The influence of motherhood, marriage and clinical position could be analyzed from another perspective. Marriage and motherhood were thought to suggest the experience of heterosexual intercourse to different degrees. According to the researcher's observation, in the part of China where the five teaching hospitals were located, a woman does not usually give birth within the first two years of marriage. Usually only a very small proportion of local female nurses have premarital sexual intercourse. Therefore, those who are not mothers are assumed to have a shorter history of marriage and assumed to have fewer experiences of heterosexual intercourse, in comparison with those who have children.

As to head nurses, they usually have to deal, in person, with all difficult situations, especially when staff nurses cannot solve these (See Chapter 4, p. 142). In the local hospitals, a staff nurse who could be promoted to a head nurse

position must work very hard in any nursing task, including MGRC, without any complaint. This is to ensure, first and foremost, that the future head nurse would be a good role model for staff nurses once she is promoted. As was analyzed, for female nurses to deliver MGRC was thought to entail more psychosocial and sexual concerns and needs and therefore be more difficult and challenging, in comparison with other nursing tasks (Chapter 3, pp. 51-55). Therefore, a head nurse is assumed to have been exposed to more situations which require the delivery of MGRC and to dealing with various issues related to MGRC before her promotion, and subsequently, as a head nurse. In the former situation, a head nurse was assumed, in comparison with staff nurses, to have had more chances to deal with MGRC and the various issues associated with MGRC, considering the head nurses' diligent and committed working style. In the latter situation, a head nurse was assumed to have had to deal with all thorny situations in association with MGRC which staff nurses were unable to deal with. This suggests that head nurses may have more chances and thereby more experiences of delivering MGRC and of dealing with various issues related to MGRC. It was thus proposed that the experience of MGRC delivery may have a significant influence over FNS-MGRC (See Figure 5.2, p. 175).

In summary, the experiences of heterosexual intercourse, i.e. coitus sex, and of MGRC provision were considered as factors which may significantly influence a female nurse's FNS-MGRC. The frequency of delivering MGRC was selected as an indicator to reflect a female nurse's experience of MGRC provision. However, in this research, it was considered to be privacy intrusive to ask about, and difficult for respondents to tell others about the frequency of coitus sex. In

the questionnaire (See Appendix M, pp. 317-319) in Test 4, subjects were only asked whether they had experience of coitus sex, but were not asked about the frequency of coitus sex.

### **Hypotheses**

A hypothesis is defined as a statement which expresses the testable relationships between concepts or variables (David & Sutton, 2004). According to the above operationalization of FNS-MGRC, the following hypotheses were formulated and were examined. The examination of these hypotheses is reported in the next chapter.

1) FNS-MGRC is positively significantly correlated with Fear of Negative Evaluation, Approval Motivation, Susceptibility to Embarrassment and Embarrassability.

2) FNS-MGRC is positively correlated with Interdependent Self-construal, but negatively correlated with Independent Self-construal.

3) The frequency of MGRC delivery has a significant influence on FNS-MGRC.

4) Experiential factors, i.e. the frequency of MGRC delivery and the experience of coitus sex, have significant influence over FNS-MGRC.

5) Demographic factors have no significant influence over FNS-MGRC.

Additionally, two single items (See Appendix M, p. 319), i.e. the specific sensitivity item towards MGRC (SS-item), and the general sensitivity item (GS-item) were proposed. The GS-item was intended to measure whether a person was sensitive in a general sense, whereas the SS-item was a direct enquiry about the specific sensitivity to MGRC. According to the definition of sensitivity and

FNS-MGRC, the GS-item and the SS-item can only measure two aspects of FNS-MGRC. Therefore, it was proposed that:

6) FNS-MGRC is positively significantly correlated with the GS-item and the SS-item.

In addition, considering the possible influence of social desirability response bias over FNS-MGRC, as was analyzed earlier (See Chapter 3, pp. 74-75, 78) was also proposed that:

7) FNS-MGRC is positively significantly correlated with Social Desirability.

To examine the above hypotheses derived from the 2-dimensional FNS-MGRC, an instrument, i.e. FNS-MGRC scale, had to be developed, so as to measure FNS-MGRC. The technique of psychometrics was then carried out. To facilitate the report about the development of the FNS-MGRC scale, and the examination of the above hypotheses, the next section introduces several existing scales related to FNS-MGRC. These scales have been established with reliability and validity. They were referred to by the researcher during the generation of the initial 52-item pool of FNS-MGRC, and were used to examine the construct validity of the FNS-MGRC scale. Permission to use these scales has been obtained from all the original authors.

### **Related constructs and measures**

#### **Embarrassability Scale (ES)**

Embarrassability refers to a person's general susceptibility to embarrassment (Modigliani, 1968). High embarrassability suggests a general tendency to experience more severe embarrassment in any situation in which self

presentation is threatened (Modigliani, 1968).

The original ES was developed by Modigliani (1968) and contains 26 items describing diversified social predicaments. Respondents are required to rate the extent of their embarrassment against a 10-point scale ranging from 0 (not embarrassed at all) to 9 (extremely embarrassed). Miller (1996) changed the wording of the ES to make it appropriate for use with both women and men, and changed the scale to a 5-point description scale (Miller, 1996, pp. 94-95) as follows: 1="I would not feel the least embarrassed -not awkward or uncomfortable at all"; 2="I would feel slightly embarrassed"; 3="I would feel fairly embarrassed: somewhat self-conscious, and rather awkward and uncomfortable"; 4="I would feel quite embarrassed"; and 5="I would feel strongly embarrassed: extremely self-consciousness, awkward, and uncomfortable".

The Cronbach's  $\alpha$  of the original ES is 0.88 with a mean item-total correlation of 0.78. It has been proven to have moderate predictive validity with the correlation coefficient of 0.35 between the self-reported ES score and experienced embarrassment (Modigliani, 1968).

#### **Susceptibility to Embarrassment Scale (SES)**

In comparison to the above-reported measure's approach to embarrassability, i.e. recording a person's perceived embarrassment across situations (Modigliani, 1968), Kelley and Jones (1997) considered that embarrassability could be measured through the examination of the dispositional characteristics of an individual, i.e. trait sensitivity to embarrassability (p. 308).

SES (Kelly & Jones, 1997) comprises 25 items to capture the following



aspects: emotional exposure, social appropriateness concern, self-presentation and self-consciousness in public. Respondents are asked to rate the likeness between the described attributes and their own personalities using a 7-point scale ranging from 1 (not at all like me) to 7 (very much like me). The measure was administered among 260 American college students (72 males and 134 females), of which 58 were retested 8 weeks later. The overall test-retest correlation coefficient was 0.64. Internal consistency was quite satisfying ( $\alpha=0.90$ ) (Kelly & Jones, 1997).

Maltby and Day (2000) found SES was also suitable for English adults ( $n=203$ , male=84, female=119) with a high internal consistency ( $\alpha=0.96$ ) and satisfying reliability across time ( $r=0.67$ ). The corrected item-to-total correlations ranged from 0.50 to 0.88. No significant sex difference was found between men's and women's embarrassment scores (Maltby & Day, 2000).

#### **Brief Fear of Negative Evaluation Scale (bFNES)**

The brief version of the FNE scale (bFNES, Leary, 1983) was generated from the full length scale developed by Watson and Friend (1969). It aimed to evaluate the degree to which a person is concerned over unfavourable evaluation from others. bFNES contains 12 items, to be answered with a 5-point scale concerning the extent of likeness between the described characteristic and the self-perceived characteristic. The scale ranges from 1=not at all, 2=slightly, 3=moderately, 4=very, to 5=extremely characteristic of me (Leary, 1983, p. 373).

bFNES was administered among two samples of psychology student volunteers to determine its psychometric properties. bFNES was found to be highly correlated with the full-length scale with  $r$  of 0.96 (Leary, 1983). Both the

brief and full scales have a consistent two-factor structure (Rodebaugh et al., 2004). No evidence was found that the total scale conferred any advantage over the straightforwardly-worded items alone; whereas the bFNES demonstrated better discriminant and convergent validity (Rodebaugh et al., 2004).

For the bFNES, the item-total correlation coefficient ranged from 0.53 to 0.75. The 4-week test-retest reliability coefficient was 0.75. The overall  $\alpha$  was 0.90 (Leary, 1983), but  $\alpha$  for the eight straightforwardly-worded items was much higher ( $r=0.94$ ) than that of the four reversely-worded items ( $r=0.71$ ) (Rodebaugh et al., 2004).

#### **Approval Motivation Scale (AMS)**

The 10-item AMS (Martin, 1984) was reconstructed from the original 21-item Martin-Larsen Approval Motivation Scale (Larsen, Martin, Ettinger, & Nelson, 1976). It was designed directly to tap the approval motivation in respect of the desire for positive evaluation and social approvals, as well as the avoidance of negative evaluations and social punishment (Larsen et al., 1976; Martin, 1984). Through three rigorously designed studies, the short AMS was tested and found to have achieved similar psychometric properties to the 21-item long scale (Larsen et al., 1976; Martin, 1984).

Respondents were required to answer using a 5-point scale ranging from 1 (disagree strongly) to 5 (strongly agree) (Martin, 1984). Endorsement of these items reflects the tendency to adopt both seeking behaviours for self-enhancement and defensive behaviours in pursuit of self-construal protection. The internal consistency reliability ( $\alpha$ ) ranged from 0.65 to 0.67 among 495 introductory psychology students (Martin, 1984). Item stability (1-week interval)

for five reversed items ranged from 0.73 to 0.83 with a mean of 0.80 (Martin, 1984).

### **Self Construal Scale (SCS)**

Self-construal refers to the thoughts, feelings and actions with regard to one's relationships with others, and the distinct self from others (Singelis, 1994). Based on the results from the cross-cultural studies on the different self-construal between the Western and the Eastern countries (Triandis, 1989; Triandis et al., 1988), it was proposed that everyone had a dual self, i.e. interdependent self-construal and independent self-construal (Singelis, 1994; Singelis et al., 1999). These are considered as the feature of the culture of collectivism and individualism, respectively (Yamada & Singelis, 1999).

The original SCS consists of 24 items with 12 items on interdependent and independent self construal respectively (Singelis, 1994). However, Grace and Cramer (2003) found this 24-item SCS to be a 3-factor structure including power distance or hierarchy construct, in addition to independent and interdependent self-construal. The 24-item scale was administered to 360 Hawaii undergraduate students with a broad ethnic and racial background and was answered using a 7-point Likert-type scale ranging from 1 (strong disagreement) to 7 (strong agreement). The internal reliability was 0.73 for interdependent self-construal and 0.69 for independent self-construal.

When seeking approval for scale use, Professor T.M. Singelis (personal communication, March 1, 2005) suggested that the researcher use his newly developed 30-item self-construal scale, because of its improved construct breadth and internal reliability (with  $\alpha$  ranging from 0.72 to 0.75) (Singelis et al., 2006).

The 3-week test-retest reliability for Interdependent Self-construal and Independent Self-construal was 0.66 and 0.57, respectively (Singelis et al., 2006).

It was proposed that these two aspects (i.e. interdependent self-construal, independent self-construal) instead of any one of them should be taken into consideration (Singelis, T.M., personal communication, March 15, 2006). Although the use of items focusing on one aspect makes internal consistency higher than the use of all items, the validity as a whole would be threatened (Singelis, T.M., personal communication, March 1, 2005, March 15, 2006). This is because the self-construal construct constitutes two separate factors, instead of the opposite pole representing a single independent construct (Singelis, Triandis, Bhawuk, & Gelfand, 1995).

Any self-reported measure could be subjected to the social desirability response bias. This issue has been discussed in detail in Chapter 3 (pp. 74-75). The scale used to measure social desirability response bias will be introduced as the last measure relevant to FNS-MGRC.

#### **Social Desirability Scale (SDS)**

Social desirability or ‘faking good’ refers to the need of subjects in self-reported surveys to respond in a culturally appropriate and acceptable way (Crowne & Marlowe, 1960). This behaviour can lead to the exaggeration of virtues and misrepresentation of situations (Barger, 2002). The SDS developed by Crowne and Marlowe (Crowne & Marlowe, 1960) has been widely used to evaluate the tendency to characterize oneself in a favourable fashion.

The SDS encompasses 18 socially desirable but improbable statements and 15 culturally undesirable but probable statements with a true-false answering

format. The endorsement of the desirable items and the denial of the undesirable items were supposed to constitute faked goodness. The internal consistency coefficient and test-retest correlation coefficient are 0.88 and 0.89 respectively (Crowne & Marlowe, 1960). A high score reflects a deeply vulnerable self-esteem, and reflects defensiveness, i.e. presenting self in a favourable light and protecting the positive or idealized self-image (Brannigan, 1977; Martin, 1984).

The 33-item scale is multidimensional and has very satisfying internal-consistency reliability ranging from 0.72 to 0.74 (Barger, 2002; Loo & Thorpe, 2000). In comparison, the short versions of the scale are not sufficiently adequate to capture all aspects of the construct (Barger, 2002; Loo & Thorpe, 2000). Other details about the SDS were presented in Chapter 3 (pp. 74-75).

## **Conclusion**

In conclusion, in this chapter emphasis has been placed on the analysis of the 2-dimensional conceptual model of FNS-MGRC. The related constructs and their measures were also presented in order to facilitate the examination of the proposed hypotheses which will be reported in the next chapter.

## **Chapter 6 Measurement of FNS-MGRC**

This chapter focuses on reporting Study 3. The development of the FNS-MGRC scale with satisfying reliability and validity was central to Study 3. To facilitate the description, Study 3 is reported in two parts in this chapter. The first part focuses on the initial FNS-MGRC scale development including the formulation, refinement and reduction of the item pool. The second part describes and discusses a series of tests, i.e. Test 2, Test 3, Test 4, which were designed to further determine the reliability and validity of the FNS-MGRC scale and to examine hypotheses.

### **Part 1: FNS-MGRC scale development**

This part describes the first three steps of developing the FNS-MGRC scale. These steps comprised: 1) the generation of items according to the operationalized 2-dimensional FNS-MGRC, 2) the refinement of items through an expert panel approach, and 3) the reduction of items through the approach of a test, i.e. Test 1. The 14-item FNS-MGRC scale was generated, and then used in Test 2, Test 3 and Test 4.

#### **Items generation**

On the basis of the operationalized 2-dimensional FNS-MGRC which was discussed in Chapter 5, the 52-item pool, i.e. initial item pool (See Appendix D, p. 307) was proposed. This item pool was expected to cover all aspects of the FNS-MGRC construct with two to four items measuring every aspect. The pool would be more likely to reach the expected ideal length, i.e. three to four times as large as the final scale ( DeVellis, 2003). In this study the item pool of FNS-MGRC contained 52 items, whereas the FNS-MGRC scale contained 14 items.

In the first dimension of FNS-MGRC, i.e. SS-MGRC, the proposed 14 items (#39-#52, See Appendix D, p. 307) were expected to measure the following aspects (See Chapter 5, pp. 178-181): a) negative perceptions of male external genitalia, e.g. regarding the penis as disgusting (#52, See Appendix D, p. 307), embarrassment at touching the penis (#49, See Appendix D, p. 307); b) negative perceptions, responses, attitudes and behaviours related to MGRC, e.g. regarding MGRC as sexual (#50, See Appendix D, p. 307), disliking delivering MGRC (#51, See Appendix D, p. 307), avoidance of MGRC delivery (#47, See Appendix D, p. 307); c) strong traditional beliefs about sexual propriety, e.g. proper sexual physical contact between the opposite sex (#48, See Appendix D, p. 307), proper sexual conduct (#43, #44, #39, See Appendix D, p. 307) negative responses to sexually improper conduct (#40, See Appendix D, p. 307); d) poor awareness of gender equality (#41, #42, See Appendix D, p. 307); and e) poor awareness of sexual health promotion (#45, #46, See Appendix D, p. 307).

As to the second dimension of FNS-MGRC, i.e. GS-MGRC, it was discussed in Chapter 5 (See p.181-184) that holding conservative beliefs about female sexual propriety, especially those about physical restriction between the opposite gender, defined a female nurse delivering MGRC as sexually improper. Therefore, a female nurse who performs MGRC and the fact that female nurses provide MGRC were assumed to be associated with others' and social negative evaluations. Thirty eight items in the dimension of GS-MGRC (#1-#38, See Appendix D, p. 307) were designed to measure the following personality attributes: a) overly concerned about others' evaluation (#1, #2, #11, #14, #20, #22, See Appendix D, p. 307); b) fear of others' negative evaluation (#16, #19,

See Appendix D, p. 307); c) concern over behaving in socially appropriate ways (#4, #5, #10, #23, #29, #30, #32, #35, #36, See Appendix D, p. 307); d) high embarrassability (#3, #25, #26, #27, #28, #31, #33, #34, #37, #38, See Appendix D, p. 307), i.e. very susceptible to embarrassing clues; e) strong interdependence or little independence (#6, #7, #13, #15, #17, #24, See Appendix D, p. 307); and f) strong approval motivation (#8, #9, #12, #18, #21, See Appendix D, p. 307). To fully measure all of the above personality attributes, five existing scales which have been established with reliability and validity were referred to. These scales were bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005) including the subscale of Independent Self Construal (ISC) and Interdependent Self Construal (DSC), SES (Kelly & Jones, 1997) and ES (Miller, 1996) (See Chapter 5, pp. 188-194).

Additionally, some items were phrased to measure aspects which were the opposite of what was purported to be measured. This was thought to be able to generate more reliable answers, as Chinese people may compromise between being honest and self enhancement, leading to the threat of social desirability response bias (Liu et al., 2003). According to some study findings (Martin, 1984; Rodebaugh et al., 2004), it might be possible to obtain more reliable responses by designing some items which measure the attributes opposite to those which it is intended to measure. For example, items #4, #6, #7, #13, #14, #17, #21, #24, #30, #35, #41, #42 and #46 (See Appendix D, p. 307).

A 5-point scale was formulated ranging from 1= “not at all like me”, 2= “a bit like me”, 3= “moderately like me”, 4= “very like me” to 5= “extremely like me”. The item score in general was the rated scale point, i.e. “1” - “5”. For the



reversed items, i.e. #2, #4, #10, #15, #18, #20, #30 (See Appendix E, p. 308), the item score was calculated by subtracting the rated scale point from six, for example, if item #2 is rated as “2”, the #2 item score will be:  $6-2=4$ . The total score of the FNS-MGRC scale was the sum of the item scores. The higher the score, the more sensitive subjects were towards MGRC, i.e. the higher their FNS-MGRC.

### **Items refinements**

An expert panel approach was used. The expert panel was organized in order to improve the item pool and establish content validity. According to the suggestion regarding qualified experts for the evaluation of content validity (Davis, 1992; Grant & Davis, 1997), three experts were selected and invited. They were members of the academic teaching staff in the School of Nursing, The Hong Kong Polytechnic University, and were RNs who had experience of delivering MGRC and of conducting research using the psychometric technique.

Each expert received the 52-item pool, and the electronic documents which explained the definition, dimensions and aspects of FNS-MGRC. A reference list was also provided for the five scales, i.e. bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005), SES (Kelley & Jones, 1997), ES (Miller, 1996). Experts were invited to answer: (1) whether the proposed dimensions and aspects of FNS-MGRC were sufficiently adequate to measure the FNS-MGRC according to the proposed definition; (2) to what degree every item was relevant to FNS-MGRC. A 4-point relevancy scale was used ranging from 1=“not relevant”, 2=“somewhat relevant”, 3=“quite relevant” to 4=“highly relevant” (Davis, 1992, p. 196). Experts were also invited

to give suggestions and comments wherever they considered these appropriate.

Based on the responses from the expert panel, the items rated as “1” were deleted, whereas those rated as “2” were revised and then sent back to the experts. This procedure was repeated until all items were rated as either “3” or “4”. In the end, a total of 38 items were included in the refined item pool. Of these, 24 items were expected to measure GS-MGRC (#1-#24, See Appendix E, p. 308), and 14 items (#25-#38, See Appendix E, p. 308) were expected to measure SS-MGRC.

### **Items reduction**

It is always desirable to use the shortest possible scale to measure any construct (Netemeyer et al., 2003). Test 1 was designed so that the 38-item pool could be reduced to an ideal length containing the necessary items. The 38-item pool was shortened to the 14-item FNS-MGRC scale through EFA with SPSS 14.0 For Windows, using Test 1 data. The following is the report of Test 1 in respect of sample, instrument, procedures, data analysis, results and discussion.

### **Sample**

A total of 151 Year3 (n=72) and Year4 (n=79) female nursing students in a 5-year full-time Bachelor nursing programme were investigated. Their ages ranged from 20 to 24 years old ( $22.2 \pm 1.06$ ). Sampling issues were discussed in Chapter 3 (See p. 82-85) and Chapter 7 (See pp. 292-294).

### **Instrument**

The questionnaire consisted of two parts: demographic information and the 38-item pool (See Appendix E, p. 308). These 38 items were ordered according to the rules regarding the random ordering of items and diminished sensitivity of items' contents so as to decrease the influence of some items over others

(Sullivan, 2001; Waltz et al., 1991, 2005). Items measuring GS-MGRC were randomly ordered, using an online randomizer (Urbaniak & Plous, 2005), whereas items measuring SS-MGRC were simply ordered according to the increased sensitivity of contents. Items measuring SS-MGRC were listed after those measuring GS-MGRC.

### **Procedures**

The access to administering the test was permitted by the university school of nursing. The test was conducted in a large lecture room. Before the administration of the questionnaires, an introduction was given about the purpose of the test and about ethical rules including confidentiality, anonymity and the freedom to attend or withdraw for any reason at any time. It took approximately 20 to 30 minutes for students to complete the questionnaire. All questionnaires were returned (response rate=100%) and usable.

### **Data analysis**

The data were analyzed with SPSS14.0 For Windows (Norušis, 2006).

#### ***Descriptive analysis***

Descriptive analysis was conducted after the selection of items to be included in the FNS-MGRC scale. In general, the item score was the rated scale point, i.e. “1” - “5”. For the reversed items, i.e. #2, #4, #10, #15, #18, #20, #30 (See Appendix E, p. 308), the item score was the figure remaining when the rated scale point was subtracted from six (See p. 199). The total score of the FNS-MGRC scale was the sum of the item scores. The higher the score, the more sensitive subjects were towards MGRC, i.e. the higher FNS-MGRC.

#### ***EFA***

EFA was used to decide the number of factors necessary for the

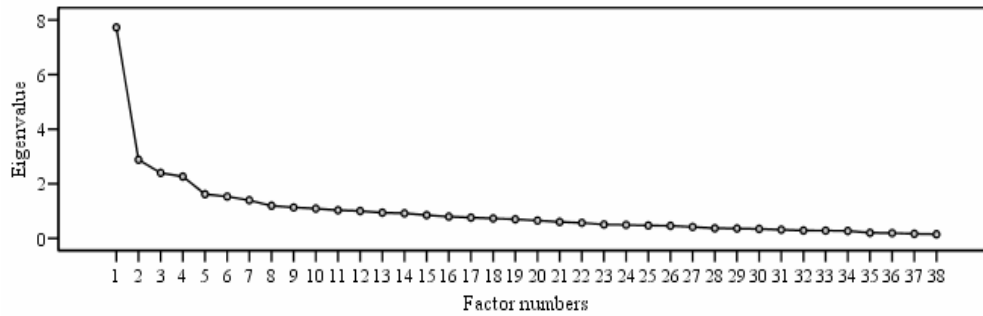
explanation about the scale variance (Pett, Lackey, & Sullivan, 2003; Thompson, 2004). The method of principal component analysis with varimax rotation was employed to extract factors. Alpha reliability analysis was conducted to examine the internal consistency reliability, i.e. Cronbach's alpha or  $\alpha$ , and to examine the correlations between items, and the correlation between items and the scale (Pett et al., 2003).

It was suggested that a combination of rules should be used to make the most reasonable decisions about the extraction of factors (Kim & Mueller, 1994; Thompson, 2004). According to the Kaiser criterion, i.e. eigenvalue should be greater than 1.0, and the Cattell Scree-plot criterion, i.e. factor extraction should be stopped at the point where there appears a levelling of the plot, (See Figure 6.1, p. 202) (Blaikie, 2003; Kim & Mueller, 1994; Sapp, 2002), four factors could be extracted.

The second EFA was performed by indicating the number of factors to be extracted, i.e.  $n=4$ . Items highly loaded on Factor 1 (i.e. #1, #2, #3, #6, #8, #9, #11, #13, #16, #17, #22, #23, See Appendix E, p. 308) were processed through EFA without indicating the number of factors to be extracted. Those highly loaded on the first factor but not highly loaded on other factors were retained. Six items (i.e. #1, #3, #8, #9, #11, #23, See Appendix E, p. 308) were selected. Items highly loaded on Factor 2, Factor 3, Factor 4, respectively, were processed in the same way. Finally, six items in Factor 2 (i.e. #25, #26, #29, #30, #32, #33, See Appendix E, p. 308), five items in Factor 3 (i.e. #12, #13, #19, #21, #24, See Appendix E, p. 308) and four items in Factor 4 (i.e. #4, #10, #20, #18, See Appendix E, p. 308) were retained. All of the above retained items were

processed with EFA without indicating the desired number of factors to be extracted. Those items highly loaded on more than one factor were removed, so that all retained items were highly loaded on only one factor. Four items (i.e. #3, #24, #20, #18, See Appendix E, p. 308) were then removed.

**Figure 6.1 Scree plot for 151 cases and 38 item variables**



### ***Scale reliability analysis***

Alpha scale reliability analysis (Pett et al., 2003) was conducted to analyze the psychometric properties of items and the internal consistency reliability of all items. Only those items with acceptable corrected item-total correlation coefficients, i.e.  $>0.25$ , (Blaikie, 2003) were retained. Three items (i.e. #4, #10, #18, See Appendix E, p. 308) were excluded.

### **Results**

At the end, a total of 14 items were selected to constitute the FNS-MGRC scale (See Table 6.1, p. 202; Appendix F, p. 309). The mean scale score was 37.0 ranging from 19.0 to 60.0 with SD of 7.858. Shapiro-Wilk statistic was 0.979 ( $P<0.05$ ) indicating abnormal distribution of scale scores (Pallant, 2005). The  $\chi^2$  value of Bartlett's Test of Sphericity was 629.694 ( $P<0.001$ ). The statistic of Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.803.

Three factors were extracted which explained 22.9%, 16.7% and 15.6% of variance, respectively. Overall 55.2% of variance could be explained. The

Cronbach's  $\alpha$  for Factor 1, Factor 2, Factor 3, and the overall was 0.81, 0.72, 0.72, 0.81, respectively. Factor loading for all items ranged from 0.51 to 0.80. The corrected item-total correlation ranged from 0.25 to 0.62. The mean of item-item correlation coefficients was 0.231 ranging from -0.080 to 0.694.

