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Moon Fai Chan

Hong Kong Polytechnic University, Hong Kong SAR, China

Feng-lan Lou

Shandong University, Shandong, China

David Arthur

Aga Khan University, david.arthur@aku.edu

Feng-lin Cao

Shandong University, Shandong, China

Lai Har Wu

Hong Kong Polytechnic University, Hong Kong SAR, China

See next page for additional authors

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Recommended Citation

Chan, M., Lou, F., Arthur, D., Cao, F., Wu, L., Li, P., Rosemeyer, M., Chung, L., Lui, L. (2008). Investigating factors associate to nurses' attitudes towards perinatal bereavement care. *Journal of Clinical Nursing*, 17(4), 509-518.

Available at: https://ecommons.aku.edu/pakistan_fhs_son/221

Authors

Moon Fai Chan, Feng-lan Lou, David Arthur, Feng-lin Cao, Lai Har Wu, Ping Li, Miharu Sagara- Rosemeyer, Loretta Yuet Foon Chung, and Li Lui

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Moon Fai Chan BSc, PhD, CStat

Assistant Professor, School of Nursing, Hong Kong Polytechnic University, Hong Kong SAR, China

Feng-lan Lou BSc, MSc, PhD, RN, MD

Dean and Professor, School of Nursing, Shandong University, Shandong, China

David Gordon Arthur PhD, RN

Head and Professor, Alice Lee Centre for Nursing Studies, National University of Singapore, Singapore

Feng-lin Cao MMed

Associate Professor, School of Nursing, Shandong University, Shandong, China

Lai Har Wu MSc, RN, RM

Lecturer, School of Nursing, Hong Kong Polytechnic University, Hong Kong SAR, China

Ping Li MSc

Associate Professor, School of Nursing, Shandong University, Shandong, China

Miharu Sagara-Rosemeyer PhD, RN, PHN

Assistant Professor, Alice Lee Centre for Nursing Studies, National University of Singapore, Singapore city, Singapore

Loretta Yuet Foon Chung MSc, PhD, RN

Assistant Professor, School of Nursing, Hong Kong Polytechnic University, Hong Kong SAR, China

Li Lui BSc

Master student, School of Nursing, Shandong University, Shandong, China

Submitted for publication: 30 August 2006

Accepted for publication: 12 December 2006

Correspondence:

Dr Moon Fai Chan

School of Nursing

The Hong Kong Polytechnic University

Hong Kong SAR

China

Telephone: (852) 2766 4090

E-mail: hsmfchan@inet.polyu.edu.hk

CHAN MF, LOU F-L, ARTHUR DG, CAO F-L, WULH, LI P, SAGARA-ROSEMEYER M, CHUNG LYF & LUI L (2008) *Journal of Clinical Nursing* 17, 509–518

Investigating factors associate to nurses' attitudes towards perinatal bereavement care

Aim. The purpose of this study was to explore nurses' attitudes towards perinatal bereavement care and to identify factors associate with such attitudes.

Background. Caring for and supporting parents whose