**Table 6.1 Psychometric properties of the 14-item FNS-MGRC scale for the student sample (N=151)**

Factors and the items ( $\alpha$ , % variance)		Factor loading	Corrected item-total correlation
Factor 1: Sexual propriety maintenance (0.81, 22.9%)			
#6	I think that some sayings/behaviours can make female nurses who are required to deliver male genitalia related care feel very uncomfortable.	0.79	0.48
#8	I will try to avoid doing male genitalia related care.	0.78	0.62
#10	Physical contact with men's most private area can make me extremely embarrassed.	0.75	0.59
#5	I dislike delivering male genitalia related care.	0.75	0.58
#3	I think that I can provide education on sexual health quite naturally.	0.59	0.38
#13	I think that physical contact with genitalia can only occur between the spouse/lovers under the condition that no blood links exist.	0.55	0.31
Factor 2: High embarrassability (0.72, 16.7%)			
#2	If others appear embarrassed, I feel embarrassed.	0.78	0.35
#14	I am easily embarrassed.	0.75	0.38
#12	I feel uneasy when people pay attention to me.	0.75	0.42
#11	I probably care too much about how to communicate with people when I first meet them.	0.51	0.25
Factor 3: Pursuing positive image (0.70, 15.6%)			
#1	I often fear that others notice my weaknesses.	0.80	0.33
#4	I fear that others find fault with me.	0.75	0.42
#7	Clearly knowing that others' opinions will not impact on me, I often still worry about them.	0.57	0.49
#9	I am afraid that others will not approve of me.	0.56	0.42

a. The overall  $\alpha$  is 0.81, and totally 55.2% variance was explained.

## Discussion

There existed controversy concerning the appropriate sample size necessary for data reduction. It was suggested that the sample size should not smaller than 100, and the greater the better (DeVellis, 2003; Neteyemer et al., 2003; Sapp, 2002), and it is desired that the size is 10 to 20 times that of the number of items, i.e. 140-280, in the scale (Thompson, 2004, p. 24). In this test the sample size, i.e. 151, reached the desired range, whereas the KMO value was

greater than 0.80 which suggests an excellent sample adequacy (Blaikie, 2003).

Bartlett's Sphericity Test showed that the  $P$  value was smaller than 0.001. This then rejected the null hypothesis that principal component analysis cannot be performed (Sapp, 2002). EFA results showed that the FNS-MGRC was a 3-factorial structure (See Table 6.1, p. 202), which is different from the proposed 2-dimensional structure of FNS-MGRC. This may be caused by: 1) the sample population was not female clinical nurses, whereas the proposition of the 2-dimensional FNS-MGRC was based on findings of Study 1 and Study 2 among clinical nurses; 2) the student sample population had little clinical experience so they may not have been fully aware of all the issues which were associated with MGRC, e.g. very few of them had the experience of sexual intercourse and MGRC delivery; and none of them was married or was a mother; 3) the students were educated at the tertiary level, whereas more than 95% of clinical nurses in the targeted teaching hospitals were educated at the secondary level, or the level of associate degree.

Further analysis showed that: items which loaded highly on Factor 1 measured SS-MGRC, while other items which loaded highly on Factor 2 otherwise Factor 3 measured GS-MGRC. This raised a challenge to the proposed 2-dimensional structure of FNS-MGRC. Further tests were then required to evaluate the model fit using CFA. Namely, these two factorial models, i.e. the 3-factorial model which was identified through Test 1, and the 2-factorial model which was consistent with the proposed operationalized 2-dimensional FNS-MGRC, could be compared with each other. This will help to identify which factorial model is a better model fit and to improve the conceptual model of FNS-

## MGRC.

As to the internal consistency reliability, i.e.  $\alpha$ , it was 0.81, thus meeting the rigorous requirement for a higher internal reliability for a new instrument (i.e.  $>0.80$ ) (Davis, 1992). Furthermore, it was suggested that when a sample size is bigger than 150, factors with 10 or more loadings of 0.40 were thought of as reliable (Sapp, 2002). In this test with 151 subjects, 14 items' loadings were greater than 0.40, also suggesting that the scale was reliable.

Other meaningful psychometric indices included corrected item-total correlation coefficients and inter-item correlation coefficients. It was recommended that the items with small corrected item-total correlation coefficients, i.e.  $<0.25$ , should be removed as they could not explain more than 6.25% of variance (Blaikie, 2003). In this test, for all of the other 13 items, corrected item-total correlation coefficients were greater than 0.25, except for item #11 with the factor loading of 0.245 (See Appendix F, p. 309). Considering that 0.245 is very close to 0.25, item #11 was retained in the scale. In addition, none of the inter-item correlation coefficients was greater than 0.90, suggesting no redundant items existed in the 14-item FNS-MGRC scale (Blaikie, 2003).

In summary, the 38-item pool of FNS-MGRC was almost three times larger than the 14-item FNS-MGRC scale so that this item pool was sufficiently large for data reduction (DeVellis, 2003). The 14-item FNS-MGRC scale was parsimonious, given that no redundant items existed. Furthermore, the scale has been established with satisfying content validity, internal consistency reliability and interpretable factorial structure, although the factorial structure was different from the proposed 2-factorial structure of FNS-MGRC.



The next part of this chapter focuses on reporting Test 2, Test 3 and Test 4 which were designed to examine the hypotheses derived from the operationalized 2-dimensional FNS-MGRC. At the same time, the psychometric properties of the 14-item FNS-scale are to be determined.

## **Part 2: Examination of hypotheses**

### **Objectives**

This part reports a series of tests, i.e. Test 2, Test 3, Test 4, which constituted the other parts of the main body of Study 3. These tests were designed for different purposes:

Test 2 and Test 3, with a 2-week interval, were designed to determine the test-retest reliability of the 14-item FNS-MGRC scale and other six back-translated scales, i.e. bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005), SDS (Crowne & Marlowe, 1960), SES (Kelly & Jones, 1997), ES (Miller, 1996). Test 2 and Test 3 were also used to determine the test-retest reliability of the item which was designed to measure the attribute of being sensitive in general, i.e. GS-item (See Appendix M, p. 319), and the other item which was designed to measure the attribute of being specifically sensitive to MGRC, i.e. SS-item (See Appendix M, p. 319).

In particular, Test 2 was designed to examine the hypotheses regarding the correlation between the FNS-MGRC scale and the other six scales of bFNES, AMS, SCS, SE, ES, which hypotheses were derived from the operationalized 2-dimensional FNS-MGRC (See Chapter 5, pp. 174-187). The confirmation of these hypotheses would not reject the correlation between these scales, suggesting the establishment of construct validity of the FNS-MGRC scale. Test

2 was also designed to examine the influence of social desirability response bias, which was measured by SDS, over the FNS-MGRC scale.

Test 4 was designed to examine the 2-factorial model fit and the 3-factorial model fit using the data from a sample of female nurses who were working in the five teaching hospitals' specialty wards where MGRC was assumed to be common. The invariance of 2-factorial model fit across groups was examined using the data from Test 2 and Test 4, respectively. The 2-factorial model was hypothesized based on the 2-dimensional FNS-MGRC, while the 3-factorial model was brought to light when EFA was applied to the data from a sample of Year3 and Year4 nursing students in Test 1. Test 4 data was also used to produce the psychometric properties regarding the internal consistency of the FNS-MGRC scale. In addition, the influence of female nurses' demography and their experience of MGRC delivery over the FNS-MGRC were also examined.

To facilitate reporting Test 2, Test 3 and Test 4, all hypotheses which were examined are summarized in the following section. These hypotheses are about the model fit (hypothesis #1-#3, See pp. 207-208), correlations between scales (hypothesis #4-#6, See p. 208), correlations between the FNS-MGRC scale and items (hypothesis #7, See pp. 208-209), the influence of social desirability response bias over the FNS-MGRC scale (hypothesis #8, See p. 211), and influences of subjects' demographic characteristics and their experiences of MGRC delivery over their FNS-MGRC (hypothesis #8-#10, See p. 209).

### **Hypotheses**

- 1) H0: The observed model and the proposed 2-factorial model of FNS-MGRC were a good fit.

- H1: The observed model and the proposed 2-factorial model of FNS-MGRC were not a good fit.
- 2) H0: The 2-factorial model of FNS-MGRC was not a better fit than the 3-factorial model.
- H1: The 2-factorial model of FNS-MGRC was a better fit than the 3-factorial model.
- 3) H0: The unconstrained or free 2-factorial model of FNS-MGRC was not a better fit than the constrained model.
- H1: The free 2-factorial model of FNS-MGRC was a better fit than the constrained model.
- 4) H0: The FNS-MGRC scale score was not positively correlated with the score of bFNES, AMS, SES, ES, and DSC, respectively.
- H1: The FNS-MGRC scale score was positively correlated with that of bFNES, AMS, SES, ES, and DSC, respectively.
- 5) H0: The FNS-MGRC scale score was not negatively correlated with the score of ISC, the other subscale of SCS.
- H1: The FNS-MGRC scale score was negatively correlated with the ISC score.
- 6) H0: The FNS-MGRC scale score was not positively correlated with the GS-item score and the SS-item score, respectively.
- H1: The FNS-MGRC scale score was positively correlated with the GS-item score and the SS-item score, respectively.
- 7) H0: The FNS-MGRC scale score was not negatively correlated with SDS score.

H1: The FNS-MGRC scale score was negatively correlated with SDS score.

8) H0: The median score of the FNS-MGRC scale was not different between the groups by age, years of work, marital status, motherhood, experiences of heterosexual intercourse, RN identity and position, respectively.

H1: The median score of the FNS-MGRC scale was different between the groups by age, years of work, marital status, motherhood, experiences of heterosexual intercourse, RN identity and position, respectively.

9) H0: The median score of the FNS-MGRC scale was not different between the groups by speciality wards and hospital, respectively.

H1: The median score of the FNS-MGRC scale was different between the groups by speciality wards and hospital, respectively.

10) H0: The median score of the FNS-MGRC scale was not different between the nurses' groups by frequency of MGRC delivery in hospital.

H1: The median score of the FNS-MGRC scale was different between the nurses' groups by frequency of MGRC delivery in hospital.

In particular, in the fourth and fifth hypotheses, DSC and ISC refer to the two subscales of SCS which measure interdependent self-construal and independent self-construal, respectively.

### **Sample**

A total of 65 Year3 female nursing students were investigated in both Test

2 and Test 3. The test interval was two weeks. These students were aged from 20 to 24 years old ( $22.0 \pm 0.97$ ).

A total of 736 female nurses were investigated in Test 4. They were aged from 18 to 51 years old ( $27.9 \pm 6.32$ ). These nurses were working in the speciality wards in the same five teaching hospitals as were surveyed in Study 2. MGRC was assumed to be common in the following specialty wards, i.e. Urology, A&E, ICU, Cardiothoracic Surgery, Neurology, Neurosurgery, General Surgery and Orthopaedics.

### **Instruments**

Two questionnaires were used in Test 2, Test 3 and Test 4. Questionnaire 1 was used in Test 2 and Test 3, while Questionnaire 2 (See Appendix M, pp. 317-319) was used in Test 4.

#### **Questionnaire 1**

This consisted of three sections: a) demographic information, i.e. name, student number, age; b) seven scales, i.e. FNS-MGRC scale, bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005), SES (Kelly & Jones, 1997), ES (Miller, 1996), SDS (Crowne & Marlowe, 1960); and c) two single items, i.e. GS-item, SS-item (See Appendix M, p. 319). Details about the above scales and items are presented in the next section.

#### **Questionnaire 2**

This consisted of five sections: a) an invitation letter, which included an introduction to the purpose of test and an explanation about ethical rules, i.e. confidentiality, anonymity and freedom to withdraw; b) demographic information, e.g. marriage, age, years of nursing work; c) the FNS-MGRC scale with a 5-point

scale ranging from 1=“not at all like me” to 5=“extremely like me”; d) the frequency of MGRC delivery, a 5-point scale was used, i.e. 1=“never”, 2=“very seldom”, 3=“median”, 4=“often”, 5=“very often”, and e) the GS-item and the SS-item, which both required to be answered with a 5-point descriptive scale.

The GS-item was designed to measure the degree to which a subject considered herself as sensitive in a general sense, whereas the SS-item was designed to measure the degree to which a subject considered herself as sensitive to MGRC delivery. These two items had been sent to the three experts, together with the item pool of FNS-MGRC. These experts were invited to evaluate the content validity of both the item pool of FNS-MGRC, the GS-item and the SS-item. Therefore, the GS-item and the SS-item had been established with content validity.

In addition, basic psychometric properties about bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005) including the subscales of ICS and DCS, SES (Kelly & Jones, 1997), ES (Miller, 1996) and SDS (Crowne & Marlowe, 1960) are presented in Table 6.2. The 14-item FNS-MGRC scale had been established with content validity and satisfying internal reliability with  $\alpha$  of 0.81 (See Table 6.1, p. 202).

**Table 6.2 Psychometric properties of six scales related to the FNS-MGRC scale**

Scales	Items (n)	Internal reliability		Test-retest reliability		Source
		$\alpha$	Sample (n) <sup>a</sup>	Coefficient	Interval	
bFNES	12	0.90	15	0.75	4 week	Leary, 1983
AMS	10	0.75	243	0.73-0.97 <sup>b</sup>	1 week	Martin, 1984
SCS	30					Singelis, T.M., personal communication, March 1, 2005;
ISC subscale	15	0.72	61	0.57	3 weeks	Singelis et al., 2006
DSC subscale	15	0.74	61	0.66	3 weeks	
SES	25	0.90	206	0.64	8 week	Kelly & Jones, 1997
ES	26	0.88	N/A	N/A	N/A	Miller, 1996
SDS	33	0.88 <sup>c</sup>	39	0.89	1 month	Crowne & Marlowe, 1960

bFNES=brief Fear of Negative Evaluation Scale; AMS=Approval Motivation Scale; SCS: Self Construal Scale;

ISC= Independent Self-Construal (subscale); DSC=Interdependent Self-Construal (subscale);

SES=Susceptibility to Embarrassment Scale; ES=Embarrassability Scale; SDS=Social Desirability Scale.

a. undergraduates; b. item test-retest reliability; c. calculated by KR-20 formula.

N/A=not available

## **Procedures**

The research was approved by the Human Subject Subcommittee, The Hong Kong Polytechnic University. The access to the university school of nursing and the targeted teaching hospitals was permitted by responsible managers, respectively.

The six scales, i.e. bFNES (Leary, 1983), AMS (Martin, 1984), SCS (Singelis, T.M., personal communication, March 1, 2005), SES (Kelly & Jones, 1997), ES (Miller, 1996), SDS (Crowne & Marlowe, 1960), were firstly translated into Chinese by the researcher. Two bilingual academic staff members in the School of Nursing, The Hong Kong Polytechnic University, worked together so as to back-translate these translated Chinese scales into English. Another two bilingual academic staff members in the School of Nursing, The Hong Kong Polytechnic University, were invited to examine the semantic equivalence of the original English scales and the back-translated English scales (See Appendix G, H, I, J, K, L, pp. 310-316).

The semantic equivalence of all of the above six scales was rated with a 5-point scale, i.e. 1=“dissimilar”, 2=“slightly similar”, 3=“moderately similar”, 4=“very similar”, 5=“same”. Those rated as “1”, “2” and “3” were revised and then sent back to the above two academic staff members until all items were rated as either “4” or “5”. In addition, these two academic staff members discussed all items which were rated differently, e.g. one staff member rated an item as “3” and the other rated the same item as “5”. During the discussion, they were provided with the original English items, translated items and the back-translated items until they were able to agree to which degree the semantic equivalence

between the original items and the back-translated items had been reached. Issues related to the cross-cultural use of instruments are discussed in detail in Chapter 7 (See pp. 287-288).

Questionnaire 1 was administered to 65 Year<sup>3</sup> female nursing students. Before the administration of the questionnaire, subjects were informed of the purpose of the test and of the important ethical rules, i.e. confidentiality, anonymity and the freedom to withdraw for any reason. Two weeks later this group of students was tested again. For each test the response rate was 100% with the usable rate of 89.2% (58/65). Questionnaire 2 was administered to all nurses, exclusively female, in the targeted speciality wards in these hospitals, with the help of Chief Nurse Managers in the five teaching hospitals. Three days later the questionnaire was returned. A total of 736 questionnaires were administered. The response rate was 90% (n=681), of which 86% (n=588) was usable.

### **Data analysis**

CFA was processed with AMOS6.0 by referring to Meyers, Gamst and Guarino (2006), and Arbuckle and Wothke (1999). Other statistical analyses were performed through SPSS14.0 For Windows by referring to Norušis (2006).

### **CFA**

Differently from EFA, CFA enables the test of hypotheses regarding the relationship between the observed data which is collected from a sample and the data which is predicted by the proposed model (Meyers et al., 2006). In Test 3, the sample size was adequate because: 1) it was larger than 500; 2) the ratio of sample size to the number of freely estimated parameters was greater than 20:1 (Dishman et al., 2002; Motl et al., 2000). Therefore, CFA could be processed.

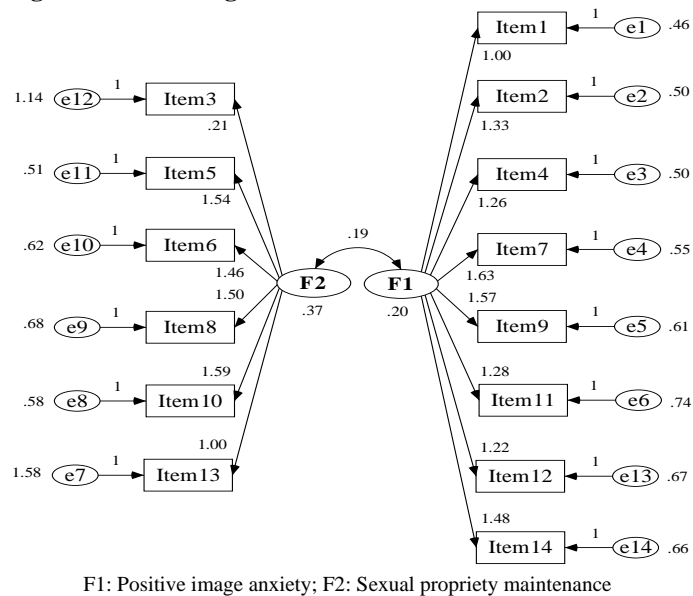


Maximum likelihood estimation is one of the methods in conducting CFA. This method was used because it could maximize the probability of the observed data matching with the proposed model (Dishman et al., 2002; Meyers et al., 2006). Standard procedures of maximum likelihood estimation were used to establish the fixed, freed and constrained parameters in the factor loading, factor variance-covariance, and uniqueness matrices, respectively (Meyers et al., 2006; Motl et al., 2000).

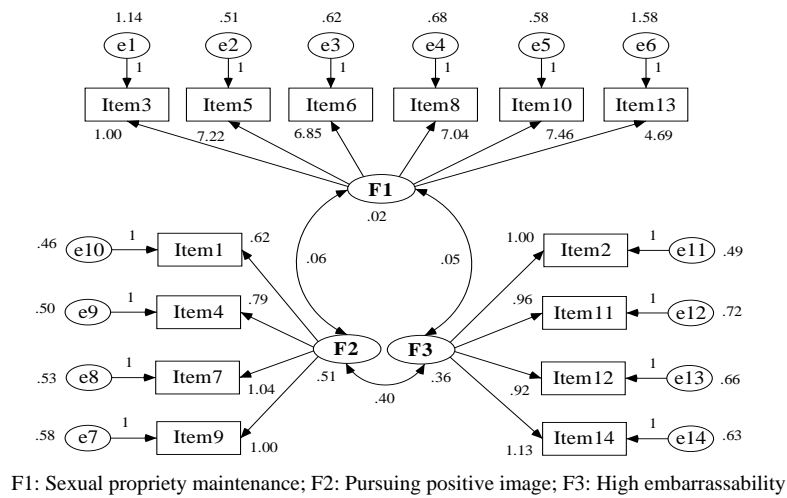
### ***Factorial models***

Two factorial models were examined: 1) the 2-factorial model (See Figure 6.2, p. 214) was derived from the operationalized 2-dimensional FNS-MGRC (See Chapter 5, pp. 174-187); and 2) the 3-factorial model (See Figure 6.3, p. 215) was identified during the EFA in Test 1 data (See Table 6.1, p. 202). In particular, items which highly loaded on the second and third factors in the 3-factorial model were found to highly load on the first factor in the 2-factorial model.

**Figure 6.2 Path diagram of 2-factorial model of FNS-MGRC**



**Figure 6.3 Path diagram of 3-factorial model of FNS-MGRC**



### **Model fit analysis**

Three groups of model fit measures were calculated: absolute, relative and parsimonious fit measures:

#### **1) Absolute fit measures**

Absolute fit measures indicated how well the covariance/correlation of the hypothesized model, i.e. proposed interrelationships between variables, fits the covariance/correlation of the observed data, i.e. the interrelationships between the observed variables (Meyers et al., 2006). It is expected that  $\chi^2$  statistics are insignificant with  $P$  value greater than 0.05, which suggests that the observed model may fit well with the proposed model.

However,  $\chi^2$  is subject to the influence of sample size.  $\chi^2$  statistics increase in parallel with sample size, which may lead to the easy rejection of an acceptable model when sample size is very large (Dishman et al., 2002; Meyers et al., 2006; Motl et al., 2000; Thompson, 2004). Therefore,  $\chi^2$  is less useful in judging a model fit, but it is very useful when competitive models are compared in combination with parsimonious fit measures.

The goodness-of-fit index (GFI) represents the proportion of variance in

the observed correlation/covariance which is accounted for by the predicted model. GFI equal to or greater than 0.90 was indicative of an acceptable model (Dishman et al., 2002).

The root mean square residual (RMSR) refers to the average of the residuals between the observed correlation/covariance and the proposed model variance (Dishman et al., 2002). The smaller the RMSR, the better the fit is (e.g.  $<0.05$ ). The root mean square error of approximation (RMSEA) is the average of the residuals between the observed correlation/covariance in the sample and the predicted correlation/covariance for the population. RMSEA around 0.06 indicates a close fit (Dishman et al., 2002).

## 2) Relative fit measures

Relative fit measures are the measures of fit relative to the independent model which assumes no relationships in the data, i.e. a poor fit, and the saturated model which assumes a perfect fit (Meyers et al., 2006). The most common relative fit measures include comparative fit index (CFI), normed fit index (NFI), incremental fit index (IFI) and relative fit index (RFI). When the value of CFI, NFI, IFI or RFI is from 0.90 to 0.95, it indicates an acceptable fit (Dishman et al., 2002; Meyers et al., 2006).

## 3) Parsimonious fit measures

Parsimonious fit measures are also known as adjusted fit measures. When the method of maximum likelihood estimation is carried out, the greater the estimated parameters, the more possible the data will support the proposed model (Meyers et al., 2006). The parsimonious fit statistics penalize larger models which possess more estimated parameters (Meyers et al., 2006). Adjusted

goodness-of-fit (AGFI) and parsimonious goodness-of-fit (PGFI) are the most common parsimonious fit measures. The value of AGFI or PGFI equal to or greater than 0.50 is indicative of an acceptable fit (Meyers et al., 2006). Parsimonious fit measures are more useful when competitive models are compared. That is, the model which has higher parsimonious fit measures is superior to the one which has smaller parsimonious fit measures (Meyers et al., 2006).

#### ***Model invariance analysis***

After the determination of a better fit model, i.e. 2-factorial model in this study, model invariance across the student data and the nurse data was examined using a 2-phase procedure (Meyers et al., 2006).

Firstly,  $\chi^2$  was calculated so as to assess the model invariance across groups. It was the difference between the two  $\chi^2$  test statistics for the constrained and the unconstrained model. Its degree of freedom (*df*) was the difference between that of the constrained and the unconstrained model. The *P* value was calculated using CHIDIST procedure which was listed in the spreadsheet function in Microsoft Excel (Thompson, 2004). The significant  $\chi^2$  statistic, i.e. *P* value was smaller than 0.05, suggested the rejection of the null hypothesis that the proposed model is invariant across groups.

Secondly, following the rejection of the null hypothesis, the paths with which the coefficients associated differed from group to group required to be identified (Meyers et al., 2006). For example, in the path diagram of the 2-factorial model of FNS-MGRC in Figure 6.2 (See p. 214), a path is represented by a line with an arrow which connects two measured variables. One variable,

which is pointed toward by the arrow, is termed the ‘indicator variable’, e.g. ‘item2’, the other is termed the ‘latent variable’, e.g. ‘F1’. The latent variable is commonly measured by all items, the arrows of which point toward the same latent variable. Each path is associated with a correlation coefficient which reflects the weight of the indicator variable with the latent variable. The higher the coefficient, the more strongly the indicator is correlated with the latent variable.

### **Descriptive analysis**

Chi-square test was employed to evaluate the distribution of demographic characteristics across hospitals. After the deletion of item #3, descriptive analyses were conducted. The total scale score was the sum of 13 items’ scores. Shapiro-Wilk Normality Test (Shapiro-Wilk=0.972,  $P<0.001$ ) showed that the FNS-MGRC scale score was not normally distributed so that nonparametric methods of analyses were conducted (Field, 2000; Sheskin, 2004).

### **Nonparametric analysis**

Spearman’s correlation analyses were employed to analyze the correlation between scores of FNS-MGRC scale, bFNES (Leary, 1983), AMS (Martin, 1984), SES (Kelly & Jones, 1997), ES (Miller, 1996), SDS (Crowne & Marlowe, 1960), ISC, DSC, the GS-item and the SS-item. Also, Spearman’s correlation analyses were conducted to determine the test-retest reliability coefficient of the above scales, subscales, i.e. ISC, DSC, and the GS-item/SS-item. Mann-Whitney Test was used to compare the median differences of the FNS-MGRC scale score between two groups by demographic characteristics. Kruskal Wallis Test was used when the median difference between more than two groups was compared

(Sheskin, 2004).

### **Stepwise regression analysis**

The absolute value of kurtosis and skewness of the scales'/subscales' scores, i.e. FNS-MGRC scale, bFNES (Leary, 1983), AMS (Martin, 1984), SES (Kelly & Jones, 1997), ES (Miller, 1996), SDS (Crowne & Marlowe, 1960), ISC, DSC, ranged from 0.092 to 0.396, and from 0.043 to 0.769, respectively. All of these kurtosis and skewness statistics were smaller than 2.000, suggesting that these scales'/subscales' scores could be treated as continuous indicators (Tzeng & Ketefian, 2003).

Multiple regression (stepwise method) analysis was then performed to select the optimal predictors of FNS-MGRC, i.e. dependent variable, from the independent variables, i.e. bFNES (Leary, 1983), AMS (Martin, 1984), SES (Kelly & Jones, 1997), ES (Miller, 1996), SDS (Crowne & Marlowe, 1960), ISC, DSC. It is a method to select the most contributory independent variables to the dependent variable by including variables whose inclusion can contribute significant changes to the variance, and by excluding variables whose inclusion cannot lead to significant change to the variance (Burns & Grove, 2005; Green & Davis, 2005).

With the exception of the purported 13-item FNS-MGRC scale, other scales/subscales, i.e. bFNES (Leary, 1983), AMS (Martin, 1984), SES (Kelly & Jones, 1997), ES (Miller, 1996), SDS (Crowne & Marlowe, 1960), ISC, DSC, have been established with satisfying reliability and validity. The predictive capability of the above scales/subscales for the FNS-MGRC could be referred to as retrospective or postdictive validity, whereas the other scales/subscales could

be viewed as criterion. However, retrospective validity is the weakest criterion validity (Bryant, 2000; Sapp, 2002). Nevertheless, it can facilitate the understanding of a person's present state by referring to the possible past/antecedent state of concern (Bryant, 2000; Sapp, 2002).

### **Scale reliability analysis**

Alpha scale reliability analysis was performed so as to determine the scale internal reliability, i.e. Cronbach's  $\alpha$ , and items' psychometric properties (Pett et al., 2003).

## **Results**

### **Demography**

Nearly 75% of subjects (N=588) had been working for no more than 10 years. Nearly 20% had never performed MGRC, while only approximately 10% had done so frequently.

Slightly more than half of subjects were married. Of these, nearly 75% (74.9%, 239/319) were mothers. No significant differences of distribution of other demographic characteristics were found except that of age ( $P<0.01$ ), years of work experience ( $P<0.001$ ), motherhood ( $P<0.05$ ) and the frequency of MGRC delivery ( $P<0.001$ ). Other details are shown in Table 6.3 (See p. 221).

### **Descriptive statistics**

The FNS-MGRC scale score ranged from 13 to 65 ( $32.04\pm 8.937$ ). Item means ranged from 1.869 to 3.442 with the overall mean of 2.456.

### **Model fit measures**

All the other model fit measures (See Table 6.4, p. 222) reached the criteria of an acceptable model fit except the  $\chi^2$  statistics. Parsimonious measures, i.e. AGFI, PGFI, were greater in the 2-factorial model than in the 3-factorial model,

suggesting that the 2-factorial model was a better model fit.

**Table 6.3 Demography and group differences of FNS-MGRC score (N=588)**

Demography	n	%	Chi-square	Kruskal Wallis
Age				
18-30	434	73.8	20.938**	0.821
31-40	119	20.2		
41+	35	6.0		
Years of nursing work				
≤10	432	73.5	26.036 <sup>†</sup>	2.632
11-20	124	21.1		
21+	32	5.4		
Marital status				
Never married	269	45.7	2.799	41067.000 <sup>a</sup>
Married	319	54.3		
With child				
Yes	239	40.6	9.561*	41444.000 <sup>a</sup>
No	349	59.4		
Had sex				
Yes	323	54.9	3.284	41531.000 <sup>a</sup>
No	265	45.1		
RN				
Yes	528	89.8	5.969	15178.000 <sup>a</sup>
No <sup>b</sup>	60	10.2		
Position title				
Staff Nurse	536	91.2	20.448	11724.500 <sup>a</sup>
Head Nurse	52	8.8		
Frequency of MGRC delivery				
Never	106	18.0	171.104 <sup>†</sup>	53.747 <sup>†</sup>
Very seldom	227	38.6		
Median	187	31.8		
Often	45	7.7		
Very often	23	3.9		
Specialty ward				
Urology	64	10.9	39.944	26.753 <sup>†</sup>
Acute & Emergency	74	12.6		
ICU	46	7.8		
Cardiothoracic surgery	107	18.2		
Neurosurgery	69	11.7		
Neurology	61	10.4		
General Surgery	85	14.5		
Orthopaedics	82	13.9		
Hospital				
# 1	130	91.5	-	2.718
# 2	121	89.6		
# 3	128	92.1		
# 4	116	88.5		
# 5	93	69.4		

\*  $P<0.05$ , \*\*  $P<0.01$ , <sup>†</sup>  $P<0.001$ .

a. Mann-Whitney Test

b. These nurses were new graduates and had not passed the national nursing licensure examination. They played the role of assistant nurse but were called 'nurse'. Patients, their family or visitors might not know the role differences between these nurses and other RNs. They simply regarded them as inexperienced or novice nurses.

### Model invariance outcomes

For the constrained 2-factorial model,  $\chi^2$  statistics were:  $\chi^2=651.459$ ,  $df=166$ ,  $P<0.001$ . For the unconstrained 2-factorial model,  $\chi^2$  statistics were:  $\chi^2=590.237$ ,  $df=154$ ,  $P<0.001$ . Therefore, the  $\chi^2$  statistics across groups were:  $\chi^2=61.222$ ,  $df=12$ ,  $P<0.001$ , suggesting that the null hypothesis that the 2-



factorial model of FNS-MGRC was invariant across students' data and nurses' data should be rejected.

Further analyses showed that the critical ratios (*CR*) for the item of #2 (*CR*=4.288), #5 (*CR*=2.961), #6 (*CR*=4.158), #7 (*CR*=3.333), #8 (*CR*=4.460), #9 (*CR*=4.725), #12 (*CR*=2.225), #13 (*CR*=2.830) and #14 (*CR*=5.867), were greater than 1.96 (Meyers et al., 2006), suggesting these items were scored differently by nurses and students.

**Table 6.4 Model fit indices for the FNS-MGRC scale (N=588)**

Fit measure indices	2-factorial model	3-factorial model
Absolute fit measures		
$\chi^2$	246.848 <sup>†</sup>	240.096 <sup>†</sup>
Degree of Freedom ( <i>df</i> )	76	74
Goodness of Fit Index (GFI)	0.942	0.943
Root Mean Square Residual (RMSR)	0.057	0.056
Root Mean Square Error of Approximation (RMSEA)	0.062	0.062
Relative fit measures		
Comparative Fit Index (CFI)	0.937	0.939
Incremental Fit Index (IFI)	0.938	0.939
Normed Fit Index (NFI)	0.912	0.915
Relative Fit Index (RFI)	0.895	0.895
Parsimonious fit measures		
Adjusted Goodness of Fit Index (AGFI)	0.920	0.919
Parsimonious Goodness of Fit Index (PGFI)	0.682	0.665

<sup>†</sup> *P*<0.001

### Other validity outcomes

FNS-MGRC was positively correlated with the GS-item (*rs*=0.28, *P*<0.05) and the SS-item (*rs*=0.60, *P*<0.001). The two factors of FNS-MGRC, i.e. F1 and F2, were significantly correlated with the GS-item (F1 *vs.* GS-item: *rs*=0.22, *P*<0.001; F2 *vs.* GS-item: *rs*=0.30, *P*<0.001), and SS-item (F1 *vs.* SS-item: *rs*=0.58, *P*<0.001; F2 *vs.* SS-item: *rs*=0.41, *P*<0.001), respectively.

The FNS-MGRC scale score was significantly positively correlated with that of bFNES (*P*<0.001), AMS (*P*<0.05), SES (*P*<0.001) and ES (*P*<0.001). The score of the FNS-MGRC scale was not significantly correlated with either

subscales of SCS: FNS-MGRC *vs.* ISC:  $P>0.05$ ; FNS-MGRC *vs.* DSC:  $P>0.05$ )  
(See Table 6.5, p. 223).

**Table 6.5 Spearman's correlation coefficients between scales (N=58)**

	FNS-MGRC	bFNES	AMS	SCS		SDS	SES
				ISC	DSC		
bFNES	0.61 <sup>†</sup>						
AMS	0.32*	0.34*					
SCS							
ISC	-0.11	-0.05	-0.30*				
DSC	0.01	-0.01	0.12	0.07			
SDS	-0.24	-0.25	-0.21	0.03	0.08		
SES	0.64 <sup>†</sup>	0.62 <sup>†</sup>	0.35**	-0.24	0.00	-0.36**	
ES	0.44 <sup>†</sup>	0.17	0.27*	-0.17	0.02	-0.27*	0.47 <sup>†</sup>

\*  $P<0.05$ , \*\*  $P<0.01$ , <sup>†</sup>  $P<0.001$ .

bFNES=brief Fear of Negative Evaluation Scale; AMS=Approval Motivation Scale;

SCS= Self Construal Scale; ISC=Independent Self Construal;

DSC=Interdependent Self-Construal; SDS=Social Desirability Scale;

SES=Susceptibility to Embarrassment; ES=Embarrassability Scale.

bFNES, SES and ES were the best predictors of FNS-MGRC with the standardized coefficients. i.e.  $\beta$ , of 0.434, 0.278 and 0.233, respectively. The optimal regression equation was:  $\text{FNS-MGRC} = -3.051 + 0.514 \times \text{bFNES} + 0.110 \times \text{SES} + 0.136 \times \text{ES}$ . In this equation, FNS-MGRC, bFNES, SES and ES represent the scale score of the 13-item FNS-MGRC scale, bFNES, SES and ES, respectively. This equation/formula was statistically significant ( $F=23.688$ ,  $P<0.001$ ).

## Reliability outcomes

### Internal consistency reliability

For the 13-item FNS-MGRC scale, the internal consistency reliability, i.e.  $\alpha$ , for F1, F2 and the overall was 0.83, 0.82 and 0.87, respectively. Two factors were highly correlated ( $r_s=0.70$ ,  $P<0.001$ ). The mean of inter-item correlation coefficients was 0.354 ranging from 0.105 to 0.624. The corrected item-total correlation coefficients ranged from 0.40 to 0.66. Factor loadings ranged from 0.44 to 0.80. Other details are shown in Table 6.6.

**Table 6.6 Psychometric properties of the 13-item FNS-MGRC scale (N=588)**

Factor & Item statements	Factor Loading	Corrected item-total correlation	Item test-retest reliability
<b>F1: Positive image anxiety (<math>\alpha=0.83</math>)</b>			
#7 Clearly knowing that others' opinion will not impact on me, I often still worry about them.	0.70	0.63	0.59
#9 I am afraid that others will not approve of me.	0.67	0.59	0.51
#2 If others appear embarrassed, I feel embarrassed.	0.64	0.56	0.45
#14 I am easily embarrassed.	0.63	0.59	0.49
#4 I fear that others find fault with me.	0.62	0.51	0.75
#12 I feel uneasy when people pay attention to me.	0.55	0.47	0.59
#11 I probably care too much about how to communicate with people when I first meet them.	0.55	0.46	0.48
#1 I often fear that others notice my weaknesses.	0.55	0.46	0.56
<b>F2: Sexual propriety maintenance (<math>\alpha=0.82</math>)</b>			
#5 I dislike delivering male genitalia related care.	0.80	0.64	0.82
#10 Physical contact with men's most private area can make me extremely embarrassed.	0.79	0.66	0.70
#6 I think that some sayings/behaviours can make female nurses who are required to deliver male genitalia related care feel very uncomfortable.	0.75	0.62	0.60
#8 I will try to avoid delivering male genitalia related care.	0.74	0.62	0.76
#13 I think that physical contact with genitalia can only occur between the spouse/lovers under the condition that no blood links exist.	0.44	0.40	0.58

a. The overall  $\alpha$  is 0.87.

### ***Test-retest reliability***

The test-retest reliability for six scales was: FNS-MGRC: 0.90 ( $P<0.001$ ), bFNES: 0.77 ( $P<0.001$ ); AMS: 0.77 ( $P<0.001$ ); ISC: 0.69 ( $P<0.001$ ); DSC: 0.60 ( $P<0.001$ ); SDS: 0.79 ( $P<0.001$ ); SES: 0.76 ( $P<0.001$ ) and ES: 0.72 ( $P<0.001$ ), respectively. The test-retest reliability for GS-item and SS-item was 0.57 ( $P<0.001$ ) and 0.61 ( $P<0.001$ ) respectively. For the scale of FNS-MGRC, the item test-retest reliability ranged from 0.45 to 0.82 (See Table 6.6, p. 224).

## **Discussion**

### **Rejected null hypotheses**

Through Test 2, Test 3 and Test 4, it was found that many null hypotheses (hypothesis #1, #2, #4, #5, #6, #9, #10, See pp. 207-209) derived from the operationalized 2-dimensional FNS-MGRC were rejected, with the exception that the null hypothesis related to DSC in hypothesis #4 (See p. 208) and that related to the factor of 'hospital' in hypothesis #9 (See p. 209) were accepted. The

rejection of null hypotheses suggests that the initially proposed relationships are not falsified, therefore the conceptual foundations of these hypotheses, i.e. the conceptual model of FNS-MGRC (See Chapter 5, pp. 157-173), the operationalized 2-dimensional FNS-MGRC (See Chapter 5, pp. 174-187), are appropriate. Given that all of these conceptual foundations have been discussed in detail in Chapter 5, it is thus not necessary to repeat those discussions in this chapter.

The null hypothesis that “the observed model and the proposed 2-factorial model of FNS-MGRC were a good fit (See p. 207) was rejected according to the  $P$  value of  $\chi^2$  statistics, i.e.  $<0.001$  (See Table 6.4, p. 222). However, caution is advised about drawing any conclusion regarding whether the 2-factorial model was a good fit, given the strong influence of sample size over the  $\chi^2$  Test (Arbuckle & Wothke, 1999; Meyers et al., 2006; Thompson, 2004). The null hypothesis that “the 2-factorial model of FNS-MGRC was not a better fit than the 3-factorial model” (See p. 208) was rejected because the 2-factorial model had greater parsimonious model fit measures than those of the 3-factorial model (See Table 6.4, p. 222). This suggests that the 2-factorial model was a better fit in comparison with the 3-factorial model. The null hypothesis that “the unconstrained or free 2-factorial model of FNS-MGRC was not a better fit than the constrained model” was rejected because of the very small  $P$  value of  $\chi^2$  statistics, i.e.  $<0.001$ . This suggests that the 2-factorial model was not invariant across nurse data and nursing student data.

The following four null hypotheses regarding the relationship between the FNS-MGRC scale and other measures, i.e. bFNES (Leary, 1983), AMS (Martin,

1984), SES (Kelly & Jones, 1997), ES (Miller, 1997), were rejected. Namely, that the FNS-MGRC scale score was not positively correlated with the score of bFNES (Leary, 1983), AMS (Martin, 1984), SES (Kelly & Jones, 1997), ES (Miller, 1997), respectively, because all *P* values were smaller than 0.05 (See Table 6.5, p. 223). These then substantiate the proposition regarding the relationship between FNS-MGRC and other psychological constructs, justifying the operationalization of FNS-MGRC which was discussed Chapter 5 (See pp. 174-187). Also, the null hypotheses regarding relationships between FNS-MGRC and the GS-item and the SS-item, respectively, were rejected.

In addition, all the other null hypotheses related to the influence of subjects' demographic characteristics or their experiences of MGRC delivery, with the exception of "frequency of MGRC delivery" and "specialty ward", over their FNS-MGRC scale scores were not rejected because of the greater *P* values, i.e. >0.05 (See Table 6.3, p. 221). This suggests that the majority of subjects' demographic factors may have little influence over the trait of FNS-MGRC.

Issues surrounding all of the above hypotheses are discussed later in this section, i.e. in the part on "two dimensional FNS-MGRC" (See pp. 230-233). Attention also requires to be drawn to those hypotheses which failed to be confirmed.

#### **Accepted null hypotheses**

The hypotheses which failed to be rejected include the influence of social desirability response bias over subjects' FNS-MGRC (hypothesis #7, See pp. 208-209), the correlation between the FNS-MGRC scale and SCS (hypothesis #4, #5, See p. 208), and the influence of demographical factors and experiential

factors, e.g. subjects' experience of sexual intercourse, over their FNS-MGRC (hypothesis #8, See p. 209). These aspects are discussed in the next section.

#### *Social desirability response bias*

The failure to identify a significant negative relationship between the scale of FNS-MGRC and SDS ( $r_s = -0.243$ ,  $P > 0.05$ ) within the range of -0.20 to +0.20 (Mitchell & Jolley, 2004, p. 112), suggested that the reliability and validity of the FNS-MGRC scale might not be threatened by social desirability response bias. In other words, female nurse subjects may not fake to be good by concealing their negative or sensitive responses to MGRC and related matters.

The above result also suggests that the admission of the negative perceptions, responses and attitudes towards MGRC might not threaten subjects' self-esteem, self-image, and/or public image, and influence little over their lives and work. Therefore, it was not necessary for them hide those perceptions, responses, attitudes and behaviours. In other words, the negative perceptions towards MGRC among female nurses in the target hospitals might have been recognized and considered as normal. Otherwise, subjects would try to cover their real perceptions, attitudes and responses to MGRC, and pretend to be good in case they were punished because of their possession of the negative perceptions, responses and attitudes towards MGRC.

Another two hypotheses about the correlation between FNS-MGRC and ISC and DSC also failed to be confirmed.

#### *Self construal*

Self-construal is constituted by a variety of thoughts, feelings, and actions which defines the distinctiveness of being oneself and defines the person's

relationship with others (Singelis, 1994). A person who has a strong ISC places emphasis on the internal attributes and dynamics, uniqueness, individuality and directiveness in communication. In contrast, a person who has a strong DSC stresses the relational, external and public matters like social roles, interpersonal relationships, appropriateness under any condition, indirectiveness in communication (Sharkey & Singelis, 1995; Singelis, 1994; Singelis et al., 1999, 2006; Yamada & Singelis, 1999). It has been long and consistently found that China has a culture of collectivism within which Chinese people tend to develop an interdependent self-construal, far stronger than the independent self-construal (Singelis, 1994; Singelis et al., 1995).

As was proposed, the higher the FNS-MGRC scale score, the higher the DSC subscale score and the lower the ISC subscale score. However, these correlations failed to be confirmed as no significant differences were found between these measures' scores (See Table 6.5, p. 223). Furthermore, Sharkey and Singelis (1995) found, in a multiple ethnic and cultural sample (N=371), that ISC was significantly negatively correlated with ES, while DSC was significantly positively related to ES, but these two correlations were not found in Test 2 (See Table 6.6, p. 224).

The above inconsistent findings trigger a few concerns: 1) that Chinese people may not develop such a dual self-construal, i.e. stronger interdependent self-construal than independent self-construal, within a collectivist culture, as was proposed by the western scholars (Singelis, 1994); 2) SCS (Singelis, T.M., personal communication, March 1, 2005). SCS was developed in America so that it may be inapplicable in a Chinese context; 3) nowadays, Chinese female nursing

students might not have fully developed the self-construal that their culture features, i.e. stronger interdependence and collectivism; and 4) Chinese female nursing students may develop a different self-construal from Chinese female nurses. All of the above possibilities may lead to the failure to confirm the proposed correlations between the FNS-MGRC and ISC, DSC, respectively. Therefore, these concerns require further investigation.

Additional issues regarding the use of SCS (Singelis, T.M., personal communication, March 1, 2005) are discussed in Chapter 7 (See pp. 276-278, 287-289). In the next section the failure of the confirmation regarding the influence of subjects' demographic factors over their FNS-MGRC is discussed.

#### **Influential factors of FNS-MGRC**

In Test 4, neither the median FNS-MGRC scale scores were not significantly different ( $P>0.05$ ) between the married and the unmarried subjects, nor were the median FNS-MGRC scale scores between those who had experience of sexual intercourse and those who had not ( $P>0.05$ ) (See Table 6.3, p. 221). This suggests that the influence of subjects' husbands/boyfriends over subjects' FNS-MGRC may not be as strong as was proposed.

In comparison, being involved in a situation in which MGRC was common appears to have a strong influence on subjects' FNS-MGRC. It was found that the median FNS-MGRC scale score was significantly different between those with varied frequency of experiences of MGRC delivery in hospital:  $P<0.001$ , speciality ward:  $P<0.002$  (See Table 6.3, p. 221). This suggests that those who performed MGRC frequently might not be as negative or sensitive towards MGRC as those who had performed MGRC only a few times, i.e. infrequently.



In contrast with the significant influence of specialty wards over subjects' FNS-MGRC, the environment or the social system, i.e. hospital, might not have a significant influence over subjects' FNS-MGRC (See Table 6.3, p. 221). This suggests that the immediate environment, i.e. speciality wards, plays a more important role in regulating female nurses' FNS-MGRC. Test 4 also suggests that the position of being a head nurse, subjects' age and years of nursing work may not significantly influence subjects' FNS-MGRC (See Table 6.3, p. 221).

Considering that only the factors of specialty wards and the frequency of delivering MGRC had a significant influence over female nurse subjects' FNS-MGRC, it could be concluded that exposure to the practice of MGRC is the key factor which influences a female nurse's FNS-MGRC. This point is contributory to the modification of the operationalized 2-dimensional FNS-MGRC in respect of influential factors. It also suggests that the cultural constraints over female nurses' practice of MGRC might be able to be overcome by sufficient exposure to the actual delivery of MGRC.

Therefore, to increase the frequency with which female nurses perform MGRC may help female nurses to deal with MGRC-related embarrassing situations in a proper manner. MGRC, e.g. genital hygiene, urinary catheterization, is an integral part of necessary nursing care.

The next section focuses on the significance of Test 4 findings to the operationalized 2-dimensional FNS-MGRC.

## **2-dimensional FNS-MGRC**

Although  $\chi^2$  statistic did not support that the 2-factorial and 3-factorial models of FNS-MGRC are a good fit, all the other model fit measures (See Table

6.4, p. 222) have reached the acceptable criteria for a fit model, supporting that the two models were an acceptable fit in the nurses' data. The  $\chi^2$  statistic has weaknesses therefore the unsatisfactory  $P$  value, i.e.  $<0.05$ , does not definitely mean that the proposed model is not an acceptable fit. Issues surrounding the  $\chi^2$  test weaknesses have been discussed in this chapter (See p. 215). Furthermore, the 2-factorial model may be a better fit than the 3-factorial model because of the greater parsimonious fit measures (See Table 6.4, p. 222).

The 3-factorial model of FNS-MGRC is meaningful as it corroborates the above 2-factorial model. Items which highly loaded on the second factor of FNS-MGRC, i.e. positive image anxiety, could be grouped into two groups, each suggesting a key personality attribute, i.e. pursuing positive image (F2) and high embarrassability (F3). These two attributes may have a strong influence over each other ( $r_s=0.93$ ,  $P<0.001$ ). It implies that these two attributes are the most contributory to one's anxiety over developing a positive image in public. These might play an important role in Chinese female nurses' lives. Furthermore, these two attributes may have significant influence over one's attribute of sexual propriety maintenance (F1) as the correlation coefficients between them were very high: F2 vs. F1:  $r_s=0.69$ ,  $P<0.001$ ; F3 vs. F1:  $r_s=0.69$ ,  $P<0.001$ .

In general, a person who pursues a positive public image must pay much attention to others' or social evaluations in order to demonstrate they can meet significant others' or valuable roles' expectations. Therefore, he/she must be vigilant about or worried about any negative evaluation from others, as negative evaluations would threaten his/her positive public image. The fear of negative evaluation can contribute to more experience of embarrassment in various social

situations (Miller, 1995, 1996). On the other hand, a person who is vigilant about or who fears negative evaluations must be concerned over whether significant others, e.g. authorities, approve of them. This vigilance or fear can help him/her avoid disapproval, especially by significant others, and therefore any negative evaluations, which may arise because of the fact that people's opinions, especially significant others' opinions, often influence other (general) society members' images or opinions. According to both the 2-factorial and 3-factorial structure of FNS-MGRC, a person with a high FNS-MGRC might be a person who is overly concerned about negative evaluations, concerned about approval from others and more susceptible to embarrassment. The above discussion about the relationships between pursuing a positive public image, fear of negative evaluations and motivation to seek approval were derived from the 2-factorial FNS-MGRC, i.e. 2-dimensional FNS-MGRC (See Chapter 5, pp. 174-187), and supported by the middle to high correlations between the FNS-MGRC scale and bFNES (Leary, 1983), SES (Kelly & Jones, 1997), ES (Miller, 1996) and AMS (Martin, 1984) (See Table 6.5, p. 223), and supported by the regression analysis outcomes (See p. 223).

In addition, the low correlation between FNS-MGRC and the GS-item (F1 *vs.* GS-item:  $r_s=0.22$ ; F2 *vs.* GS-item:  $r_s=0.30$ ) suggests that GS-MGRC concept was distinct from the concept regarding being a sensitive person in a general sense. In comparison, the moderate correlation between SS-MGRC and the SS-item (F1 *vs.* SS-item:  $r_s=0.58$ ; F2 *vs.* SS-item:  $r_s=0.41$ ) suggests that FNS-MGRC may mean more than a straightforward sensitivity to MGRC. The above findings regarding the relationships between the FNS-MGRC and the two items,

i.e. GS-item, SS-item, reflect the complexity of the psychological construct of FNS-MGRC and the difference between the latent construct and an aspect of a construct.

Furthermore, the 2-factorial model was not invariant ( $P<0.001$ ) across nursing students' data and nurses' data. Only four out of 13 items in the FNS-MGRC scale (#1, #4, #10, #11, See Table 6.6, p. 224) were similarly scored by female nurse subjects and female nursing student subjects. This may result from the small sample size of students ( $n=58$ ), or originate from the significant differences between clinical nurses and nursing students in respect of sexual, social and professional maturity. More research efforts are thus required so as to find a better interpretation of these results. On the other hand, the invariance also suggests the sensitivity of the 13-item FNS-MGRC scale, as it could differentiate between different groups.

In addition to the concern over the factorial structure of FNS-MGRC and the construct of FNS-MGRC, attention must also be paid to the psychometric properties of the FNS-MGRC scale.

#### **FNS-MGRC scale**

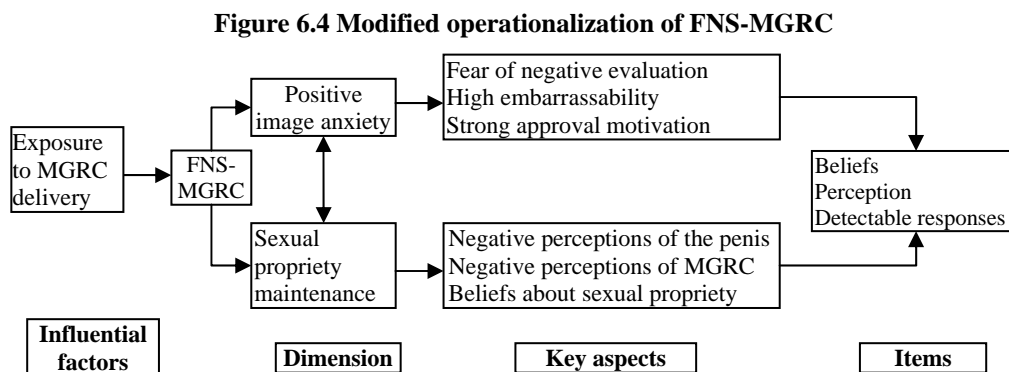
The 13-item FNS-MGRC scale has been established with satisfying psychometric properties; that is, high internal consistency greater than the cut-off values, i.e.  $\alpha>0.80$ , acceptable corrected item-total correlation coefficients, i.e. corrected item-total correlation coefficients  $>0.40$  (Blaikie, 2003), excellent time stability ( $r_s=0.90$ ), i.e.  $>0.60$  (Sapp, 2002), and dearth of redundant items, i.e. inter-items correlation  $<0.90$  (Blaikie, 2003). A series of model fit measures and high correlation coefficients between the FNS-MGRC scale and other existing

scales suggested that the FNS-MGRC scale does measure the construct purported to be measured. This means that the construct validity of the FNS-MGRC scale has been established.

Nevertheless, the nurse data did not support the proposition that attitudes towards sexual health are a necessary aspect of the 2-dimensional model of FNS-MGRC. The factor loading of this item (#3 item, See Table 6.1, p. 203) was extremely low, i.e. 0.12, which suggests that it should be deleted, which is the reason that all statistical outcomes, except that on the examination of model fit, were generated based on the remaining 13 items instead of all 14 items.

### Summary of findings

In summary, the operationalized 2-dimensional FNS-MGRC was supported by the majority of results from both the nurse data and the student nurse data. Figure 6.4 shows the modification of the 2-dimensional FNS-MGRC according to findings from Study 3.



The two dimensions of FNS-MGRC, i.e. GS-MGRC, and SS-MGRC, were labelled, respectively, according to the core concept which is measured by all items highly loaded on the same factor. The disconfirmed hypotheses related to self-construal, gender inequality awareness and sexual health promotion

awareness suggest that these aspects should be removed from the primary operationalized FNS-MGRC. In addition, it was found that only specialty wards and frequency of MGRC delivery might have influenced subjects' FNS-MGRC. These two factors were considered to reflect the intensity of subjects' exposure to MGRC delivery. For example, nurses in the ward of urology might witness or perform MGRC more frequently than those in the ward of General surgery. In addition, the frequency of delivering MGRC certainly is in proportion to the intensity of a nurse's exposure to MGRC delivery, i.e. the more times she delivers MGRC, the more intensive her exposure to MGRC delivery.

As to the 13-item FNS-MGRC scale, it has been established with satisfying reliability and validity. However, flexibility is required in relation to when the FNS-MGRC scale is used, by taking cultural and working environmental factors into consideration as these may have a significant influence over female nurses' FNS-MGRC.

## **Conclusion**

This chapter has placed emphasis on the development of the FNS-MGRC scale, the determination of its psychometric properties and the examination of a variety of hypotheses which were derived from the operationalized 2-dimensional FNS-MGRC. In the next chapter, all findings from Study 1, Study 2 and Study 3 are discussed as a whole.

## **Chapter 7 Discussion**

This chapter firstly introduces the organization of discussion contents, and then presents a synthesis of all research findings. It will be followed by the discussion, particularly focusing on the aspects which might be contributory to the generation of issues in the practice of female nurses delivering MGRC in the targeted hospitals. These aspects include sexual interpretation, power of socialization and ethical issues. Subsequent to this discussion the implications, recommendations and limitations of this research are set out.

### **Introduction**

Before commencing the overall discussion about all the research findings, it should be noted that findings from Study 1 (See pp. 101-123), Study 2 (See pp. 130-143) and Study 3 (See pp. 202-206, 224-234) have been discussed in Chapter 4 and Chapter 6, respectively. In particular, an overall discussion about findings from Study 1 and Study 2 was also presented in Chapter 4 (See pp. 143-147), and a summary of Study 3 findings was presented in Chapter 6 (See pp. 234-235).

As was found through an extensive literature review (See Chapter 2, pp. 21-44), there was a paucity of research which placed emphasis on nurses' perceptions, attitudes and responses towards MGRC during their delivery of MGRC. Therefore, this chapter will select out those specific findings, i.e. in relation to nurses' perceptions, attitudes and responses towards MGRC during their delivery of MGRC, from this research and address their particular aspects. These findings and particular aspects are then linked to others' findings, according to the literature, and simultaneously, interpretations about the specificities and particularities of the findings from this research are provided so

as to enable a better understanding of possible issues embedded in the local practice of female nurses delivering MGRC.

To aid clarity, discussions in this chapter are structured logically into two parts. The first part focuses on research findings about: a) the practice of female nurses delivering MGRC in the local hospitals, and b) female nurses' personality trait of FNS-MGRC. The second part places emphasis on the particular aspects of findings which may influence either the practice of female nurses delivering MGRC, or female nurses' FNS-MGRC, and then their perceptions, attitudes and responses towards MGRC during the provision of MGRC.

This chapter does not make many comparisons between findings from this research and others'. This is because of: a) the dearth of references found to focus on the above areas, i.e. female nurses' perceptions, attitudes and responses towards MGRC during MGRC delivery, the personality trait of FNS-MGRC, in the previous paragraph, and b) the similarities and differences between findings from this research and those from available references, which have been discussed in detail in Chapter 4 (See pp. 101-123, 130-143) and Chapter 6 (See pp. 202-206, 220-234).

As to the conservative sexual culture and the sexual impropriety/propriety rules in mainland China, these have been discussed in Chapter 3 (See pp. 51-52), Chapter 4 (See pp. 98-99) and Chapter 5 (See pp. 150-154). Therefore this chapter mentions only the key points, but does not provide details.

### **Synthesis of findings**

To facilitate the synthesis of all research findings, a summary of major findings from Study 1, Study 2 and Study 3, respectively, is presented in Table



7.1 (See p. 295). As is shown in Table 7.1, it is clear that all research findings appear to centre around either the practice of female nurses delivering MGRC or female nurses' personality trait of FNS-MGRC. Accordingly, the research findings with the same focus were grouped and discussed together.

### **Practice of female nurses delivering MGRC**

This group of findings was generated mainly from the preliminary study stage, i.e. Study 1 and Study 2. Chapter 4 presented a discussion closely based on the outcomes of these two studies so as to facilitate the operationalization, examination and discussion about the latent construct, i.e. the personality trait of FNS-MGRC. In comparison, this section places emphasis on the discussion of the major issues embedded in the practice of female nurses delivering MGRC and the relationships between these issues.

#### **1) Nurses' roles in the practice of MGRC**

Local Chinese female nurses may play a very limited role in the practice of MGRC in local hospitals. This could be reflected through: a) very few MGRC, e.g. bladder irrigation, bladder washout, urinary catheter removal, were provided predominantly by nurses; and b) few cues could be identified in this research that nurses may pay attention to male patients' psychosocial and sexual concerns and needs when providing MGRC. Some subjects indicated that male patients' wishes for, e.g. privacy, a male MGRC provider, should be respected, but none appeared to show any concern over patients' concerns and needs with respect to sexuality.

In comparison, available references suggest that nurses in western countries, e.g. UK, America, might play different roles in the practice of MGRC. In the first place, nursing aides or nurse assistants instead of nurses might be

responsible for perineal hygiene (Carnaby & Cambridge, 2002; Jervis, 2001; Twigg, 2000a, 2000b); suprapubic catheterization has been advocated to be performed by a clinical nurse specialist in the UK, although its practice is still dominated by doctors (Gujral, Kirkwood, & Hinchliffe, 1999; Robinson, 2005); male urinary catheterization appears to be performed mainly by nurses, both female and male nurses (Hampton, 2005; Shallcross, 2000; Wilde, 2003b), whereas other types of MGRC, e.g. bladder irrigation (Ng, 2001), bladder washout (Evans & Godfrey, 2000), might also be the province of nurses. In the second place, nurses in the UK and America would seem to be playing a role in meeting male patients' psychosocial and sexual needs when physical conditions, e.g. prostate disease (Kelsey et al., 2004; Weber & Sherwill-Navarro, 2005), incontinence (Roe & May, 1999), presence of an indwelling catheter (Hampton, 2005), stoma surgery (Manderson, 2005), may require certain types of MGRC, e.g. genital wound care, urinary catheterization, indwelling catheter care. These suggest that nursing practice in the area of MGRC in some western countries might have reached a more advanced stage, in comparison with that in mainland China.

## 2) Nurses' negativity

Research findings from Study 1 and Study 2 suggested that local Chinese female nurses' and nursing managers' perceptions, attitudes and responses towards MGRC might be negative (See Chapter 4, pp. 101-123, 130-143). The quality of certain types of MGRC, e.g. meatal cleansing, which were mainly the responsibility of nurses and/or those to whom they delegated this work, e.g. the patient's wife, a cleaning staff member, might be compromised as a result.

Given the dearth of available references found to have investigated nurses' perceptions, attitudes and responses towards specific types of MGRC, it is difficult to draw any general conclusion regarding the similarities and differences between local Chinese female nurses' perceptions, attitudes and responses towards MGRC and those of nurses in other countries, e.g. America, UK, Australia. However, specific conclusions regarding nurses' perceptions of certain types of MGRC have been drawn, and details were presented in Chapter 4 (See pp. 130-143).

### 3) Role conflicts

Nurses' limited roles in the local practice of MGRC and female nurses' negative conduct during their provision of MGRC may be rooted in the direct conflict between role expectations of a nurse and of a desirable Chinese female adult (See Chapter 4, pp. 140-142; Chapter 5, pp. 152-153). The centre of this role conflict is that a desirable Chinese female should not physically contact or expose the penis of any man who is not her (potential) husband, whereas in mainland China, a nurse, according to codes of ethics for nurses (ICN, 2006; Pang et al., 2000; SN, 2000) (See pp. 255-264), should provide any necessary health care without being restricted by, e.g. gender, types of illness. Therefore, a female nurse who provides MGRC may be subjected to negative evaluations and judgements, e.g. be thought to be behaving in sexually improper ways, similar to the behaviour of an undesirable female.

Sexual impropriety/propriety rules constitute the core elements in the conservative sexual culture in mainland China (Ren, 2005; Zhao & Li, 2003) (See Chapter 5, pp. 150-154). Messages about the sexual impropriety/propriety

rules may be conveyed in many forms of human cultural products in mainland China, e.g. drawings, movies, TV programmes, folklore, literature. They may also be transmitted as part of the social norms which shape people and make them behave in socially and culturally appropriate ways. This process of being shaped is a process of social learning, i.e. socialization (Michener et al., 2004; Wharton, 2005). If the process of learning about sexual impropriety/propriety rules is sufficiently long, it is likely that these rules are internalized. Once internalised, these sexual impropriety/propriety rules can consciously or unconsciously govern and regulate one's perceptions, attitudes and responses towards matters related to sexual impropriety or propriety.

Although it is impossible to know whether or to what degree local Chinese female nurses have internalized the sexual impropriety/propriety rules, it is possible to observe some of the personality characteristics which probably influence or are influenced by these rules. FNS-MGRC was considered to be such a personality characteristic.

#### **Female nurses' personality trait of FNS-MGRC**

FNS-MGRC was defined in this research as a personality trait which can reflect one's capability to perceive possible issues embedded in the practice of female nurses delivering MGRC (See Chapter 5, pp. 176-176). It underpinned and determined a female nurse's perceptions, attitudes and responses towards MGRC. In Study 1 and Study 2, these perceptions, attitudes and responses were found to be negative. This negativity may be caused by, fundamentally, these subjects' interpretation of female nurses delivering MGRC as sexually improper.

Furthermore, FNS-MGRC was proposed to consist of two dimensions: a)

SS-MGRC, which reflected one's capability to perceive matters specifically related to MGRC and sexual impropriety/propriety rules; and b) GS-MGRC, which reflected one's capability to perceive others' or social negative evaluations about him/her and his/her conduct in general social life. The reason that only negative evaluations were of concern, was based on the findings from Study 1 and Study 2 that the delivery of MGRC by female nurses was associated with negative evaluations and judgements (See Chapter 4, pp. 101-123, 130-143; Chapter 5, pp. 151-153). SS-MGRC and GS-MGRC could influence one another. Nearly all findings from Study 3 supported the above propositions, suggesting the appropriateness of the conceptual model of FNS-MGRC (See Chapter 6, pp. 224-235). This conceptual model underpinned the operationalization of FNS-MGRC, whereas the operationalization of FNS-MGRC guided the generation of the FNS-MGRC scale.

The establishment of significant correlations between the FNS-MGRC scale and FNES (Leary, 1983), SES (Kelly & Jones, 1997) and ES (Miller, 1996), suggests that the personality traits, i.e. FNS, SES, Embarrassability, may play an important role in the formulation of FNS-MGRC in the process of socialization. These three traits appear not to be related to MGRC, sexual impropriety/propriety rules nor related to the practice of female nurses delivering MGRC. However, they were closely related to the capability to perceive others' negative evaluations, i.e. the GS-MGRC dimension of FNS-MGRC. In addition, the delivery of MGRC was a process of continuous interactions between the female nurse MGRC provider and the male patient MGRC receiver. The actual exposure to the interactions related to MGRC was found to influence significantly a female

nurse's FNS-MGRC, which may then have an impact on her awareness of different issues in the practice of female nurses delivering MGRC. Therefore, it could be concluded that some specific personality traits, e.g. FNE, and actual exposure to the practice of MGRC might be the most contributory factors determining a female nurses' capability to perceive varied issues in the practice of MGRC.

In summary, all issues (See Chapter 4, pp. 101-123, 130-143), e.g. diversity of MGRC care providers, female nurses' negative conduct, in the practice of female nurses delivering MGRC may centre around the interpretation and concern over whether it was sexually improper for a female nurse to physically contact or expose a male patient's penis during MGRC delivery. The interpretation of female nurses delivering MGRC as sexually improper may be shaped by the sexual impropriety/propriety rules, core to the conservative sexual culture in mainland China, in the process of socialization, suggesting the powerfulness of socialization. Specific personality traits, i.e. FNE, SE and Embarrassability, may influence a female nurse's FNS-MGRC and consequently her perceptions, attitudes and responses towards MGRC. Considering the conflict between the nurse role expectation and the desired Chinese female role expectation (See Chapter 4, pp. 140-142, Chapter 5, pp. 152-153), a further inquiry about the ethical issues in the local practice of female nurses delivering MGRC is necessary. The above aspects might be of particularity in the practice of female nurses delivering MGRC in the targeted hospitals. The following sections will discuss these aspects, i.e. 'sexual interpretation', 'powerfulness of socialization' and 'ethical issues', in sequence.

## **Particularity related to MGRC**

### **Sexual interpretation**

In this research, it was found that the delivery of MGRC by female nurses was sexually interpreted. This interpretation was found to consist of three dimensions, i.e. 'sexual stimuli', 'sexual impropriety' and 'limited to within intimate relations'. In particular, the second dimension is a very special finding about the practice of MGRC, and none of the available references revealed similar findings.

#### **1) Sexual stimuli**

The penis and its key role in sexual activities allows for certain types of MGRC, which necessitate exposure of or physical contact with the male patient's penis, to be sexually interpreted. That is, touching or exposing the male patient's penis during the delivery of MGRC by a female nurse may be sexually stimulating for the male patient. Such behaviours might be equated with sexual activities in a general sense for the majority of ordinary Chinese. However, it might be only a very small proportion of local Chinese female nurses who consider their own or other female nurses' actions during the delivery of MGRC in this way (See Chapter 4, pp. 138-139).

Furthermore, according to subjects' expressions and responses, it seemed that the female nurse's physical contact with or exposure of the male patient's penis during her provision of MGRC acted as a stimulus, such that it could possibly affect many aspects of the male patients' responses, e.g. physical, psychological, social and sexual.

In comparison, other relevant studies from, e.g. the UK (Twigg, 2000b),

Australia (Lawler, 1991) and Beijing, China (Xiang et al., 2004) appear to stress only one or two aspects of the stimulating effect of a (female) nurse's physical contact with or exposure of a patient's penis. It was found that some types of MGRC, e.g. dressing/undressing in relation to underwear, bathing/washing, urinary catheterization, were considered as sexual by nurses in western countries, e.g. UK (See Chapter 2, pp. 27-28). In particular, Lawler (1991) appeared to address the psychological, sexual and physical effects by stating that a nurse's touch of a patient's body may arouse a sensual pleasure, implying sexual. Twigg (2000b) seemed to have noticed the psychological effect, i.e. enjoyment of disabled elderly residents who were being bathed at home. Unfortunately, no more details could be identified from the above two studies (Lawler, 1991; Twigg, 2000b) regarding whether this sexual pleasure occurred at the moment when the penis was physically contacted or exposed, and whether the care provider was a female while the care receiver was a male.

As to the study conducted in mainland China, i.e. Xiang et al. (2004), it seemed that female nurse subjects may place emphasis on the physical aspect of the male patient's responses, represented by the erection, during the process of a female nurse delivering MGRC. During the provision of care in the privacy area (See Chapter 1, p. 4) of the male body, 52.3% (92/176) of Beijing female nurse subjects reported that they had ever encountered the erection, and 82.4% (145/176) considered that the erection entailed by a female nurses' physical contact with the male patient's penis was a 'respondent conditioning'. The term 'respondent conditioning' is often used to describe a repeated pairing between a neutral stimulus and an unconditioned stimulus ("Classical conditioning", 2006).



The unconditioned stimulus can automatically induce a specific physical response which cannot be induced by the neutral stimulus before the pairing. After the repeated pairing between these two types of stimulus has lasted for a sufficiently long period of time, even when the unconditioned stimulus is no longer used, the neutral stimulus itself can still induce the same physical responses (“Classical conditioning”, 2006). Therefore, it could be conjectured from the use of the term ‘respondent conditioning’ in Xiang et al.’s study (2005) that for these Beijing female nurses, the erection might be a matter of a physical or physiological response towards the unconditioned stimulus, i.e. the physical contact with the penis. However, any female characteristics, e.g. appearance, figure, of the care provider might also act as a stimulus. This suggests that Beijing female nurse subjects might simplify the dynamic and multiple effects of a female nurse’s physical contact with the private area of the male patient during her MGRC delivery.

In comparison, this research suggests that, in addition to the physical, psychological and sexual effects (See pp. 101-123, 130-143, 151-153) of a female nurse MGRC provider on a male MGRC receiver and the female nurse’s own self during her MGRC delivery, local female Chinese nurses might also have recognized the social and moral effects which were related to sexual impropriety.

## 2) Sexual impropriety

This dimension has been reported in both Chapter 4 (See pp. 101-123) and Chapter 5 (See pp. 151-153). Therefore, this section will discuss this issue relatively briefly.

Within the conservative sexual culture in mainland China, physical contact

is implicitly forbidden between male and female Chinese adults who are considered to be devoid of an acceptable intimate relationship, e.g. couples, or two singles who fall in love and may get married someday (Ren, 2005; Zhao & Li, 2003). Physical contacts with sexual meanings in public between people who are not (potential) spouses would induce the judgement that they were behaving in morally inappropriate ways, i.e. sexual impropriety. In the view of ordinary Chinese people, sexual activities, e.g. to kiss, to fondle, to have sexual intercourse, belong to the sphere of the most private and most mysterious matters in human life; thereby they should not occur in the public arena (Ren, 2005). Within this social and cultural context, that a female nurse would expose or physically contact a male patient's penis during her provision of some MGRC might be considered as sexually improper.

Furthermore, sexually improper behaviours, i.e. a female physically having contact with or exposing the penis, which is not that of her (potential) husband, are often associated with undesirable public images, e.g. that of a prostitute, or of a lewd, dirty woman (Ren, 2004, 2005; Ruan & Lau, 1997; Zhao & Li, 2003). This implicit association with undesirable female images was developed in ancient China along with the evolution of female sexual suppression. However, that association still exists to some degree in modern mainland Chinese society. The action involved when a female nurse physically contacts or exposes the male patient's penis during her provision of MGRC may not be completely disconnected, in people's minds, with the same action which is performed by a female for a male who is her client in her provision of commercial sex, or who is neither such a client nor her (potential) husband. Thus, in some people's minds,

the female nurse MGRC provider may be linked to the undesirable female image. The evaluations and judgements related to either sexual impropriety or undesirable female images are clearly negative, which may seriously hurt the female nurse MGRC providers.

Fortunately, in mainland China, female nurses are never explicitly depicted as or related to sexual objects or sexy images, which is in contrast to that in western societies, e.g. America (D'Emilio & Freedman, 1997), UK (Ferns & Chojnacka, 2005; Seed, 1995), Taiwan (TVBS-G, 2006). Therefore, the association, i.e. a female nurse's conduct in her provision of MGRC with an undesirable female image, and its influence over female nurse MGRC providers might be weak but cannot be completely ignored or discounted.

However, female nurses in mainland China may desire or be expected to behave in sexually proper ways. The above associations of a female nurse's conduct during MGRC delivery with sexual impropriety and undesirable female images might be the source of strong negative perceptions, attitudes and responses towards MGRC among local Chinese female nurses. These negative associations might also project strong influences over the female nurse MGRC provider's own intimate relationships. Detailed evidence to support these inferences and relevant discussions can be found in Chapter 4 (See pp. 103-123, 130-143) which reported both Study 1 and Study 2.

### 3) Related to intimate relations

Negative influences of the practice of MGRC over a female nurse MGRC provider's intimate relations were found not to be limited to the intimate relationships with her (potential) husband. The intimate relationship with her

(potential) husband might be negatively influenced by the female nurse's provision of MGRC, while the (potential) husband might prevent her from delivering MGRC. In particular, frequent delivery of MGRC over a long period of time may have an impact on the female nurse's sexual life, in addition to her marital life.

Although none of the subjects in Study 1 and Study 2 analysed the mechanism of the above adverse consequences over intimate relationships, they might be caused by the following: a) the female nurse MGRC provider might hold strong negative evaluations about female nurses delivering MGRC by referring to the sturdily internalized sexual impropriety/propriety rules in her own mind, consciously or unconsciously; b) the female nurse MGRC provider may develop some negative perceptions of the penis, e.g. dirty, aversive, ugly, after seeing the penis of many men with different physical conditions. The nurse may become aversive to physically contacting the penis at all, even though it is her (potential) husband's; c) the female nurse MGRC provider might be overly concerned, worried or fearful of others' negative evaluations over female nurses delivering MGRC. She may make efforts to avoid delivering MGRC lest she be negatively evaluated as a result, even although people may not actually possess those negative evaluations which were constructed in her mind; and d) the female nurse MGRC provider's (potential) husband might be unhappy with or oppose her provision of MGRC, implicitly or explicitly. Their harmonious intimate relationship might be threatened and then the sexual desire and the quality of sexual intercourse might be reduced. This might be caused by the wife/girlfriend's sexuality being considerably influenced by the psychosocially

and emotionally negative factors, e.g. poor quality of relationship, bad mood (Baumeister & Twenge, 2002; Campbell, 2004). Therefore, the (potential) husband's or the nurse's negative perceptions, attitudes or responses to MGRC delivery may influence the quality of their sexual activities.

In particular, it was also found that a female nurse's roles, i.e. wife *vs.* the unmarried, mother *vs.* not-mother, head nurse *vs.* staff nurse, might have significant influences on her overall perceptions of certain types of MGRC (See Chapter 4, pp. 140-142). This thus supports the finding that Chinese nurses' behaviour may be consistent with their role relationships (Pang et al., 2003), i.e. one behaves according to his/her age, gender, social status etc. (Pang et al., 2003, Zhan, 2002). Nurses' behavioural consistency with their role relationships reflects the perpetual and strong influence of Confucian living philosophy, i.e. keeping harmony within one's own social relationships (Ebrey, 1990; Fan, 1995; Gallagher, 2001; Ruan & Lau, 1997; Tu, 1990; Zhan, 2002). The disconformity with the (potential) husband's stance or socially and culturally accepted sexual impropriety/propriety rules is likely to be detrimental to the achievement of a harmonious intimate and social relationship.

In comparison, none of the other research studies (See Table 2.1, pp. 39-44) revealed the above dimension of sexual interpretation of female nurses delivering MGRC. Distinctively, the research conducted in the western countries, e.g. UK, America, Australia, suggested that the provision of certain types of MGRC, e.g. bathing, removing underwear, was considered as intimate (Carnaby & Cambridge, 2002; Seed, 1995; Williams, 2001), implying psychological closeness between the care-givers and care-receivers (Dowling, 2005; Savage, 1995; Williams,

2001a). However, none of the subjects in this study explicitly mentioned that MGRC was intimate care. The above dimension, i.e. 'related to intimate relations', reflects only that the fact that a female physically contacted or exposed the penis during MGRC delivery may influence or be influenced by her intimate relationship with her (potential) husband, but may have nothing to do with her feeling of psychological closeness towards the male patient. This then, in the eyes of female nurses, enriches the meaning of female nurses delivering MGRC.

### **Power of socialization**

As was analyzed in Chapter 6 (See pp. 224-235), findings from Study 3 suggested the appropriateness of the conceptual model of FNS-MGRC. As a matter of fact, the fundamental assumption underlying the conceptual model of FNS-MGRC was that Chinese female nurses had learned to maintain social appropriateness and sexual propriety. The learning of maintaining sexual propriety overlapped with the learning of social appropriateness because behaving in sexually proper ways in public constitutes part of behaving in socially appropriate ways. However, this research could not inform about when the learning of maintaining sexual propriety occurred, and hence when the overlapping between the learning of behaving in sexually proper ways and the learning of behaving in socially appropriate ways occurred.

Nevertheless, it is clear that maintaining social and sexual appropriateness is learned in the process of socialization (Wharton, 2005) which starts far earlier than the process of professional socialization (Michener et al., 2004). General socialization is nearly a daily occurrence, because human beings have to interact either with someone else or with their environments in their daily lives in a

human society (Michener et al., 2004).

In contrast, professional socialization in nursing is a process which includes the obtaining of specialized knowledge, skills, attitudes, values, and norms necessary for the performance of nursing roles (Blais et al., 2006). It is possible only when one enters and continues to be involved in nursing education and/or nursing practice, whether formally or informally (Blais et al., 2006; Chitty, 2005). In this sense, the process of professional socialization is compounded by the process of general socialization.

At the moment of entering into the process of nursing professional socialization, nursing students or nurses may have already internalized socially valued rules of importance in their lives. The rules related to female sexual impropriety/propriety are always of significant concern in ordinary mainland Chinese people's lives (Ruan & Lau, 1997; Zhao & Li, 2003). These rules are integral to social norms, and can be transmitted through the form of, e.g. media, literature, textbooks, folklore, about virtuous female role models, parental education or peers' influence. The process of general socialization does not stop when nursing professional socialization occurs, but interweaves with it. When being involved in nursing education or practice related to MGRC, the already internalized socially valued sexual impropriety/propriety rules, e.g. a female should not touch a penis which is not her boyfriend's/husband's, inevitably conflict with those rules valued in nursing, e.g. nursing care should not be restricted by e.g. age, gender, marriage (ICN, 2006; Pang et al., 2000; SN, 2000).

Furthermore, as is well known, modern nursing originated from and advances gradually in the western societies, e.g. UK, America (Lundy, 2005). In

western societies individualism and autonomy are valued and highly respected (Edwards, 2006). By contrast, mainland Chinese society remains collective goals oriented and harmonious interpersonal interdependence based (Kashima et al., 1995; Markus & Kitayama, 1991; Triandis et al., 1988). This might be caused by the longstanding and strong influence of Confucian living philosophy in pursuit of harmonious social relationships, including intimate relationships (Ebrey, 1990; Fan, 1995; Gallagher, 2001; Ruan & Lau, 1997; Tu, 1990; Zhan, 2002). It is thus not startling to find that there exists conflict between the values underlying the codes of ethics for nursing professionals, which are rooted in western living philosophy, and the values related to female sexual impropriety/propriety, which are lauded in mainland Chinese society (Sass, 2003, 2004). In facing these values conflicts, it seemed that Chinese female nurse subjects in this research behaved in sexually proper ways by avoiding exposing or physically contacting a male patient's penis at the cost of compromising the quality of certain types of MGRC, e.g. meatal cleansing.

This research thus strengthens the reasonableness of the promoted stance towards nursing professionalization, namely, the values advocated by and promoted within the nursing profession should be consistent with those treasured in the broader society, i.e. the general environment, within which the nursing profession is developed (Blais et al., 2006; Chitty, 2005; Masters, 2005). Otherwise, nurses may passively perform or actively avoid their roles, and psychological and emotional discomfort may be induced, as was revealed in Study 1 and Study 2.

Socialization, especially general socialization, is powerful in terms of its



capability to continuously shape human beings so that people will conform to social norms, i.e. socially accepted rules (Kenrick et al., 2005; Michener et al., 2004). Some social norms can inform people of what are likely to be effective actions. By following what most people do in a particular setting, one can usually make a correct choice (Kenrick et al., 2005). On the other hand, other norms are able to inform people of what is likely to be acceptable to others (Kenrick et al., 2005). By behaving in acceptable ways, one can increase his/her inclusion by valued groups/teams.

Leary (1990, 2001) proposed that people always sought for maximal inclusion and minimal exclusion or rejection by others. This was thought to result from the basic human needs for belongingness (Baumeister & Leary, 1995). Being rejected or excluded may induce many negative responses, e.g. embarrassment, loneliness, sadness, jealousy, depression, anxiety (Leary, 1990; Leary, Koch, & Hechenbleikner, 2001). Individuals are averse to such experiences, as no one likes to be rejected or excluded (Leary et al., 2001). To increase the degree to which he/she is appreciated and wanted in a valued group or by important figures, he/she is required to refer to and conform to the norms which inform acceptable attitudes and behaviours (Kenrick et al., 2005). Therefore, that local female nurse subjects behaved in accordance with the traditional social norms, i.e. sexual impropriety/propriety rules, could be considered as a way to achieve better social survival in their social relationships, in accordance with their own cultural environment.

In general, most human beings conform to social norms so as to achieve a better social survival. In this research it was proposed and then confirmed that

some personality traits may play important roles in regulating a female nurses' perceptions, attitudes and responses towards sexual impropriety/propriety rules and thus their perceptions, attitudes and responses towards MGRC. These personality traits include FNE, AM, SE and Embarrassability, in addition to FNS-MGRC. The analysis about the relationships between these personality traits and the research findings from Study 3 have been presented in Chapter 5 (See pp. 181-184) and Chapter 6 (See pp. 222-223), respectively. Therefore, they are not discussed again in this chapter.

### **Ethical issues**

Study 1 and Study 2 suggested that local female nurses' and nurse managers' negative attitudes and responses towards MGRC might be influential in relation to the compromised quality of MGRC and the negative effect on female nurse MGRC providers' personal lives. Some of the conduct of some of the local female nurses appeared to have violated the code of ethics for nurses, e.g. that of the International Council of Nurses (ICN, 2006). To evaluate nurses' conduct using one of the published codes of ethics might be difficult, given that each of the five targeted hospitals seemed to have its own Nursing Occupation Morality, instead of a shared code of ethics for nurses across hospitals in the targeted city. Pang et al.'s (2000) code of ethics is the unique code of ethics for nurses in mainland China to date, therefore this code is regarded as an assessment tool with which to discuss female nurse subjects' conduct in MGRC. However, there exist weaknesses in this code, given the challenge of the trends towards globalization, internationalization and the wide cognition of cultural diversity, all of which suggest the need for further development. To analyze Pang et al.'s

(2000) code of ethics for nurses, the codes developed by ICN (2006) and by the American Nurses' Association (ANA, 2001) were also referred to for different reasons (See p. 259).

Therefore, this section will focus discussions on the following three aspects:

1) the codes of ethics and morality codes for nurses which could be used to evaluate local female nurses' conduct in the practice of MGRC, 2) research findings related to ethics, and 3) the weaknesses and the areas possibly requiring modification in Pang et al.'s (2000) code of ethics for nurses in mainland China.

#### 1) Codes of ethics and morality codes for nurses

To date, the code of ethics uniquely available for nurses in mainland China is 'A Suggested Code of Ethics for Nurses in The New Millenium' (Pang et al., 2000; SN, 2000). This suggested code was developed collaboratively by the Chinese Nurses' Association and the School of Nursing in the Hong Kong Polytechnic University. The Chinese Nurses' Association is the single and most influential non-governmental nurses' organization in mainland China. There is at least one branch of the Chinese Nurses' Association in each province, autonomous region or municipality across mainland China. Therefore, it could be inferred that the suggested code (Pang et al., 2000; SN, 2000) is a quality code of ethics because it was developed through research, i.e. the Delphi technique, and it has the potential to be consistently and nationally used in mainland China under the promotion of the Chinese Nurses' Association. In fact, this suggested code was first published in the Chinese Journal of Nursing, the most widely read academic nursing journal published in Chinese, in 2000, and now is available on the webpage of the School of Nursing, The Hong Kong Polytechnic University

(SN, 2000). On this webpage, an equivalent English version (Pang et al., 2000) is also available.

However, the suggested code (Pang et al., 2000; SN, 2000), although it is the code of ethics uniquely available for nurses in mainland China, may not be widely known and/or applied in nursing practice. This might be caused by the fact that: a) there was a lack of any code of ethics for nurses which was commonly referred to by all healthcare organizations in any of the political divisions in mainland China, and b) there is a variety of Nursing Occupation Morality statements which consist of a group of virtues, personality attributes and a cluster of conducts in nursing practice. Furthermore, these various Nursing Occupation Moralities are stated with different words although they convey the same major meanings. From late 2006, it is intended that there should be a Nursing Occupation Morality statement which will be used consistently in all healthcare organizations in mainland China. This will be supported by the published book entitled 'Educational Materials on Occupation Morality for Healthcare Workers' which has been promoted by the state Ministry of Health (MoH, 2006c). This means that all nurses and healthcare organizations in mainland China are expected to follow what is indicated in this book.

In fact, Occupation Moralities for nurses, doctors, dentists and all other healthcare workers in mainland China are similar. All of them are, in essence, a virtues-based code of ethics. The virtues-based approach to ethics reflects "less rationalistic and more compassionate attitudes with less clear instructional characteristics", and the virtues highly valued in such an ethics code originate and are rooted in Eastern traditions, e.g. Confucianism, Taoism and Buddhism (Sass,

2003, 2004). This type of nursing ethics highlights what is good and places emphasis on what should be done by a good nurse in accordance with the context in which nursing care is delivered (de Raeye, 2006). It does not place emphasis on what is right or wrong. The latter is emphasized by the principle-based approach to ethics (Edwards, 2006; Sass, 2003, 2004). It is clear that healthcare organizations and managers may, consciously or unconsciously, prefer to use the virtues-based approach to ethics which can facilitate a healthcare worker to become a person with virtues. To be a person with virtues is one of the key elements in Confucian philosophy (Gallagher, 2001; Tu, 1990), suggesting the strong influence of Confucian ideas over current healthcare Occupation Moralities. Pang et al. (2003) found that Chinese nursing was regulated by the more virtues-based ethical rules, in contrast to American and Japanese nursing, which were regulated by the more principle-based ethical rules (Pang et al., 2003).

However, the majority of codes of ethics in the world are, basically, the principle-based approach to ethics. This approach highlights what is right or wrong instead of what is good or virtuous (Edwards, 2006). This approach to nursing ethics reflects a strong analytical and rational way of reasoning in principles which originates and is rooted in European traditions, i.e. Roman law, Aristotelian, Cartesian and Kantian thinking (Sass, 2003, 2004). Four principles, i.e. 'respect for autonomy', 'non-maleficence', 'beneficence' and 'justice' (Edwards, 2006; Sass, 2003, 2004), are highly valued and followed. The codes of ethics for nurses proposed by ICN (2006) and ANA (ANA, 2001) are typically of this type, respectively. Given the similarity of provisions between the suggested code of ethics (Pang et al., 2000; SN, 2000) and that of ICN (2006), the suggested

code (Pang et al., 2000; SN, 2000) is regarded by the researcher as a principle-based code of ethics for nurses.

ICN's (2006) code of ethics was also referred to when evaluating local female nurses' attitudes and responses towards MGRC. This is because healthcare organizations and nursing managers in Shandong Province often take ICN's stances as both their reference and their criteria with which to evaluate whether local nursing work is practised in line with international requirements. The code of ethics proposed by ANA (2001) was also referred to. This is because local nurse managers and nurses commonly consider that American nursing is practiced at the most advanced level. If the values and practice are advocated in American nursing, it might be considered natural for these values and practice to be implemented in the local healthcare systems.

The ability to be implemented professionally is the primary concern and focus for the principle-based approach to nursing ethics (Sass, 2003). Therefore, when evaluating whether nurses' conduct is professional or unprofessional, it is the principle-based code of ethics, e.g. ANA (2001), ICN (2006), Pang et al. (2000)/SN (2000), which is referred to, rather than the other variously stated Nursing Occupation Moralities which are applied in different healthcare organizations and different political divisions in mainland China.

## 2) Research findings related to ethics

As professionals, nurses should behave in accordance with the codes of ethics for nurses which are applied in their society (Blais et al., 2006; Chitty, 2005). As was analyzed in the previous section, it should be the principle-based codes of ethics, e.g. ANA (2001), ICN (2006), Pang et al. (2000)/SN (2000), that

are referred to, so as to make judgements regarding whether local female nurses' conduct is professional or not.

Findings from Study 1 and Study 2 suggested that some of subjects' negative responses and attitudes demonstrated violation of codes of ethics for nurses, i.e. ANA (2001), ICN (2006), Pang et al. (2000)/SN (2000). It was found that subjects may categorize male patients who required MGRC according to, e.g. patients' age, consciousness, sensual astuteness, severity of illness and types of MGRC. It was also found that the delegation of certain types of MGRC, e.g. perineal hygiene, meatal cleansing, was inappropriate (See Chapter 4, pp. 114-117, 119-120). This conduct violated the ethical code that nursing care should be provided under no restriction of, e.g. age, gender, illness, and that delegates' competency in performing delegated tasks should be evaluated and ensured so that optimal care can be maintained (ANA, 2001; ICN, 2006; Pang et al., 2000; SN, 2000).

If nurses cannot meet the requirements of principle-based codes of ethics for nurses, it might be more difficult for them to meet the demands of the virtues-based codes of ethics in mainland China, i.e. Nursing Occupation Moralities, which are applied in mainland China. This is because the virtues-based codes of ethics consist of such a number of virtues, specific personality attributes and nursing conducts that are quite difficult to develop. Given that such Nursing Occupation Moralities are stated differently, in this section, only one of these Nursing Occupation Moralities is taken as an example in order to illustrate the difficulties nurses may face in adhering to these Moralities. For instance, "Nursing Occupation Morality and Nurses' Occupational Conduct", (2006)

indicates that the nurse must: a) have correct cognition of nursing occupational values; b) hold chaste and genuine affection towards nursing occupation so as to love and protect life, to deal with occupational relationships and to assess whether occupational conduct is benign *vs.* malign, or right *vs.* wrong; c) be able to overcome difficulties, and be persistent in and capable of crossing over barriers and constraints during carrying out morality obligations; d) hold a genuine belief in and take the moral responsibilities to save life, to support the diseased, and to actualize humanities in nursing practice; and e) develop good occupational conduct and habits. A nurse is also expected to be able to: a) be extremely responsible and extremely enthusiastic at nursing work, b) behave appropriately, politely, and follow all kinds of laws and regulations, and enjoy helping others; c) treasure organizations' belongings and be thrifty; d) be dedicated, self-respecting, self-loving, confident and self-improving continuously, and so forth ("Nursing Occupation Morality and Nurses' Occupational Conduct", 2006). Therefore, if using the virtues-based Nursing Occupation Moralities in mainland China to make an evaluation, it is clear that local female nurse subjects' conduct in the provision of MGRC might be regarded as neither ethical nor virtuous.

Furthermore, Pang et al. (2003) found that Chinese nurses regarded possessing a sense of self-sacrifice, serving the people wholeheartedly and having a sense of responsibility as far more important, in comparison with Japanese and American nurses. However, in this research, it was hard to find any evidence that subjects made sacrifices or served the male patients wholeheartedly. Some of their responses and attitudes were not conducive to good quality of MGRC. Therefore, this research does not apparently support that Chinese nurses'



perceptions of their role responsibilities are more virtues-based.

### 3) Suggested modification of codes of ethics for nurses

It could be said that the publication of the suggested code (Pang et al., 2000; SN, 2000) represents major progress in the field of nursing ethics in mainland Chinese nursing. However, the global trends with respect to the acknowledgement of cultural diversity and culture-sensitive care, and the issues embedded in the practice of female nurses delivering MGRC pose challenges to the suggested code, suggesting room for further development.

Within the concepts of globalization and internationalization, the following two global trends are evident: in the first place, universal ethics applicable across cultures are explored, so as to facilitate the understanding and sharing of practices and research findings; in the second place, cultural diversity should be acknowledged and the code of ethics for healthcare professionals should be developed accordingly, based on each country's own cultural traditions (Sass, 2003, 2004). Within this social context, it is desirable to respect different cultures, to call for all stakeholders' contributions, e.g. institutions, nurses, patients, physicians, insurers, politicians, policy-makers, managers, and to permit ethical diversity (Sass, 2003, 2004). In other words, cultural diversity implies the necessity of nuances between the codes of ethics applied in different countries.

Nursing care, which emphasizes respect for cultural diversity, is referred to as culture-sensitive care (Kim-Godwin, Clarke, & Barton, 2001). Patients with strong religious or cultural beliefs, e.g. Muslims, could benefit greatly from receiving care which was culturally sensitive (Turkoski, 2005). However, cultural issues for nurses fail to be addressed in Kim-Godwin et al.'s (2001) writing. As

noted earlier, codes of ethics proposed by, e.g. the American Nurses' Association (ANA, 2001), ICN (2006), Pang et al., (2000)/SN (2000), usually indicate that nursing care should be provided without any restriction of, e.g. age, gender. It appears that none of these codes takes into consideration cultural constraints over nurses' practice. Otherwise at least one provision in the codes of ethics would have been proposed to guide nurses to regulate their attitudes, conduct during care provision, and support-seeking behaviours so as to deal with cultural constraints over their thoughts, perceptions, attitudes and responses without endangering the quality of nursing care. This then raises a concern over whether it is ethical to demand that a nurse, whatever his/her cultural background, do something which might be regarded as undesirable or even forbidden in his/her own general social environment, for example, the case of a female nurse in mainland China physically contacting a male patient's penis during her provision of MGRC.

With the recognition of the importance of providing culturally sensitive nursing care, it is reasonable to produce codes of ethics for nurses in accordance with the cultural context in which the codes are to be applied. In the society which defines the physical contact with or exposure of a male patient's penis by a female nurse during MGRC delivery as sexually improper, this issue should be openly recognized and the nursing education and codes of ethics for nurses modified so that MGRC is provided by competent care providers. Optimal MGRC could thus be maintained, and culture diversity would be respected as a result. This requires that attention be paid not only to patients, but also to nurses, otherwise complete respect of cultural diversity is unattainable. Furthermore,

nurses may develop negative perceptions, attitudes and responses during their coping with the practice which contains elements incompatible with their life beliefs. This negative type of coping may ultimately compromise the quality of nursing care. Study 1 and Study 2 suggested that this might be the case in the practice of female nurses delivering MGRC in the targeted hospital.

The last concern deserving discussion is the lack of any provision in the suggested code of ethics for Chinese nurses (Pang et al., 2000; SN, 2000). regarding nurses' maintenance of health. In comparison, the codes of ethics proposed by ANA (2001) and ICN (2006), respectively, clearly indicate that nurses are required to be healthy in order to maintain the standard of nursing care. The lack of ability to conduct self-care among female nurses who are required to provide MGRC may cause deterioration of their health, due to the role conflict they experience between being a desirable female and being a nurse. Role conflicts could cause the nurse to suffer from psychological conditions, e.g. anxiety, depression, distress, or even burnout (Blais et al., 2006). Therefore, a provision related to the maintenance of physical and mental health among nurses themselves should be included in the code of ethics for nurses in mainland China.

## **Implications**

The implications of this research can be grouped into five areas, i.e. conceptual development, knowledge expansion, education development, practice improvement and future research directions. These are followed by recommendations in relation to education, practice and research.

### **Conceptual development**

Study 3 used King's Conceptual System (King, 1981, 1995a, 2006;

Fawcett, 2005; Frey, 1995, 2005; Sieloff, 1995) to facilitate the proposition of the conceptual model of FNS-MGRC. This conceptual model was then used to guide the operationalization of FNS-MGRC so that FNS-MGRC became measurable and the development of the FNS-MGRC scale was possible.

In the conceptual model of FNS-MGRC, the concept 'environment' was clarified, as King did not provide a definition (Fawcett, 2005; Sieloff, 1995). Furthermore, different environments, i.e. nursing environment *vs.* general environment, physical environment *vs.* non-physical environment, internal environment *vs.* external environment, were defined separately and their relationships were analysed. This conceptual clarification facilitated the explication of nurses' and patients' activities and roles within different environments.

The conceptual model of FNS-MGRC enriched the meaning of a female nurse as a whole person and an open personal system. It put forward that a female nurse or a male patient held a dual identity, i.e. nurse-other or patient-other. The proposition of the concept 'dual identity' was preconditioned by the recognition that a female nurse had been equipped with values, beliefs, attitudes, behaviours, knowledge and skills necessary for the performance of nursing roles in the nursing environment, through nursing professional socialization. However, a female nurse was required to undertake social roles other than nursing roles in her general social life. She continuously developed values, beliefs, attitudes, behaviours, knowledge and skills in the whole process of general socialization, whether professional socialization occurred or not, so as to perform roles other than her nursing roles in her general social life in the general environment.

General socialization and professional socialization thus contributed to the generation of the two identity elements, 'other' and 'nurse', respectively. These two elements were inseparable, as some values, beliefs, attitudes, behaviours, knowledge and skills were necessary for the performance of both nursing and other roles.

In contrast, a male patient's dual identity was formulated in different ways. He was considered and treated as a patient when he required nursing care and was positioned in the nursing environment. In the same way as a nurse, he was also in the continuous process of general socialization, even when he was a patient, and kept on developing values, beliefs, attitudes, behaviours, knowledge and skills necessary for the performance of his roles in general social life in the general environment. The above two conditions contributed to the generation of the two identity components, i.e. 'patient', 'other', respectively. These two identity components were also inseparable, because the values, beliefs, attitudes, behaviours, knowledge and skills which had been developed in the process of his general socialization could influence his thoughts, perceptions, attitudes and responses as a patient in a nursing environment, and he could still be conditioned to perform his roles as usual, even although he was a patient in a nursing environment.

Therefore, a female nurse and a male patient must share some values and beliefs because both of them have been shaped by the same political, economic, cultural and social factors in the broader society in which they live. With the cultural environment of sexual conservativeness in Shandong Province in China, all social members were assumed to share the values and beliefs related to female

sexual propriety. Therefore, both the female nurse MGRC performer and the male patient MGRC receiver could be expected to share the evaluation and judgement that for a female to physically contact or expose the naked penis which is not that of her (potential) husband is sexually improper, and therefore should be forbidden. This shared understanding was the source of all negative perceptions, attitudes and responses among female nurses and male patients who were involved in the practice of MGRC.

Furthermore, it could be inferred that the more values and beliefs shared between professional nursing and the broader society, the more values and beliefs would be shared between the female nurse MGRC provider and the male patient MGRC receiver, and thus fewer conflicts would occur between the two identity components of 'nurse' and 'other' for the female nurse, and between the female nurse and the male patient, respectively. The decrease in conflicts would reduce the consumption of energies, e.g. blood glucose, in the female nurse's inner environment. This would be beneficial to her health, and also conducive to a better understanding of the male patient's needs and concerns, which may help to improve nursing care.

Another contribution of the conceptual model of FNS-MGRC is the explication of the hidden nature of communication and the possibility of interpretation inconsistency. The hidden nature of communication refers to the fact that the processing of a message is unobservable, which makes the interpretation inconsistency possible. Interpretation inconsistency may occur when the message which is intended to be sent is different from that actually sent, or when the message receiver interprets the received message differently from the

message sender, provided the sent message is rightly what the message sender intends to send. People may have developed different symbolic systems for communication, and people may be able always to accurately send what they intend to send. However, misinterpretation is always possible, and accumulated misinterpretations may exacerbate the interaction between the female nurse MGRC provider and the male patient MGRC receiver, which in turn may compromise the quality of MGRC. For example, the maladroit performance of the female nurse might be misinterpreted as the demonstration of embarrassment. This misinterpretation may in turn aggravate the male patient's embarrassment. This suggests that it is necessary to identify and clarify confusing, vague or uncertain messages sent by the male patient. Such clarification would decrease the occurrence of misinterpretation and thereby improve the outcome of the nurse-patient interaction.

### **Knowledge expansion**

The medical model remains predominant in nursing education and practice in mainland China. This model places emphasis on physical conditions but pays little attention to associated psychosocial issues (Xu, Y., Davis, Clements, & Xu, Z., 2002; Xu et al., 2000). There is a dearth of knowledge about psychosocial issues associated with MGRC in academic references, including textbooks. The main channel through which nurses and nursing students come to recognize these issues is through clinical practice related to MGRC in hospital.

This research contributes new knowledge about the practice of MGRC by female Chinese nurses and about their perceptions, attitudes and responses towards MGRC. This knowledge contributes to a better understanding of the

possible barriers and threats to the provision of optimal MGRC by RNs and student nurses.

It was also found that nurses' perceptions, attitudes and responses when providing MGRC could be influenced by their female roles as a single person/wife, non-mother/mother and by their position as a head nurse/staff nurse. Multiple roles may entail incompatible role expectations leading to role conflicts (Blais et al., 2006), suggesting the practice of MGRC by female nurses may threaten the deliverers' health, e.g. the possibility of suffering from burnout.

This research also demonstrates the knowledge gap between the ideal and the actual practice of MGRC by showing that female Chinese nurses are engaged as little as possible in the practice of MGRC. For example, very few female nurses would have performed male catheterization. Although codes of nursing ethics (ICN, 2006; Pang et al., 2000; SN, 2000) promote that nursing care should be unrestricted by considerations of, e.g. age or gender, the delivery of MGRC was found to have been influenced not by the codes of ethics, but by the nurses' personal factors, e.g. gender, marriage and/or age. Traditional beliefs in proper female sexual conduct may play an important role, but such cultural influences should not be overly estimated nor disregarded.

In particular, this research contributes to the theoretical development of nursing in mainland China. The confirmed 2-dimensional model of FNS-MGRC explains the interaction between a female nurse and a male patient as individuals respectively, within the nursing environment and the broader society. It emphasizes the dual identity of the nurse as a professional and as an ordinary member of society, implying possible conflicts between being a good female



Chinese person in the general sense and being a good nurse who follows the code of ethics (e.g. ICN, 2006; Pang et al., 2000; SN, 2000). This model reflects the complexity of nurses' perceptions, attitudes and responses towards MGRC.

A scale has been developed to measure FNS-MGRC on the basis of the above model. This quantification makes it possible to measure and compare the possible differences in FNS-MGRC across regions and over time. It lays the foundation for the development of new education programmes which aim to improve the practice of MGRC. The FNS-MGRC scale could be used to evaluate the effect of these programmes on female nurses' perceptions, attitudes and responses towards MGRC.

#### **Practice improvement**

This research suggests that the majority of female nurses may seldom perform MGRC. Given how commonplace MGRC was in the speciality wards which were studied, it appears that female nurses either omitted to carry out MGRC, or delegated this care to others such as the patient's family members or nursing aides. Inappropriate delegation could compromise the quality of MGRC and lead, for example, to the patient suffering from pain, penis edema or poor genital hygiene.

On the other hand, in one sense, female nurses' perceptions, attitudes and responses could be considered as positive. They proposed a number of strategies to improve MGRC, e.g. male nurses/aides delivering MGRC, categorizing MGRC according to the extent to which the penis is exposed or held, thus reflecting the fact that they were dissatisfied with female nurses' current practice in relation to MGRC.

Furthermore, managers' attitudes may influence female nurses' perceptions, attitudes and responses towards MGRC. An improved understanding of the difficulties, stresses and role conflicts for female nurses in delivering MGRC could lead to the provision of a more caring and supportive working environment which would facilitate the improvement of the practice of MGRC. This research provides more perspectives to enable nursing managers and policy makers to better understand the difficulties and issues embedded in the delivery of MGRC by female nurses. New policies and a code of practice could be proposed so as to better regulate the practice of MGRC.

The "Suggested Code of Ethics for Nurses in the New Millennium" (Pang et al., 2000; SN, 2000) differs from the codes of ethics produced by ANA (2001) and ICN (2006) in that it does not include any item emphasizing nurses' responsibility to maintain their personal health for the purpose of providing optimal care. Considering that female Chinese nurses may suffer from role conflicts or even burnout due to their practice of MGRC, the Suggested Code (Pang et al., 2000; SN, 2000) may require to be revised by adding an item which addresses the maintenance of personal health among nurses.

### **Education development**

It was found that female Chinese nurses may lack knowledge on sexuality, sexual health, sexual harassment, and gender inequality. The lack of knowledge and understanding in these areas could influence female nurses' competency in tackling cultural constraints over their own conduct and male patients' responses to nurses' delivery of MGRC. This lack may be due to one or more of the following reasons.

Sexuality remains a taboo topic in mainland China (Ren, 2005). Sexual harassment was not well recognized, nor was there any law in relation to sexual harassment before 2006 (Jing, 2005; Parish et al., 2006). Sexuality and sexual health is mainly presented from the perspectives of anatomy, physiology, pathology and diseases in textbooks and relevant references in nursing. The dimensions of psychology, society and culture have not attracted attention, nor was any mention found about integration of these dimensions into any nursing education materials. Though some sociological investigations have placed emphasis upon these aspects (e.g. Fang, 2004; Liu & Lu, 2005; Pan et al., 2004), the application of these findings for the benefit of improving health has not been explored.

This research also suggests that female Chinese nurses may be incompetent in handling embarrassing situations, e.g. pubic area shaving, male catheterization, meatal cleansing. Nursing education in mainland China usually stresses the nurses' role in assisting and facilitating doctors to treat physical illnesses. The interaction between nurses and patients for the purpose of providing nursing care has not been appreciated or emphasized. The scarcity of education in managing emotions, psychosocial and sexual concerns/needs may contribute to the generation of a great deal of emotional labour for nurses in coping with their own responses and that of male patients during MGRC. Over-taxed emotional labour could lead to burnout and job dissatisfaction (de Castro, Agnew, & Fitzgerald, 2004).

Furthermore, it seems that female Chinese nurses have not reflected upon the influence of gender inequality on their conduct in the practice of MGRC.

Some nurses may actively avoid providing MGRC as a result of their husbands' negative responses when they heard about their delivery of MGRC. This supports the findings of Baumeister and Twenge (2002) that culturally presented sexual suppression can induce active avoidance by females of conduct with sexual meaning.

The above analyses suggest that there exist apparent weaknesses in current nursing education, i.e. the dearth of content related to gender, sexuality, sexual health and sexual harassment, especially from the perspective of psychology and sociology.

#### **Future research directions**

##### ***Embarrassment***

It was found in this research that female Chinese nurses may not widely negatively perceive MGRC, as was suggested in Xiang et al.'s study (2004), but similar to other research (Jervis, 2001; Lawler, 1991; Savage, 1995; Xiang et al., 2004; Williams, 2001b), MGRC (especially genital hygiene and male catheterization) was found to be embarrassing, particularly for young or novice nurses in both western and eastern nursing settings.

Miller (1996) proposed that embarrassment was a shared phenomenon across cultures and featured similar causes and signs. However, there is a lack of investigation about embarrassment in the field of nursing. Understanding the similarities and differences between cultures could help development of universally effective strategies to deal with embarrassing situations. It could also be beneficial to the mutual understanding of nursing practice in different cultures, and to the sharing of knowledge in the areas related to embarrassment and/or

MGRC.

### *Sexuality*

This research suggests that female Chinese nurses may lack knowledge and understanding about sexuality, sexual health and sexual harassment. Without the necessary knowledge and understanding in these areas, it is unrealistic to expect that female Chinese nurses can competently undertake the role of sexual health promotion, successfully protect themselves from the threat of sexual harassment, and effectively recognize and protect male patients who may be suffering sexual abuse by other nurses.

Presently, a conservative sexual culture and female sexual suppression are still popular and influential in mainland China, but the country is facing the challenges of the increasing occurrence of sexually transmitted diseases (MoH, 2004), and of psychological distress and social difficulties among gays, lesbians, extramarital sexual partners and sexual workers (Li, Liu, & Cui, 1997; Zeng, 2004; Zheng et al., 2005). These challenges reflect the potential need for nurses' openness to and involvement in promoting sexual health. In western societies it has been recognized that nurses should play an important role in the promotion of sexual health and in the treatment and prevention of sexually transmitted diseases (Earle, 2001; Miles, Knight, Cairo, & King, 2003; Peate, 2004).

However, no research was found which investigated Chinese nurses' and nursing students' knowledge, beliefs and attitudes towards sexuality, sexual health and sexual harassment. An understanding of these matters is essential to the design of relevant nursing courses which address the nurse's role in promoting sexual health and in preventing sexual harassment.

### ***Privacy***

Privacy is a concept which originated from western society. The concept includes at least four dimensions: physical privacy, psychological privacy, social privacy and information privacy (Scott et al., 2003a). Privacy protection was found in this research to be a rarely investigated area. It appears that the majority of Chinese nurses have not been aware that MGRC invades the male patient's privacy (Xiang et al., 2005; Xie, Liu, & Chen, 2003).

The available investigations (Huang, Wang, S.Q., & Wang, H.X., 2003; Sun et al., 2004; Xiang et al., 2005; Xie et al., 2003) suggested that male patients may experience intense psychological discomfort, e.g. embarrassment, sexual impulse, anxiety and/or depression during the process of female nurses providing care for them in the genital area. However, these studies failed to analyse the influences of privacy invasive procedures over performers and receivers, respectively.

In comparison, the majority of studies on privacy conducted in western societies (e.g. Bäck & Wikblad, 1998; Lemonidou, Leino-Kilpi et al., 2003; Lemonidou, Merkouris et al., 2003; Scott et al., 2003b) were found to study both the patients and their responsible nurses. The research instruments often took different formats but with the same inquiry foci. However, similar studies were not found in mainland China which aimed to investigate patients' needs for privacy and/or perception of privacy protection, and simultaneously to investigate nurses' perceptions of these patients' needs for privacy and/or nurses' perceptions of protection of these patients' privacy.

### ***FNS-MGRC scale***

FNS-MGRC could reflect a female nurse's awareness of the varied issues associated with MGRC and the possible negative influence of this awareness over her performance of MGRC. It is therefore especially useful in measuring and evaluating female students'/nurses' FNS-MGRC before and after they receive the education related to MGRC and the associated issues, e.g. sexuality.

However, the removal from the FNS-MGRC scale of the item measuring competency in conducting sexual health promotion (i.e. item #3, See Table 6.1, p. 203) might weaken the completeness of the FNS-MGRC scale. Its extremely low factor loading may be caused by the current lack of emphasis on the nurses' role in sexual health promotion. However, if nurses' roles in mainland China continue to expand to include a role in sexual health promotion, the FNS-MGRC scale will require to be redesigned to include this aspect.

In comparison, in nursing settings where nurses' work includes sexual health promotion, there is no need to delete the above item, but the psychometric properties of the 14-item FNS-MGRC should be re-examined if the local culture is vastly different from the conservative sexual culture in mainland China.

Another issue is about the target population of the FNS-MGRC scale which is limited to female nurses. With the increasing employment/recruitment of male nurses/students in nursing, the scale might have to be reconstructed because it cannot be used to measure male nurses' sensitivity to MGRC.

### ***SCS***

The correlation between the two subscales of SCS, i.e. ISC, DSC, and the FNS-MGRC scale was not confirmed in this research. This then rejects the

hypothesized relationships that: a) the higher the ISC score, the lower the FNS-MGRC score ; and b) the higher the DSC score, the higher the FNS-MGRC score.

However, the correlation between SCS (Singelis, T.M., personal communication, March 1, 2005) and ES (Miller, 1996) was not found in this research. However, the correlations between ES and other scales, i.e. SDS (Crowne & Marlowe, 1960), bFNES (Leary, 1983), SES (Kelly & Jones, 1997), were found to be significant, thus supporting others' findings (e.g. Kelly & Jones, 1997; Maltby & Day, 2000; Miller, 1995), which suggests the validity of ES. This then raises a challenge about the validity of SCS and the relationship between SCS and ES which has been repeatedly confirmed (Sharkey & Singelis, 1995; Singelis et al., 1999).

Strangely, in the most recent publication about SCS, i.e. Singelis et al., (2006), the indicated source, i.e. Singelis, (1994), of the 30-item SCS with a 5-point Likert scale was found actually to report the original 24-item SCS with a 7-point Likert scale. However, no explanation about these changes was provided in Singelis et al.'s report of 2006. In fact, the use of the 30-item SCS in this research was suggested by Singelis (personal communication, March 1, 2005) when this researcher requested approval for the use of the original 24-item SCS.

Besides, Cronbach's alpha for the 30-item SCS was reported "in the middle 0.60 to the low 0.70s" (Singelis et al., 2006, p. 236). It has not reached the desired internal consistency reliability for a newly developed instrument, i.e.  $>0.80$  (Davis, 1992). Again, strangely, in the quoted sources (i.e. "Singelis, 1994; Singelis et al., 1999; Yamada & Singelis, 1999") (Singelis et al., 2006, p. 236) of the above value, what had been used was the original 24-item SCS and not the



30-item scale.

Under this condition, not only should the rejection of the proposed relationship between Self Construal and FNS-MGRC be made with caution, but also the validity, reliability and applicability of the 30-item SCS, if used in mainland China, should be examined in mainland China. After the determination of all the above necessary psychometric properties, the relationship between Self Construal and FNS-MGRC should be re-examined.

### **Recommendations**

The following recommendations are based on the study findings and their implications as perceived by this researcher. The recommendations have been classified into three areas: education, practice and research.

#### **Education**

Educational programmes should be designed and implemented which clearly address the psychosocial and sexual issues embedded in MGRC. Both content and teaching methods should be selected so as to enable these issues to be openly discussed among nursing managers, nursing educators, nurses who provide direct care to male patients and nursing students. As a result, nurses/students should be clearly aware of male patients' possible needs for psychosocial or sexuality support, and then be able to recognize the potential threats or barriers to optimal MGRC. Considering the relationship between sexuality, sexual health, sexual harassment, gender inequality and MGRC, education and training in these areas should be addressed in nursing courses.

It is also necessary for these programmes to be so designed as to empower nurses to deal with any issue which may emerge during the delivery of MGRC.

The practice of MGRC is under the influence of the traditional conservative sexual culture in mainland China which is being challenged by the growing openness of the country to the culture of the western world. On the other hand, health problems, human needs and human societies are evolving in this changing world. These necessitate the continuous examination of the physical, psychological, social and sexual issues related to MGRC. Continuing education and life long learning therefore should be promoted so that nursing professionals keep abreast of the most recent developments to enable the provision of optimal care which meets patients' changing needs within the changing society.

Before and after the implementation of the above education programmes, including their contents and teaching methods, the 13-item FNS-MGRC scale could be used to evaluate the effects of the education on female nurses' FNS-MGRC. This evaluation would inform to what degree and in what respects female nurses' perceptions, attitudes and responses have or have not changed, which will facilitate the further improvement of these programmes.

In addition, the conceptual model of FNS-MGRC suggests that it is desirable for the values advocated in professional nursing to be in harmony with the values which are treasured and of significant concern in people's general social lives within the broader society. Otherwise, values conflicts might be possible and these conflicts might threaten nurses' health and compromise the outcome of nursing care. Therefore, education programmes should be developed so as to help enhance nurses' and/or nursing students' capability to figure out patients' concerns and needs as a patient, i.e. concerns and needs of the identity component of 'patient', and as a general social member who may play his/her

roles as usual, i.e. concerns and needs of the identity component of 'other'. These programmes are also anticipated to help nurses and/or nursing students to reflect upon their own needs and concerns which may have positive or negative influences over the interaction with patients during the provision of nursing care. The capability to manage values and beliefs conflicts is another element which should be considered to be fostered through these education programmes.

In addition, given that only messages and the action of message sending is observable, nurses should learn to produce verbal and nonverbal expressions which transmit positive messages in the view of patients. This requires more than emotional labour because emotional labour focuses only on the efforts to display appropriate emotions (de Castro, Agnew, & Fitzgerald, 2004; Grandey, 2000). Even although the emotional labour is very stressful and could threaten occupational health (de Castro et al., 2004; Grandey, 2000), the mental labour required to manage the sending of appropriate/positive messages could, in comparison, be more stressful and require more skill. Therefore, education programmes are needed which could help increase nurses' and/or nursing students' competencies in transmitting appropriate messages which are beneficial to patients.

### **Practice**

Taking care of the professional self, e.g. one's unique pattern of beliefs, values, attitudes, behaviours, emotions, needs, creativity, dreams, and aspirations, related to behaving as a nursing professional, should be promoted within the nursing profession (Douglas & Willis, 2005). Only when one is capable of caring for self can care be translated and administered to others. This capacity is

gradually developed on the basis of the growing understanding both of being cared for and of caring (Douglas & Willis, 2005). Furthermore, an increased and shared understanding between a nurse and others, especially patients, of what it means to be a nursing professional can help the nurse grow personally and develop good interpersonal relationships (Douglas & Willis, 2005; Townsend, 2006).

In other words, being able to take care of one's personal health and professional self is, for the nurse, beneficial to the provision of optimal care to patients and to the advancement of the nurse as a professional. Nurses ought to strengthen their identity as nursing professionals through demonstrating the desired attributes or conduct in accordance with the code of ethics (Douglas & Willis, 2005; ICN, 2006). For instance, where it is permitted to delegate certain types of MGRC to family members, the quality of the MGRC delivery must be monitored and maintained.

Managing role conflicts should be taken as a necessary aspect of taking care of the professional self. As was discussed in the previous section on study implications, female Chinese nurses may experience role conflict between acting as a desired female Chinese and as a desired good nurse during the practice of MGRC. Role conflict can trigger a series of emotional, physical, social and psychological responses leading to psychological strain or even burnout (Blais et al., 2006; Hardy, M.E. & Hardy, W.L., 1988). Therefore, role conflict management should be taught and emphasized during the education and practice of MGRC in school and/or in hospital.

In particular, nursing managers, especially head nurses, should recognize

that it takes time to influence cultural beliefs, i.e. conservative sexual culture, over nursing practice and nurses. This may be because that culture is something which is widely constructed into every aspect of human life in a variety of forms, e.g. folklore, customs, rituals, textbooks, songs, and the arts. Nursing managers' and head nurses' attitudes and conduct can exert a strong influence over staff nurses/students. Nursing managers, head nurses and educators therefore should deal with any matter related to MGRC in a manner which demonstrates that their own conduct is not restricted, e.g. by their gender or age, in accordance with the code of nursing ethics (ICN, 2006; SN, 2000). It is also important that they make efforts to build a supportive working environment in which staff nurses and students can express their concerns and seek help when dealing with MGRC.

Nursing managers, head nurses and educators should also recognize that some male patients may truly prefer a male to deliver MGRC, given the long and strong influence of the conservative sexual culture in mainland China. It is therefore necessary to recruit and educate more male nurses, nursing students, and nursing aides to meet these patients' needs. However, it should be emphasized that only when male patients request it, should a male nurse be asked to come to deliver that patient's MGRC. Nursing is still a female dominated profession within which male nurses may feel they are treated unequally, in comparison with female nurses. This could lead to male nurses experiencing job dissatisfaction, role stress and/or the perception of gender inequality. Therefore, female and male nurses should take the same responsibilities in the delivery of MGRC and be treated equally.

Given that male nurses/students still account for a very small proportion

(<1%) of the nurse population in mainland China (Li & Wang, 2005), nursing managers should consider redefining the nurses' role in the practice of MGRC, in order to solve the immediate problems, i.e. some male patients' preference for a male MGRC provider, and some female nurses' negative responses towards delivering MGRC. Some types of MGRC, e.g. perineal hygiene, meatal cleansing, and pubic area shaving, could be allocated to well-trained nursing aides, while nurses take responsibility for their training and supervision and for quality control. Nurses and/or senior students should be trained to perform these types of MGRC which require considerable theoretical knowledge and technical skills, e.g. male catheterization.

### **Research**

Recommendations in relation to future research are considered under a few areas, i.e. embarrassment, sexuality issues, FNS-MGRC and SCS.

#### ***Embarrassment***

MGRC may be similarly perceived as embarrassing by nurses across cultures and societies. Strategies revealed in some references, e.g. Lawler, 1994; Meerabeau, 1999; Price, 2002, could be further investigated so that the effects of receiving MGRC on male patients and that of providing MGRC on female nurses could be evaluated and compared.

The required competencies for female nurses to deal with embarrassing MGRC (e.g. male catheterization, meatal cleansing, public area shaving) also deserve investigation. These competencies could be identified and then used to direct nursing educators and nursing managers to select and take proper actions to improve the female dominated practice of MGRC.

### *Gender and sexuality issues*

Content related to gender, sexuality, sexual health and sexual harassment should be integrated into all nursing education programmes, including continuing education programmes. Teaching and learning methods have to be developed and evaluated so as to facilitate nurses/students to critically analyze the influences of these matters on patients and themselves, to recognize their weaknesses in dealing with these matters, and to develop skills to strengthen their capability to deliver MGRC as nursing professionals.

An instrument measuring Chinese nurses'/students' knowledge, beliefs and attitudes towards sexuality should be developed in order to evaluate the effect of the reconstruction of nursing education programmes on nurses/students. The widely used instrument, i.e. Sexual Knowledge and Attitudes Scale (Miller & Lief, 1979), and the other recently developed instrument, i.e. Sexuality Attitudes and Beliefs Survey (Reynolds & Magnan, 2005), could be referred to for the generation and evaluation of an equivalent instrument applicable in mainland China.

With the growing openness in mainland China, the needs for support on sexual health and non-traditional sexuality, e.g. homosexuality, transexuality, are growing, as are the needs to protect victims of sexually transmitted diseases and sexual harassment (e.g. Li et al., 1997; Zeng, 2004; Zheng et al., 2005). To meet these needs, nurses/students must be educated so as to gain the necessary knowledge and develop the required competencies in conducting sexuality counseling/support.

In particular, sexual harassment can have negative consequences for

victims in respect of physical and psychological influences (Bronner, Peretz, & Ehrenfeld, 2003; Valente & Bullough, 2004; Plaudi & Barickman, 1998). Female Chinese nurses/students should be educated to be vigilant about the possible occurrence of sexual harassment of patients, and to be clear about ways and strategies with which to protect themselves from being sexually harassed, and stop patients from any sexually harassing advances/conduct. Nursing managers should develop a channel and a platform to deal with any suspected occurrence of sexual harassment.

In addition, an instrument measuring nurses' beliefs, knowledge and attitudes towards sexual harassment, and an instrument to diagnose the occurrence of sexual harassment require to be developed.

### ***Privacy***

A dearth of studies was found which placed special emphasis on the aspect of privacy intrusion and protection during MGRC. Further investigation therefore is required into this area.

There is a lack of evidence from which to draw any conclusion about the influence of the perception of privacy intrusion and the protection of privacy for both female nurses and male patients. Future investigation could firstly focus on the patients' needs for privacy and female nurses' provision of privacy protection during the delivery of MGRC.

Given that no instruments were found to specifically measure male patients' needs for privacy and/or female nurses' provision of privacy protection, a qualitative inquiry should be conducted first of all, which will lay the foundation for the generation of an instrument measuring patients' needs for



privacy and patients' perception of privacy protection.

In order to examine the similarities and differences between female nurses' perceptions and male patients' perceptions of needs for privacy and privacy protection, both the male patients and their responsible nurses should be investigated.

### ***FNS-MGRC***

The FNS-MGRC scale was found to be not sufficiently flexible to be applicable in any culture or society. However, the steps in developing this scale, i.e. item pool development, items reduction, establishment of reliability and validity, could be replicated in other cultures and societies.

If this is done, it is necessary to explicate the socially and culturally accepted sexual conduct before scale adaptation is begun. This conceptual articulation is essential to scale development (DeVellis, 2003; Netemeyer et al., 2003). It is useful in guiding the generation of items measuring the specific sensitivity of FNS-MGRC, one of the two dimensions of FNS-MGRC.

Given the prevailing sexual conservative culture in mainland China, it is possible to develop a standardized test to establish the norm of the 13-item FNS-MGRC scale. However, this scale has not been established with predictive validity. It is desirable firstly to conduct a test to establish the predictive validity by examining the relationship between the nurses' FNS-MGRC scale scores and their performance during MGRC. The higher the score, the poorer the performance is, and the more perceivable negative responses are, suggesting the predictive validity. However, this is somewhat difficult as there exist no instruments to measure nurses' conduct during MGRC. To develop an instrument

measuring female nurses' conduct during MGRC is therefore also needed.

Furthermore, the target population of the FNS-MGRC scale, i.e. female nurses, could be extended to male nurses after modification of item #6 (See Table 6.6, p. 224). For example, item #6 could be changed to 'I think that some sayings/behaviours can make the male nurse who gives male genitalia related care feel very uncomfortable'.

To go further, any item which measures the dimension of specific sensitivity to MGRC could be expanded into two: In the first item, the gender of the nurse could be male; while in the second item, the gender of the nurse could be female. In this way both male nurses' and female nurses' sensitivity to MGRC could be measured.

However, any modification of the FNS-MGRC scale, as was mentioned above, would require the development of new tests to re-examine its validity and reliability, which is essential for the measurement of latent construct (DeVellis, 2003).

### **SCS**

As was discussed in the section on study implications, the reliability, validity and applicability of the 30-item SCS in mainland China were challenged by the lack of and inaccurate reporting of research evidences. This suggests that the 30-item SCS (i.e. Singelis, T.M., personal communication, March 1, 2005) should be examined in a systematic way to ensure its applicability in the other culture.

It has been long recognized that there exists an issue of equivalence between the original instrument in one culture and the translated instrument in the

other culture (e.g. Brislin, 1970; Prince & Mombour, 1967). Although different terms were used to describe the varied concerns about this issue, e.g. conceptual equivalence/content equivalence, technical equivalence/operational equivalence, (e.g. Bowden & Fox-Rushby, 2003; Brislin, 1970; Flaherty et al., 1988; Herdman et al., 1998), the major concerns are almost identical. These include conceptual, item, semantic, operational, measurement and functional equivalence (See Table 7.2) (Bowden & Fox-Rushby, 2003; Herdman et al., 1998).

**Table 7.2 Summary of different equivalences between the instruments used in cross-cultural research<sup>a</sup>**

Equivalence	Definition
Conceptual	It is achieved when the instruments in different languages have the same relationship to the latent concept in different cultures, respectively, primarily in terms of domains included and the emphasis placed on different domains.
Item	The latent concepts/parameters purported to be measured are the same, and the concepts/parameters are equally relevant and acceptable in different cultures.
Semantic	The transfer of meaning across languages exerts similar effect on respondents who speak different languages.
Operational	The use of similar format, instructions, mode of administration and measurement methods between the instruments used in different cultures.
Measurement	The achievement of equivalent psychometric properties between different instruments.
Functional	The extent to which the instruments, which are purported to measure the same construct, do what they are supposed to do equally in different cultures.

a. Source: Bowden & Fox-Rushby, 2003; Herdman et al., 1998.

The above six dimensions of equivalence reflect a full consideration of all necessary characteristics of an instrument produced in one culture but used in multiple cultures. The methods have been used to produce generic health-related quality of life measures usable in multiple cultures, e.g. Asia, Africa, Europe (Bowden & Fox-Rushby, 2003; Herdman et al., 1998). In fact, the original author of the 30-item SCS has made efforts to establish metric equivalence between the original English SCS and the translated Spanish SCS (Singelis et al., 2006).

The 30-item SCS scale therefore should be examined fully in order to assess whether it reaches the suggested 6 dimensions of equivalence before its

use to examine further its relationship with the FNS-MGRC scale.

Although this research has many implications in respect of knowledge expansion, nursing education, nursing practice and future research directions, it is important to the proper understanding of these implications for the limitations to be discussed in detail.

### **Limitations**

Mainland China has a very large population, i.e. 1.3 billion, with 56 recognized ethnicities (“People’s Republic of China”, 2005) and a variety of cultures, featured by different traditional norms concerning sexual propriety (Ren, 2005). Furthermore, Qilu Culture, the pillar of Shandong culture, occupies one of the most significant positions in Chinese Culture (“History and geography”, 2006; “Shandong province”, 2006). However, this research was limited to female nurses’ practice of MGRC in the five teaching hospitals located in the capital of Shandong, one of the 34 administrative regions in China (“People’s Republic of China”, 2005). Over 95% of nurses in these hospitals were of Han ethnicity. It is therefore not possible to generalize the findings of this research to the entire Chinese female nurse population.

Furthermore, there are over 3,000 years of history of female sexual suppression which can be traced back to the Western Dynasty (1122 B.C. – 770 B.C.) (Zeng, 2004). The influence of this culture cannot be ignored. However, at present, in large cities such as the capital of Shandong, in which the hospitals targeted for this research were located, the unique modality of sexual intercourse under the protection of the law is between heterosexuals within marriage (Ruan & Lau, 1997; Chan, K.H., a lawyer, personal communication, October 26, 2006).

However, mainland China is experiencing dramatic changes with the influx and growing popularity of western living philosophy which emphasizes individualism and openness (Hu, 2000). Therefore, the researcher's interpretation about the cultural influence, i.e. the conservative sexual culture, over the practice of MGRC, female nurses' perceptions of MGRC, and their FNS-MGRC might have limitations and therefore be open to discussion.

In Study 1, probing questions were avoided in order to prevent subjects from experiencing emotional discomfort, for example, when one of the subjects mentioned the breaking-up of a 10-year intimate relationship, or when subjects disclosed their own or their husbands' negative attitudes towards female nurses delivering MGRC. The avoidance of such probing questions inevitably led to some questions remaining unasked. Examples of these follow. How did subjects negotiate with their husbands/boyfriends about their practice of MGRC? How did subjects manage the conflict between their husbands'/boyfriends' demands and their nurse role and responsibilities in delivering MGRC? Did they neglect their role responsibilities as a nurse by conforming to their husbands'/boyfriends' demand that they should not deliver MGRC? According to local culture, probing questions under the above conditions implies intentional hurt, as either those experiences were known to be painful to recall, or the nurse's conduct in the delivery of MGRC was apparently being questioned and judged as unethical and incompetent.

In Study 2, the major limitation is the heavy response burden as the questionnaire (See Appendix B, pp. 303-304) contained many questions. In addition, the structure of the questionnaire was relatively complicated as different

response formats were used and different alternative answers were provided from which subjects had to choose.

In particular, subjects were approached at around 8a.m. when it was time for the regular Monday to Saturday morning meeting at which both the night duty nurses and day duty nurses had to be present. Normally, the night duty nurses gave a report about occurrences at night, doctors reported on special cases and/or patients who had had operations on the previous day, and the head nurse and the ward dean (usually a doctor) informed staff of all recent notices and information which had been provided by the hospital managerial division. Therefore, accessing the nurses at the time of the regular morning meeting gave the researcher the opportunity to contact the greatest number of nurses and this contributed to achieving the large sample size.

However, nurses just coming off night duty would be tired after nearly eight hours on duty, and would be expecting to go back home as soon as possible. In comparison, nurses about to commence their day duty were eager to start organizing and dealing with various nursing tasks as soon as possible, otherwise they could not finish them on time, as they usually did. These factors may have contributed to the high number of missing values and unusable questionnaires (See Chapter 4, p. 130).

However, it was expected that nurses would instantly report their immediate responses towards MGRC and related matters without referring to others' opinions. Therefore, although the data collection time frame had weaknesses, it was still the optimal choice to achieve the above purposes, i.e. prompt answers with little influence from others, and a sufficiently large sample

size.

In Study 3 limitations existed in the process of the development of the FNS-MGRC scale. The sample for item reduction in Test 1 was not the optimal choice. Refusal for the necessary repeated access was expressed implicitly by some nurse managers in the five targeted hospitals. For example, one manager considered that ‘nurses are too busy. Asking them to complete questionnaires is somewhat ...’. Another manager said, ‘You know, nurses are very busy. They dislike answering questionnaires. To answer a similar questionnaire repeatedly is most distasteful.’ Another was more straightforward, ‘It is not that I don’t understand the importance of research, nor that I do not support your research, but the nurses are too busy. I am sorry’. This attitude on the part of nurse managers made it almost impossible for the researcher to make further requests for access. In the view of local Chinese people, to request or propose anything more when people talk about ‘being busy’, means that you are forcing him/her to do something they do not wish to do.

Furthermore, as the sample for item reduction in Test 1 was nurses, samples for the determination of test-retest reliability (i.e. Test 2 and Test 3 with a 2-week interval), and of the correlation between the FNS-MGRC scale and other existing scales (i.e. Test 2) must also be nurses. This would thus require access to these hospitals and the sample for a further three times in addition to the two times of indispensable access in Study 2 and Test 4 in Study 3. Therefore, access to nurses in the five teaching hospitals, as the sample population of Test 1, Test 2 and Test 3, was not feasible.

Year5 nursing students would have been a better alternative to Year1,

Year2, Year3 and Year4 students, as Year5 students had been exposed to both the theoretical knowledge and the practice of MGRC during their year of clinical practice in hospital. However, this group of students was unavailable because they were away on clinical practice in various regions and therefore lived in different cities.

As to Year4 nursing students, there were less than 100 in the targeted school of nursing, and this number was less than the minimum sample size, i.e. 100, which was required for a test for the purpose of item reduction (DeVellis, 2003; Netemeyer et al., 2003). Given that both Year3 and Year4 students had been exposed to the theoretical knowledge of MGRC, although both lacked clinical experience, students from these years were selected as the sample for Test 1. In comparison, Year1 and Year2 students had not been sufficiently exposed to the theoretical teaching about MGRC and nursing theories. The curriculum for Year1 students comprised advanced courses in natural science, e.g. chemistry, physics, lineal mathematics, and basic courses in health science, e.g. anatomy, embryology. The curriculum for Year2 students comprised advanced courses in health science, e.g. biophysics, physiology, pathophysiology, pathology, biochemistry, biology, parasitology, immunology, genetics, pharmacology. Only from their third year onwards did nursing students begin to study basic nursing courses, e.g. nursing fundamentals, orientation to nursing theories, and clinical nursing courses, for example, medical and surgical nursing. Therefore, Year1 and Year2 students may have some understanding of MGRC and associated issues, but this understanding would be minimal compared to Year3 and Year4 students.

Considering that one of the recommendations of this research was to



facilitate the improvement of education programmes relevant to MGRC, the target population of the FNS-MGRC scale should be senior nursing students and/or nurses who would be likely to be involved in such programmes. It was therefore thought most appropriate to recruit Year3 and Year4 students as the sample for Test 1.

In addition, the researcher had to make decisions about the retention or deletion of some of the items, based on her own understanding of the 2-dimensional model of FNS-MGRC, instead of referring purely to the outcomes of EFA and scale reliability analysis (See Chapter 6, pp. 200-202). This subjectivity was in effect a two-edged sword. On the one hand, it facilitated the selection of items which were most relevant to the concept, i.e. FNS-MGRC, based on the assumption that the researcher was best able to understand the concept of FNS-MGRC as she had studied the concept extensively for over one year. On the other hand, it may have threatened the validity in terms of item selection as sometimes the differences between alternative items were very subtle or even ambiguous. The choice therefore was dependent on the researcher's understanding of each item. However, Kim and Mueller (1994) consider this type of threat is a limitation in all scale reduction.

## **Conclusion**

This chapter has summarized the findings of this research and provided an overall discussion. It has also presented the implications of these findings and made recommendations which were derived from these implications. The limitations of this research have been stated. In the next chapter, which concludes this thesis, the study and its major findings are summarized.

**Table 7.1 Summary of research findings**

Subjects		Summary of major findings	Conclusions
Preliminary study stage			
Study 1 (See pp. 101-123)	8 female nurses in a university teaching hospital	1) Two themes were identified: a) 'association with sexuality', which included the sub-themes of 'being sexual', 'impact of intimate relationship' and 'emotional responses'; b) 'consequences', which included the sub-themes of 'care with preconditions', 'unavoidable responsibilities' and 'limited involvement with implicit approval'.	1) A variety of issues e.g. diversity of care providers, female nurses' negative conduct, may embed in the practice of female nurses delivering MGRC. 2) All issues might be caused by the interpretation of female nurses delivering MGRC as sexually improper.
Study 2 (See pp. 130-143)	312 female nurses <sup>a</sup>	1) Local Chinese female nurses' practice of MGRC might be limited to few types of MGRC, and they may prefer to practise less. 2) Local Chinese female nurses' perceptions of MGRC might not be completely negative. Many strategies were proposed to improve the practice of female nurses delivering MGRC. 3) Local Chinese female nurses' role as wife, mother or head nurse might significantly influence their overall perceptions of certain types of MGRC. 4) Frequent delivery of MGRC might influence the female nurse MGRC provider's personal life, and the practice of female nurses delivering MGRC might influence the public image of nurses.	1) Qualitative findings were found to be consistent with quantitative findings in Study 2, and findings from Study 2 were consistent with and complemented findings from Study 1. 2) Local Chinese female nurses may be involved little in the practice of MGRC. 3) Similarities and differences could be found between local Chinese female nurses' perceptions of certain types of MGRC and those of nurses in western countries, e.g. USA, UK.
Main study stage			
Study 3 (See pp. 202-206, 220-235)	Test 1: 151 Year3 & Year4 students <sup>b</sup> ; Test 2: 70 Year3 students <sup>b</sup> ; Test 3: 65 Year3 students <sup>b</sup> ; Test 4: 588 female nurses <sup>a</sup> .	1) A 58-item pool was formulated, and then refined to be a 38-item pool which was reduced to be a 14-item FNS-MGRC scale. The 14-item scale, with satisfying internal consistency reliability, had a 3-factorial structure using student data, but a 2-factorial structure using nurse data. 2) An item required to be removed from the 14-item scale because of low factor loading. The 13-item scale was established with satisfying internal reliability, time reliability and construct reliability. 3) The degree of exposure to the practice of MGRC may significantly influence a female nurse's FNS-MGRC. 4) Not all hypotheses were confirmed, suggesting a necessity to modify the operationalization of FNS-MGRC.	1) The 13-item FNS-MGRC scale has been established with satisfying reliability and validity. 2) The underlying conceptual foundation of the scale was appropriate overall. 3) The conceptual model of FNS-MGRC and the modified operationalized 2-dimensional FNS-MGRC could guide the interpretation of the practice of MGRC in a society which has a conservative sexual culture.

a. Subjects worked in the wards of urology, general surgery, cardiothoracic surgery, neurosurgery, orthopaedics, neurology, ICU, A&E and Operating Theatre in the five teaching hospitals.

b. All students were female in the 5-year Bachelor nursing programme in a school of nursing in the university which was directly overseen by the Ministry of Education.

## **Chapter 8 Conclusion**

This chapter briefly describes and links the three studies in this research, and simultaneously presents a brief summary of the major findings from each study. A short discussion about the implications of this research and a note regarding the limitations conclude this chapter.

This research investigated an area which was previously devoid of knowledge, i.e. Chinese female nurses' practice of, perceptions of and sensitivity towards MGRC within a society which has a longstanding and penetrating conservative sexual culture (See Chapter 3, pp. 51-52; Chapter 4, pp. 98-99; Chapter 5, pp. 150-154). The maintenance of female sexual propriety is paramount in this culture, and the core of female sexual propriety is the avoidance of any conduct in public which may be interpreted as sexual or seductive (Ren, 2005; Zhao & Li, 2003). MGRC includes a group of nursing care actions which require the procedure of physical contact with and/or exposure of the naked penis. The penis is often associated with sexual pleasure, power and masculinity which are particularly significant concerns in a man's life in both Eastern (Jankowiak, 2002) and Western countries (Gascoigne et al., 1999; Milligan, 1999; Newman, 1997; Oliffe, 2005; Pomfret, 1994). Therefore, MGRC may trigger specific psychosocial and sexual concerns in those male patients who require and receive MGRC.

This research was conducted in a city in Shandong Province in China which has a conservative sexual culture, and where local Chinese people's lives are predominantly and strongly influenced by Confucian living philosophy. The research commenced with an exploratory qualitative study, i.e. Study 1 (See

Chapter 4, pp. 99-123), which investigated eight female nurse subjects' perceptions, attitudes and responses in their practice of MGRC. These subjects worked in the same university teaching hospital. It was found that subjects associated female nurses delivering MGRC with improper sexual activities, and that this association had negative effects on their perceptions, attitudes and responses related to MGRC. These negative effects directly or indirectly compromised the quality of MGRC, which, as a result, was detrimental to the health of male patients who required MGRC.

The research then continued with a cross-sectional descriptive survey, i.e. Study 2 (See Chapter 4, pp. 123-143), which placed emphasis on the investigation and analysis of 312 female nurse subjects' perceptions of certain types of MGRC. These subjects were recruited from speciality wards where MGRC was considered to be common. These wards were in the five university teaching hospitals, from one of which subjects in Study 1 had been recruited. Findings from Study 2 suggested that nurses, almost exclusively female, may play, and prefer to play, limited roles in the provision of 10 types of MGRC, i.e. perineal hygiene, pubic area shaving, meatal cleansing, genital wound care, urinary catheterization, urinary catheter removal, bladder washout, bladder irrigation, intravesical therapy and suprapubic catheterization. Subjects' perceptions of four types of MGRC, i.e. perineal hygiene, meatal cleansing, pubic area shaving and urinary catheterization, were not extensively negative, and their roles as a wife, mother or head nurse might significantly influence their overall perceptions of these four types of MGRC as embarrassing, awkward, sexual, dirty, stigmatizing, privacy intrusive and having an impact on the male patient's

sexual health. In particular, it was considered by subjects that frequent delivery of MGRC might have a negative impact on female nurse MGRC providers' marital lives and sexual lives, and that the practice of female nurses delivering MGRC might have a negative influence over the public image of nurses.

Findings from Study 1 and Study 2 projected a phenomenon that female nurses delivering MGRC could be subjected to negative evaluations and judgements, i.e. the female nurse who provided MGRC was considered to be behaving in sexually improper ways, therefore it was inappropriate for female nurses to perform MGRC which required physical contact with or exposure of the penis. The capability to perceive negative evaluations and judgements related to MGRC and to female nurses delivering MGRC was defined in this research as FNS-MGRC, a latent personality trait and psychological construct. By referring to King's Conceptual System (King, 1981, 1995a, 1995b, 1997, 1999, 2006; Carter & Dufour, 1994; Fawcett, 2005; Frey, 1995, 2005; Sieloff, 1995), a conceptual model of FNS-MGRC (See Chapter 5, pp. 157-173) was proposed which guided the operationalization of the 2-dimensional FNS-MGRC (See Chapter 5, pp. 174-187).

This research thus furthered and deepened the investigation from female nurses' perceptions and responses, to the latent construct FNS-MGRC, which determined these perceptions and responses. In Study 3 (See Chapter 6, pp. 195-235), the FNS-MGRC scale was developed firstly for the purpose of testing the hypotheses which were derived from the operationalized 2-dimensional FNS-MGRC. Only 14 items (See Table 6.1, p. 203; Appendix F, p. 309) were included in the FNS-MGRC scale, after the 38-item pool (See Appendix E, p. 308) had

been tested among 151 nursing students. The 38-item pool was refined from the initial 58-item pool (See Appendix D, p. 307). It was then established with test-retest reliability and validity among 65 nursing students through Test 2 and Test 3, with an interval of two weeks. The factorial structure (See Figure 6.2, p. 214; Figure 6.3, p. 215) of the 14-item FNS-MGRC scale (See Table 6.6, p. 224) was examined among 588 female nurse subjects who were working in the five teaching hospitals' speciality wards where MGRC was considered to be common. Other hypotheses derived from the operationalized 2-dimensional MGRC were also examined. The majority of hypotheses were confirmed, suggesting the appropriateness of the conceptual foundation underlying the FNS-MGRC scale; whereas the disconfirmed hypotheses guided the modification of the operationalization of FNS-MGRC (See Figure 6.4, p. 222). Findings from Study 3 showed that the FNS-MGRC scale had satisfying psychometric properties, which included internal consistency reliability, test-retest reliability, content validity, criterion validity and construct validity. Three personality traits, i.e. fear of negative evaluation, embarrassability and susceptibility to embarrassment, were found to be the best predictors of FNS-MGRC.

All of the research findings had implications (See Chapter 7, pp. 264-278) in the following five areas: conceptual development, knowledge expansion, practice improvement, education development and future research directions. Recommendations (See Chapter 7, pp. 278-289) in the areas of education, practice and research were also made, based on these implications. Nevertheless, this research has a number of limitations (See Chapter 7, pp. 289-294) in relation, for example, to generalizability, sampling and data collection.

In conclusion, this research investigated Chinese female nurses in Shandong Province, China, in relation to their practice of MGRC from three different perspectives. Study 1, 2, and 3 represent a specific perspective which researched the female nurses' inner worlds related to MGRC, respectively. This research thus contributes new knowledge, which in turn contributes to an understanding of Chinese female nurses and their practice of MGRC. It also suggests a few areas, e.g. embarrassment, sexuality, privacy and FNS-MGRC, which are deserving of further investigation.

## Appendix A

### Teaching and practice of MGRC in mainland China

**Table A.1 Teaching of MGRC in the schools of nursing in the 10 universities** <sup>a, b</sup>

Male genitalia related care (MGRC)	Not taught	Lecture	Demonstration	Self-directed laboratory practice	Clinical observation	Clinical practice
Perineal hygiene	2	4	6	1*	5	1*
Meatal cleansing	2	5	7	1*	6	1*
Urinary catheter removal	-	6	8	2*	5	2*
Bladder washout	3	6	2	-	1	-
Bladder irrigation	2	7	2	-	2	-
Intravesical therapy	3	6	1	-	1	-
Pubic area shaving	3	4	3	-	2	-
Genital wound care	6	2	1	-	1	-
Urinary catheterization	-	9	10	2*	8	2*
Suprapubic catheterization	4	5	4	-	6	-

\* It is the number of the schools of nursing in which only male students were required to learn/practice.

a. Data collection: All 15 universities directly overseen by Ministry of Health, Ministry of Education, or Central Military Commission, People's Republic of China, were sampled. The questionnaires were directly given or mailed to the Heads of the schools of nursing in these universities. They were responsible for the data collection in the schools and their correspondent best teaching hospitals. A total of 10 universities returned the questionnaires with the response rate of 66.7%.

b. Finding: The teaching approaches and teaching styles of MGRC were diversified, but inconsistent across universities. Bachelor nursing students were not sufficiently prepared in the area of MGRC.

**Table A.2 MGRC providers in the 10 teaching hospitals (N=79)** <sup>a, b</sup>

Male genitalia related care (MGRC)	Doctor		Nurse		Nursing Aide		Others	
	n	%	n	%	n	%	n	%
Perineal hygiene	11	13.9	53	67.1	11	13.9	19	24.1
Meatal cleansing	8	10.1	65	82.3	7	8.9	11	13.9
Urinary catheter removal	38	48.1	57	72.2	-	-	-	-
Bladder washout	21	26.6	70	88.6	-	-	-	-
Bladder irrigation	3	3.8	77	97.5	-	-	-	-
Intravesical therapy	25	31.6	36	45.6	-	-	-	-
Pubic area shaving	49	62.0	34	43.0	-	-	1	1.3
Genital wound care	51	64.6	30	38.0	-	-	-	-
Urinary catheterization	57	72.2	33	41.8	-	-	-	-
Supra pubic catheterization	48	60.8	3	3.8	-	-	-	-

a. Data collection: Eight speciality wards were surveyed in each of the above university teaching hospitals, i.e. A&E, ICU, Neurology, Urology, Cardiothoracic Surgery, Neurosurgery, Orthopaedics, General Surgery. One of 80 administered questionnaires was not returned. The response rate was 98.8%.

b. Finding: MGRC was performed by a variety of healthcare providers. Nurses mainly delivered MGRC which did not necessitate fully touching or exposing the penis and MGRC which required are relatively lower level of skills. Besides doctors and nurses, others were involved in those at the lowest level of skill, i.e. perineal hygiene, meatal cleansing and pubic area shaving.



**Table A.3 Male MGRC providers in the 10 teaching hospitals**  
(N=79) <sup>a, b</sup>

Male genitalia related care (MGRC)	Yes		No	
	n	%	n	%
Perineal hygiene	7	8.9	68	86.1
Meatal cleansing	6	7.6	70	88.6
Urinary catheter removal	18	22.8	58	73.4
Bladder washout	3	3.8	71	89.9
Bladder irrigation	1	1.3	75	94.9
Intravesical therapy	7	8.9	43	54.4
Pubic area shaving	33	41.8	38	48.1
Genital wound care	21	26.6	43	54.4
Urinary catheterization	40	50.6	37	46.8
Supra pubic catheterization	13	16.5	36	45.6

a. Data collection: the same as that noted in Table A.2.

b. The majority of MGRC was not exclusively performed by male nurses. Only one hospital indicated that male nurses were employed. About half of 79 speciality wards in which pubic area shaving and urinary catheterization were conducted by male nurses. No conclusion could be drawn as a variety of providers were involved in MGRC.

## Appendix B Questionnaire for Study 2

Please answer every question based on your own situation. Please shade in the appropriate answer using pencil.

Hospital					
Age (yrs)	year(s)				
Marriage	①Single	②Married	③Divorced	④Widowed	⑤Cohabited
With child	①Yes	②No			
Education level	①Secondary	②Associate	③Bachelor	④Master	⑤Doctor
Degree	①Without	②Bachelor	③Master	④Doctor	
Years of nursing work year(s)					
Position	①Staff Nurse	②Head Nurse			
Specialty wards	① Urology	② A & E	③ ICU	④ Cardiothoracic Surgery	
	⑤ Neurosurgery	⑥ Neurology	⑦ General Surgery		
	⑧ Orthopaedics	⑨ Operation Theatre			

Male genitalia related care	Have you done do it before?		Please rate the technical level of every procedure.				
	Yes	No	Extremely low	→			Extremely high
Urinary catheterization	①	②	①	②	③	④	⑤
Urinary catheter removal	①	②	①	②	③	④	⑤
Bladder irrigation	①	②	①	②	③	④	⑤
Bladder washout	①	②	①	②	③	④	⑤
Pubic area shaving	①	②	①	②	③	④	⑤
Meatal cleansing	①	②	①	②	③	④	⑤
Perineal hygiene	①	②	①	②	③	④	⑤
Genital wound care	①	②	①	②	③	④	⑤
Intravesical therapy	①	②	①	②	③	④	⑤
Suprapubic catheterization	①	②	①	②	③	④	⑤

Male genitalia related care	Usual practice						
	Who performs the procedure?					Is it done by a male?	
	①Doctor, ②Nurse, ③Nurse Aide, ④Ward cleaning staff, ⑤Family member.					Yes	No
Urinary catheterization	①	②	③	④	⑤	①	②
Urinary catheter removal	①	②	③	④	⑤	①	②
Bladder irrigation	①	②	③	④	⑤	①	②
Bladder washout	①	②	③	④	⑤	①	②
Pubic area shaving	①	②	③	④	⑤	①	②
Meatal cleansing	①	②	③	④	⑤	①	②
Perineal hygiene	①	②	③	④	⑤	①	②
Genital wound care	①	②	③	④	⑤	①	②
Intravesical therapy	①	②	③	④	⑤	①	②
Suprapubic catheterization	①	②	③	④	⑤	①	②

Male genitalia related care	Preferred practice						
	Who performs the procedure?					Should it be done by a male?	
	①Doctor, ②Nurse, ③Nurse Aide, ④Ward cleaning staff, ⑤Family member.					Yes	No
Urinary catheterization	①	②	③	④	⑤	①	②
Urinary catheter removal	①	②	③	④	⑤	①	②
Bladder irrigation	①	②	③	④	⑤	①	②
Bladder washout	①	②	③	④	⑤	①	②
Pubic area shaving	①	②	③	④	⑤	①	②
Meatal cleansing	①	②	③	④	⑤	①	②
Perineal hygiene	①	②	③	④	⑤	①	②
Genital wound care	①	②	③	④	⑤	①	②
Intravesical therapy	①	②	③	④	⑤	①	②
Suprapubic catheterization	①	②	③	④	⑤	①	②

Please rate the extent to which you agree with the views below by using the scale.

①Strongly disagree, ②Disagree, ③Not Disagree or Agree, ④Agree, ⑤Strongly agree.

Male genitalia related care	It has impact on sexual health.					It is embarrassing.					It is dirty.					It is awkward.				
Pubic area shaving	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤
Perineal hygiene	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤
Meatal cleansing	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤
Urinary catheterization	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤

Please rate the extent to which you agree with the views below.

①Strongly disagree, ②Disagree, ③Not disagree nor agree, ④Agree, ⑤Strongly agree.

Male genitalia related care	It intrudes patients' privacy.					It is stigmatizing.					It is sexual.				
Pubic area shaving	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤
Perineal hygiene	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤
Meatal cleansing	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤
Urinary catheterization	①	②	③	④	⑤	①	②	③	④	⑤	①	②	③	④	⑤

What other comments would you like to make about female nurses delivering male genitalia related care (e.g. pubic area shaving, perineal hygiene, meatal cleansing, urinary catheterization)?

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## Appendix C Code and inter-coder reliability

### Description, examples and the inter-coder reliability of themes

Themes/subthemes	Description	Examples	Interrater reliability		Frequency of presence	Percentage of presence (N=138)
			Agreement percentage	Percentage agreement on presence		
Gendered work: The sex of deliverer may interfere with MGRC.						
Male work	Male delivers MGRC.	“For the benefit to patients, and for smooth MGRC delivery, it is better for male doctor/nurse to do it.” [Nurse #34]	97.1	97.5	80	58.0
Partly male work	Some MGRC is conducted by male.	“Catheterization should be done by doctor or male nurse; pubic shaving can be done by Nurse Aids ...” [Nurse #5]	99.3	96.0	13	9.4
Measures to improve MGRC: Anything that was proposed for the purpose of improving MGRC practice.						
Care categorization	MGRC procedures are categorized so that care in each category is done by specific people.	“Pubic shaving, perineal hygiene, meatal cleansing should be done by nursing staff. Nurses may ask doctor to give a hand in male catheterization. The other MGRC should be done when a male or the patient’s family is present. Perineal wound care and suprapubic catheterization are doctors’ work.” [Nurse #18]	97.8	91.4	18	13.0
Inclusion of a third person	Besides the patient and nurse, a third person presents during MGRC.	“... At least two nurses or family members should be present.” [Nurse #77]	100	100	9	6.5
Recruitment of male	Male nurses/Nurse Aids are employed to deliver MGRC.	“To protect patients’ privacy, personality, and to show respect to them, the same sex should do MGRC. Male nurses/Nurse Aids should be employed.” [Nurse #28]	92.8	77.2	21	15.2
Privacy protection	Any action is suggested preventing genitalia from exposure to anyone other than nurses or doctors.	“Hopefully MGRC is done by a male; and curtain is used to prevent patients from exposure.” [Nurse #8] “MGRC should be performed in the treatment room instead of ward room.” [Nurse #20]	97.1	89.5	20	14.5
Education preparation	Nurses need education or training to ensure smooth MGRC delivery.	“It is very difficult to catheterize some elderly patients because of serious prostatic hyperplasia, or urethral stricture. It will be very painful for the patient if a nurse with little experience performs the procedure.” [Nurse #76]	98.6	91.7	13	9.4
According to patients' condition	MGRC can be done by the patient himself, or by male staff.	“MGRC can be done by male. If physically possible, nurses should teach the patient to do MGRC by himself through health education.” [Nurse #120]	98.6	95.2	21	15.2
Based on patients' wishes	Patient's wishes are considered, otherwise information is provided for reference.	“For MGRC which, [in some patients] has a negative psychological impact, nurses should respect patients’ wishes and permit him to select capable person to do it.” [Nurse #13]	97.1	92.9	25	18.1

### Description, examples and the inter-coder reliability of themes (Cont'd)

Themes/subthemes	Description	Examples	Interrater reliability		Frequency of presence	Percentage of presence (N=138)
			Agreement percentage	Percentage agreement on presence		
Negative factors intervening female nurses delivering MGRC: Any factor was mentioned which may interfere with female nurses delivering MGRC.						
Age	Age may interfere with MGRC.	“As to catheterization, for young and clear-minded male patients, it is very embarrassing; and is very difficult for the patient and the nurse (particularly young nurses) to adapt to it.” [Nurse #73]	99.3	93.3	7	5.1
Marriage	The marital status may influence MGRC.	“It is difficult not only for the unmarried female nurse, but also for a male patient’s wife to accept it [i.e. female nurse delivering MGRC]”. [Nurse #1]	100	100	5	3.6
Family's wishes	Patients’ family’s wishes are considered.	“MGRC can be done by nurses. But some patients and their families showed reluctance, and take it as awfully embarrassing.” [Nurse #24]	100	76.9	5	3.6
Annoying expressions	Patients or others who imply a negative view about female nurses delivering MGRC.	“Some male patients, awfully immoral, may use very dirty words so I insist male should do MGRC.” [Nurse #74]	100	100	2	1.4
Traditional Chinese views of sexuality	The view on sexual virtues is taken as the excuse for female nurse not to give MGRC.	“... In this sexually conservative country, it is really a predicament for both patients and nurses to do MGRC.” [Nurse #76]	96.4	81.5	11	8.0
Adverse effects of female delivering MGRC: Negative effect may result from female nurses delivering MGRC.						
Discomfort	Any negative emotional response is evoked by MGRC.	“MGRC is important for health. However, it is embarrassing indeed, not only for the nurse, but also for the patient.” [Nurse #12]	96.4	94.8	52	37.7
Negative impact on female nurse's life	Female nurse's personal life may be impacted by MGRC.	“Doing MGRC for a long time may have negative impact on the married nurses’ mental health and private life. It also influences the unmarried nurses’ mental health, the choice for getting married and their married life”. [Nurse #22]	99.3	88.9	4	2.9
Negative impact on nurse image	Any negative image is associated with female nurse delivering MGRC.	“... In order to improve the nurse-patient relationship, to reduce embarrassing situations, to reduce the social bias against nursing, it is better for female nurses to avoid such tasks unless in life-saving emergency care.” [Nurse #41]	100	100	2	1.4

## Appendix D Initial item pool of FNS-MGRC

#	Statement
1	I can promptly perceive others' innermost feelings and thoughts.
2	I feel that I am vulnerable.
3**	If others appear embarrassed, I have the same feeling.
4*	I can easily play appropriate roles according to the situations.
5**	Sometimes I feel that others are talking to me about private matters.
6*	I would rather be myself than behave in order to make others speak highly of me.
7*	I seldom feel that I require excuses for my behaviours.
8*	I often follow the majority, though I know that some of their behaviours are not good.
9*	I have little social interaction with those who don't get along well with the majority.
10*	It is important for me to behave appropriately in public.
11	I am often worried that others misunderstand what I am saying.
12	I am always very cautious in case I do something that others dislike.
13*	I don't change my viewpoints just because others disagree with mine.
14	Clearly knowing that others' opinion will not impact on me, I often still worry about them.
15	I don't care even though I know that a bad impression has been developed in others' minds.
16	I often fear that others notice my weaknesses.
17	I seldom worry about what impression I have had upon others.
18	I fear that others will not approve of me.
19	I fear that others find fault with me.
20	I am worried about others' opinions about me when I am talking with them.
21	Knowing that someone is judging me, I am influenced little by it.
22	I feel that I care too much about others' views about me.
23	I am often worried about my conduct, especially in public.
24	I can accept any comments about me.
25	I feel uneasy when people pay attention to me.
26*	I am not confident in myself.
27*	I will feel discomfort in public unless my hair style and clothes etc. appear to be appropriate.
28*	I feel uneasy at being surrounded by lots of people.
29	I probably care too much about how to communicate with people when I first meet them.
30	I don't care to be the centre of attention.
31*	I feel fidgety at speaking to a large number of people.
32*	I feel that it is inappropriate to talk with people during my first encounter with them.
33*	I often feel awkward in social situations.
34	I feel disgraceful, or even vexed at unusual conduct of little importance.
35	I do not easily blush.
36	I am easily embarrassed.
37	I feel that I cannot hide innermost feelings and thoughts when I am with a large number of people.
38*	I often feel that my inner world is fully exposed to others.
39*	I feel that I can promptly stop men's improper conduct.
40**	Heterosexual activities which appear on screen/books can make me very embarrassed if a friend who is not particularly close is sitting beside me.
41	I believe that men behave vastly differently from women.
42*	I believe that women can do the same as men.
43	I speak and behave with caution in case I am involved in 'pink news' (a common term Chinese meaning gossip about sexual relationships).
44*	I seldom participate in any discussion about any intimate heterosexual relationship.
45*	I seldom confess my true opinion on sexuality.
46**	I can talk about sexuality in a natural way.
47	I will try to avoid delivering male genitalia related care.
48**	I think that any physical contact with the sexual organ can only occur between the spouse and the lovers.
49	Physical contact with men's most private area can make me extremely embarrassed.
50	I think that female nurses touching the male sexual organ is like sexual stimulus.
51	I dislike delivering male genitalia related care.
52	I am averse to the male sexual organ.

\*excluded items; \*\* revised items.

## Appendix E    Refined item pool of FNS-MGRC

#	Statement
1	I fear that others will not approve of me.
2	I don't care even though I know that a bad impression has been developed in others' minds.
3	I feel disgraceful, or even vexed at unusual conduct of little importance.
4	Knowing that someone is judging me, I am influenced little by it.
5	I can promptly perceive others' innermost feelings and thoughts.
6	I am often worried about my conduct, especially in public.
7	Sometimes I feel that others are talking to me about private matters.
8	Clearly knowing that others' opinion will not impact on me, I often still worry about them.
9	I fear that others find fault with me.
10	I don't care to be the centre of attention.
11	I feel that I am vulnerable.
12	If others appear embarrassed, I feel embarrassed.
13	I am easily embarrassed.
14	I am often worried that others misunderstand what I am saying.
15	I can accept any comments about me.
16	I feel that I care too much about others' views about me.
17	I am worried about others' opinions about me when I am talking with them.
18	I do not easily blush.
19	I feel uneasy when people pay attention to me.
20	I seldom worry about what impression I have had upon others.
21	I probably care too much about how to communicate with people when I first meet them.
22	I am always very cautious in case I do something that others dislike.
23	I often fear that others notice my weaknesses.
24	I feel that I cannot hide my innermost feelings and thoughts among a great number of people.
25	I think that some sayings/behaviours can make female nurses who are required to deliver male genitalia related care feel very uncomfortable.
26	I think that any physical contact with genitalia should only occur between the spouse/lovers under the condition that no blood links exist.
27	I always feel that people overly criticize woman for any inappropriate conduct.
28	I think that female nurses touching the male sexual organ is like sexual stimulus.
29	Physical contact with men's most private area can make me extremely embarrassed.
30	I think that I can provide education on sexual health quite naturally.
31	Heterosexual activities which appear on screen/books can make me very embarrassed if a friend who is not particularly close is sitting beside me.
32	I will try to avoid delivering male genitalia related care.
33	I dislike delivering male genitalia related care.
34	I feel that the sexual suppression of women is more serious than that of men.
35	I speak and behave with caution in case I am involved in 'pink news' (a common term Chinese meaning gossip about sexual relationships).
36	I feel that behaving appropriately in social activities is more important for women than for men.
37	I believe that men behave vastly differently from women.
38	I am averse to the male sexual organ.

## Appendix F 14-item FNS-MGRC scale

Below is a series of statements on one's views, feelings, attitudes and behaviours. Please read each item and rate the extent to which it is appropriate for you by referring to the scale as follows. Please shade in the appropriate answer using pencil.

①Not at all like me, ②A bit like me, ③Moderately like me, ④Very like me, ⑤Extremely like me						
#	Statement	See the above scale				
1	I often fear that others notice my weaknesses.	①	②	③	④	⑤
2	If others appear embarrassed, I feel embarrassed.	①	②	③	④	⑤
3	I think that I can provide education on sexual health quite naturally.	①	②	③	④	⑤
4	I fear that others find fault with me.	①	②	③	④	⑤
5	I dislike delivering male genitalia related care.	①	②	③	④	⑤
6	I think that some sayings/behaviours can make female nurses who are required to deliver male genitalia related care feel very uncomfortable.	①	②	③	④	⑤
7	Clearly knowing that others’ opinion will not impact on me, I often still worry about them.	①	②	③	④	⑤
8	I will try to avoid delivering male genitalia related care.	①	②	③	④	⑤
9	I am afraid that others will not approve of me.	①	②	③	④	⑤
10	Physical contact with men’s most private area can make me extremely embarrassed.	①	②	③	④	⑤
11	I probably care too much about how to communicate with people when I first meet them.	①	②	③	④	⑤
12	I feel uneasy when people pay attention to me.	①	②	③	④	⑤
13	I think that physical contact with genitalia can only occur between the spouse/lovers under the condition that no blood links exist.	①	②	③	④	⑤
14	I am easily embarrassed.	①	②	③	④	⑤



## Appendix G Back-translated brief Fear of Negative Evaluation Scale

Please read the descriptions below and indicate the answer most appropriate to you by using the following scale. Please shade in the appropriate answer using pencil.

①Not at all characteristic of me, ②Slightly characteristic of me, ③Moderately characteristic of me, ④Very characteristic of me, ⑤Extremely characteristic of me.

No.	Statement	See the above scale				
1	I worry about how people think of me even though I know that it doesn't make any difference to me.	①	②	③	④	⑤
2	I don't care how people think of me even when I know that they have a bad impression of me.	①	②	③	④	⑤
3	I often worry about people noticing my shortcomings.	①	②	③	④	⑤
4	I seldom worry about how people think of me.	①	②	③	④	⑤
5	I am afraid when people are not satisfied with me.	①	②	③	④	⑤
6	I am afraid that people point out my shortcomings.	①	②	③	④	⑤
7	I am not troubled by how people think of me.	①	②	③	④	⑤
8	I worry about how people think of me when I talk to them.	①	②	③	④	⑤
9	I usually worry about how people think of me.	①	②	③	④	⑤
10	It does not affect me very much even when I know that I am being judged.	①	②	③	④	⑤
11	Sometimes I think that I care too much about how people think of me.	①	②	③	④	⑤
12	I often worry that I will say or do something wrong.	①	②	③	④	⑤

Source: Leary, 1983 (in English)

## Appendix H Back-translated Approval Motivation Scale

Below is a series of descriptions about one's thinking, feeling, attitudes or behaviours. Please read each item, rate the degree of agreement with them most appropriate to you by using the following scale. Please shade in the appropriate answer using pencil.

① Strongly disagree, ② Disagree, ③ No opinion, ④ Agree, ⑤ Strongly agree.

No.	Statement	See the above scale				
1	I would rather be myself than behave in such a way as to leave a good impression on others.	①	②	③	④	⑤
2	I will change my style of doing things in order to please others.	①	②	③	④	⑤
3	In order to maintain a harmonious relationship and to be liked by people, I will behave according to people's expectation.	①	②	③	④	⑤
4	When there is a conflict in opinion, I have difficulty in expressing my opinion.	①	②	③	④	⑤
5	I will argue with people only when there is support from my friends.	①	②	③	④	⑤
6	I rarely feel that I need to give a reason or apologize for my actions.	①	②	③	④	⑤
7	I do not think it is important to behave in an appropriate manner in social activities.	①	②	③	④	⑤
8	I can accept any judgment and comments about me.	①	②	③	④	⑤
9	To prevent people from not liking what I say or do, I am quite cautious during social gatherings and activities.	①	②	③	④	⑤
10	I usually will not change my stand even when people do not agree with my views.	①	②	③	④	⑤

Source: Martin, 1984 (in English)

## Appendix I Back-translated Self Construal Scale

This scale is used to measure feelings and behaviours in varied situations. Please read the items below. Rate the degree of agreement with each item which is most appropriate to you by referring to the followed scale. Please shade in the appropriate answer using pencil.

①Strongly disagree, ②Disagree, ③Slightly disagree, ④ Uncertain, ⑤Slightly agree, ⑥Agree, ⑦Strongly agree.

No.	Statement	See the above scale						
1	I enjoy being unique and different from others in many aspects.	①	②	③	④	⑤	⑥	⑦
2	I can talk openly with someone whom I have met for the first time even though the person is much older than me.	①	②	③	④	⑤	⑥	⑦
3	Even when I do not agree with the group members' opinion, I will avoid any argument.	①	②	③	④	⑤	⑥	⑦
4	I respect all persons who have authority.	①	②	③	④	⑤	⑥	⑦
5	I do my own thing regardless of what others' views are.	①	②	③	④	⑤	⑥	⑦
6	I respect those people who act humbly towards me.	①	②	③	④	⑤	⑥	⑦
7	I feel that it is important to be an independent person.	①	②	③	④	⑤	⑥	⑦
8	I will sacrifice my own benefit for the benefit of others.	①	②	③	④	⑤	⑥	⑦
9	I would rather say "no" directly than risk being misunderstood.	①	②	③	④	⑤	⑥	⑦
10	Having a vivid imagination is very important to me.	①	②	③	④	⑤	⑥	⑦
11	I will consider my parents' opinion when I am planning to study or work.	①	②	③	④	⑤	⑥	⑦
12	I believe that my fate is inter-connected with the fate of other people.	①	②	③	④	⑤	⑥	⑦
13	I prefer to be straightforward when interacting with someone I have just met.	①	②	③	④	⑤	⑥	⑦
14	I feel good when I cooperate with others.	①	②	③	④	⑤	⑥	⑦
15	I feel comfortable in the spotlight as I am being praised or rewarded.	①	②	③	④	⑤	⑥	⑦
16	If my siblings have failed, I feel that I am also responsible for the failure.	①	②	③	④	⑤	⑥	⑦
17	I always feel that having a good relationship with people is more important than my personal success.	①	②	③	④	⑤	⑥	⑦
18	Speaking up in a class (or during a meeting) is not a problem for me.	①	②	③	④	⑤	⑥	⑦
19	I will let a professor / my boss take my seat on public transport.	①	②	③	④	⑤	⑥	⑦
20	I act in the same way no matter who I am with.	①	②	③	④	⑤	⑥	⑦
21	My happiness depends on the happiness of the people what are around me.	①	②	③	④	⑤	⑥	⑦
22	I regard good health as more valuable than anything else.	①	②	③	④	⑤	⑥	⑦
23	Whether or not I am happy with the group, I will stay with them if they need me.	①	②	③	④	⑤	⑥	⑦
24	I try to do what is best for me regardless of what effect this may have on others.	①	②	③	④	⑤	⑥	⑦
25	To take good care of myself is my primary concern.	①	②	③	④	⑤	⑥	⑦
26	I feel that it is very important to respect decisions made by the group.	①	②	③	④	⑤	⑥	⑦
27	My personal identity, irrespective of others, is very important to me.	①	②	③	④	⑤	⑥	⑦
28	It is very important to me to maintain harmony within the group to which I belong.	①	②	③	④	⑤	⑥	⑦
29	I act in the same way in the school or at home.	①	②	③	④	⑤	⑥	⑦
30	Even though sometimes I'd rather be engaged in things that I want to do, I always follow what others want to do.	①	②	③	④	⑤	⑥	⑦

Source: Singelis, T.M., personal communication, March 1, 2005 (in English)

## Appendix J Back-translated Social Desirability Scale

The items below are about one's attitudes and personality traits. Please read each item and indicate whether each description is 'true' (T) or 'false' (F) according to your situation. Please shade in the appropriate answer using pencil.

No.	Statement	(T)	(F)
1	Before voting for someone, I will get to know the facts and the qualifications of the candidates thoroughly.	(T)	(F)
2	I never hesitate to help people who are in trouble by working out all sorts of possibilities	(T)	(F)
3	It's sometimes difficult to continue my work when there is no encouragement.	(T)	(F)
4	I've never been extremely disgusted with anyone.	(T)	(F)
5	Sometimes I have doubts about my ability to succeed.	(T)	(F)
6	Sometimes I get angry when I cannot do what I would like to do.	(T)	(F)
7	I always pay attention to how I dress.	(T)	(F)
8	When eating at home, I am as well mannered as when I am dining in a restaurant.	(T)	(F)
9	If I'm sure that I can sneak into the theatre to see a free film without being caught, I'll do it.	(T)	(F)
10	I have given up doing something on many occasions because I do not have confidence in my ability.	(T)	(F)
11	I sometimes like to talk behind people's backs.	(T)	(F)
12	I feel like being rebellious against authorities occasionally, even though I know they are right.	(T)	(F)
13	I'm always a good listener.	(T)	(F)
14	I remember pretending to be ill in order to get out of something.	(T)	(F)
15	I sometimes use people.	(T)	(F)
16	I'm always willing to admit my mistakes.	(T)	(F)
17	I always attempt to practice what I preach.	(T)	(F)
18	I don't find it difficult to get along with people who talk loudly and impolitely.	(T)	(F)
19	Instead of forgetting others' wrongdoing and will think about how to revenge.	(T)	(F)
20	I don't mind admitting that I don't know something.	(T)	(F)
21	I'm always polite, even to people who are difficult to get along with.	(T)	(F)
22	Sometimes I stick strongly to my own way of doing things.	(T)	(F)
23	I feel like smashing things occasionally.	(T)	(F)
24	I never want other people to suffer for what I've done wrong.	(T)	(F)
25	I always like to reward people for their efforts.	(T)	(F)
26	I do not get upset when people disagree with me.	(T)	(F)
27	I have never been on a long trip without first checking my car.	(T)	(F)
28	Sometimes I'm jealous of other people who are more fortunate.	(T)	(F)
29	I have never scolded anyone impulsively.	(T)	(F)
30	Sometimes I get angry because someone asks me to help.	(T)	(F)
31	I have never felt that I've been punished for no reason.	(T)	(F)
32	Sometimes I think that unfortunate people deserve what they get.	(T)	(F)
33	I have never intentionally said anything to hurt people.	(T)	(F)

Source: Crowne & Marlowe, 1960 (in English)

## Appendix K Back-translated Susceptibility to Embarrassment Scale

This scale aims to understand one's personality trait on the susceptibility to embarrassment. Please read the listed items and indicate the answer most appropriate for you by referring to the followed scales. Please shade in the appropriate answer using pencil.

		①	②	③	④	⑤	⑥	⑦
		①=Not at all like me						⑦=Extremely like me
No.	Statement	See the above scale						
1	I lack self-confidence.	①	②	③	④	⑤	⑥	⑦
2	Unless my outfit and hair are appropriate to the occasion, I feel uncomfortable in public.	①	②	③	④	⑤	⑥	⑦
3	I feel uncomfortable in front of people.	①	②	③	④	⑤	⑥	⑦
4	I don't mind being the centre of attention.	①	②	③	④	⑤	⑥	⑦
5	I may pay too much attention to the impression that I give to others.	①	②	③	④	⑤	⑥	⑦
6	I feel inadequate when I speak to a newly acquainted person.	①	②	③	④	⑤	⑥	⑦
7	I feel stupid in social gatherings.	①	②	③	④	⑤	⑥	⑦
8	I feel uncomfortable if I do not look my best when I leave home.	①	②	③	④	⑤	⑥	⑦
9	I sometimes feel very vulnerable.	①	②	③	④	⑤	⑥	⑦
10	I feel embarrassed when I make a mistake in front of people.	①	②	③	④	⑤	⑥	⑦
11	I am in a fluster when I speak in front of people.	①	②	③	④	⑤	⑥	⑦
12	I always like to express my feelings in public and in front of people.	①	②	③	④	⑤	⑥	⑦
13	I feel uneasy when I am the centre of attention.	①	②	③	④	⑤	⑥	⑦
14	Just thinking about public speaking makes me nervous.	①	②	③	④	⑤	⑥	⑦
15	I am bothered or embarrassed by uncomfortable situations even if they are insignificant.	①	②	③	④	⑤	⑥	⑦
16	I am very afraid of making mistakes in public.	①	②	③	④	⑤	⑥	⑦
17	I don't like looking like a fool in front of people.	①	②	③	④	⑤	⑥	⑦
18	I don't blush easily.	①	②	③	④	⑤	⑥	⑦
19	I often worry that I look stupid.	①	②	③	④	⑤	⑥	⑦
20	I get hurt easily.	①	②	③	④	⑤	⑥	⑦
21	I care about how other people think of me.	①	②	③	④	⑤	⑥	⑦
22	I worry what I say may sound stupid.	①	②	③	④	⑤	⑥	⑦
23	I worry that I'll do something stupid.	①	②	③	④	⑤	⑥	⑦
24	It's very important how people think of me.	①	②	③	④	⑤	⑥	⑦
25	I do not get apprehensive easily.	①	②	③	④	⑤	⑥	⑦

Source: Kelley & Jones, 1997 (in English)

## Appendix L Back-translated Embarrassability Scale

These questions ask about the degree of embarrassment induced by some situations. Embarrassment generally involves feeling self-aware, awkward, uncomfortable or exposed, which may be caused by one's self or by the others. Mild embarrassment is vastly different from strong embarrassment. Mild embarrassment generally involves a weak feeling of self-awareness, awkwardness, uneasiness and uncertainty about what to say or do next. Strong embarrassment can make one extremely uncomfortable, involving blushing, fumbling, severe self-awareness, a strong sensation of awkwardness and uneasiness, a feeling of panic which makes the person unable to react appropriately, and a strong desire to escape the embarrassing situation or the presence of others.

Please read the followed items. Try your best to imagine vividly they are happening to you. If you have encountered these situations, try to recall what you felt at that moment, then select the degree of embarrassment most appropriate to you by referring to the following description on the varying degrees of embarrassment. Please shade in the appropriate answer using pencil.

- ① I would not feel embarrassed at all: not awkward or uncomfortable at all.
- ② I would feel slightly embarrassed.
- ③ I would clearly feel embarrassed: clear self-awareness, awkwardness and discomfort.
- ④ I would feel quite embarrassed.
- ⑤ I would feel strongly embarrassed: strong self-awareness, awkwardness and uncomfortable.

No.	Description	See the above scale				
1	Suppose you have just started to talk in a class.	①	②	③	④	⑤
2	Suppose you dropped a bag of groceries as you fell on an ice patch in public.	①	②	③	④	⑤
3	Suppose you were invited to be a special guest at an evening party. The person sitting next to you was cutting up some meat on the plate and had carelessly dropped the plate of food onto his/ her clothes.	①	②	③	④	⑤
4	Suppose someone had stopped on the street to ask you a question. This person looked drunk and spoke incoherently.	①	②	③	④	⑤
5	Suppose a group of friends were singing "happy birthday" to you.	①	②	③	④	⑤
6	Suppose you were at a very formal social gathering and you had just discovered that you were the only person who had not dressed appropriately.	①	②	③	④	⑤
7	Suppose you were watching an amateur show. One of the performers was trying very hard to be funny but was not able to make anyone in the audience laugh.	①	②	③	④	⑤
8	Suppose you were calling a newly acquainted member of the opposite sex to go out on a date.	①	②	③	④	⑤
9	Suppose you had entered a room which you thought was empty. You started to talk to yourself loudly and suddenly you discovered that someone was in the same room.	①	②	③	④	⑤
10	Suppose you were visiting someone's home. You had gone into the bathroom and you discovered that someone of the opposite sex was using the toilet.	①	②	③	④	⑤
11	Suppose you were watching a show. One of the performers had forgotten his/ her script and could not continue the performance.	①	②	③	④	⑤
12	Suppose your teacher was teaching in the classroom and you could not stop coughing.	①	②	③	④	⑤
13	Suppose a friend of the opposite sex was praising your pleasant character excessively on your first date.	①	②	③	④	⑤
14	Suppose you were in a class and you noticed that your teacher had completely forgotten to zip up his/ her trousers.	①	②	③	④	⑤
15	Suppose you were entering a room which you thought was empty. You turned on the light and were surprised to discover two persons kissing each other.	①	②	③	④	⑤

(to be continued)

16	Suppose you were talking to a stranger who had a stutter because of a speech impediment.	①	②	③	④	⑤
17	Suppose your mother had come to see you and was accompanying you to all the classes.	①	②	③	④	⑤
18	Suppose you were invited to be a special guest at a banquet and you could not eat the main course because you were allergic to the food.	①	②	③	④	⑤
19	Suppose you were in the same elevator (lift) as the professor who had just given you a very low mark.	①	②	③	④	⑤
20	Suppose a man who was wearing ragged clothes had stopped you on the street and would not let you go until you had given some money to him.	①	②	③	④	⑤
21	Suppose you were entering a room full of people you did not know. As you entered, you were introduced to them.	①	②	③	④	⑤
22	Suppose you were boarding a very crowded bus or train and you tripped and fell.	①	②	③	④	⑤
23	Suppose the people who gave you gifts were sitting next to you to watch you while you opened your gifts.	①	②	③	④	⑤
24	Suppose you had asked someone who was using a walking stick whether his disability was due to a skiing accident. He blushed and answered that it was caused by poliomyelitis.	①	②	③	④	⑤
25	Suppose you had forgotten a meeting with your professor until you met him on the following day in the hallway.	①	②	③	④	⑤
26	Suppose you were talking to some students and one of them was blind. A student sitting next to this student inadvertently said someone was as blind as a bat.	①	②	③	④	⑤

Source: Miller, 1996 (in English)

## **Appendix M Instrument for Study 3**

### **Invitation letter**

Dear peer nurses:

First of all, thank you very much for sparing the time to answer this questionnaire.

This survey aims to understand female nurses' responses, e.g. views, thinking, feeling, attitudes, behaviours, to male genitalia related care. Patients are older than 14 years. Please answer each question honestly according to your own situation.

All of your answers will be used only for the purpose of research. None of your personal, specialty wards' and hospital information will be publicized under any condition. No one but the principal investigator\* will be able to access all the information you will provide.

Additionally, you have the right to withdraw from the investigation at any time without incurring any penalty.

Thank you sincerely once again for your participation and contribution.

The Hong Kong Polytechnic University

Shandong University

\* In mainland China, the name of principal investigator does not appear on the letter.

\* In mainland China, the name of principal investigator does not appear on the letter.



## Demography

Please shade in the appropriate answer using pencil.

Age	year(s)			
Marriage	①Single	②Married	③Divorced/separated	④Widowed
Have sexual life	①Yes	②No		
Have sexual partner	①Yes	②No		
With children	①No	②one	③two	④>2
RN	①Yes	②No		
Specialty ward	①Urology	②A&E	③ICU	④Cardiothoracic
	⑤Neurosurgery	⑥Neurology	⑦General Surgery	⑧Orthopaedics
Years of nursing work	year(s)			
Position	①Staff Nurse	②Head Nurse		

## Female nurses' sensitivity to male genitalia related care

Below is a series of statements about one's views, feelings, attitudes and behaviours. Please read each item and rate the extent to which it is appropriate for you by referring to the scale as follows. Please shade in the appropriate answer using pencil.

①Not at all like me, ②A bit like me, ③Moderately like me, ④Very like me, ⑤Extremely like me

No.	Statement	See the above scale
1	I often fear that others notice my weaknesses.	① ② ③ ④ ⑤
2	If others appear embarrassed, I feel embarrassed.	① ② ③ ④ ⑤
3	I think that I can provide education on sexual health quite naturally.	① ② ③ ④ ⑤
4	I fear that others find fault with me.	① ② ③ ④ ⑤
5	I dislike delivering male genitalia related care.	① ② ③ ④ ⑤
6	I think that some sayings/behaviours can make female nurses who are required to delivered male genitalia related care feel very uncomfortable.	① ② ③ ④ ⑤
7	Clearly knowing that others' opinion will not impact me, I often still worry about them.	① ② ③ ④ ⑤
8	I will try to avoid delivering male genitalia related care.	① ② ③ ④ ⑤
9	I am afraid that others will not approve of me.	① ② ③ ④ ⑤
10	Physical contact with men's most private area can make me extremely embarrassed.	① ② ③ ④ ⑤
11	I probably care too much about how to communicate with people when I first meet them.	① ② ③ ④ ⑤
12	I feel uneasy when people pay attention to me.	① ② ③ ④ ⑤
13	I think that physical contact with genitalia can only occur between the spouse/lovers under the condition that no blood links exist.	① ② ③ ④ ⑤
14	I am easily embarrassed.	① ② ③ ④ ⑤

## Frequency of delivering male genitalia related care

How often have you performed male genitalia related care, e.g. urinary catheterization, meatal cleansing, pubic area shaving, for male patients? Please shade in the appropriate answer using pencil.

① Never
② Very seldom
③ Median
④ Often
⑤ Very often

### Self perceived general sensitivity

Do you think that you are a sensitive person? Please rate the degree of your sensitivity using the following scale. Please shade in the appropriate answer using pencil.

- ① 'Extremely insensitive' means that under most conditions, most people perceived something or somebody special, but you did not, so that when others told you about them, you were so surprised.
- ⑤ 'Extremely sensitive' means that under most conditions, most people felt nothing special, but you clearly felt something.

From ① to ⑤ represents ascending sensitivity in sequence.

- |                         |
|-------------------------|
| ① Extremely insensitive |
| ② Slightly sensitive    |
| ③ Moderately sensitive  |
| ④ Very sensitive        |
| ⑤ Extremely sensitive   |

\* General sensitivity item (GS-item)

### Self perceived specific sensitivity to male genitalia related care \*

Do you think that you are sensitive to male genitalia related care delivery? Please rate the degree of your sensitivity using the following scale. Please shade in the appropriate answer using pencil.

- ① 'Extremely insensitive' means that I don't care about such matters.
- ⑤ 'Extremely sensitive' means that such care makes me feel extremely uncomfortable.

From ① to ⑤ represents ascending sensitivity in sequence.

- |                         |
|-------------------------|
| ① Extremely insensitive |
| ② Slightly sensitive    |
| ③ Moderately sensitive  |
| ④ Very sensitive        |
| ⑤ Extremely sensitive   |

\* Specific sensitivity item (SS-item)

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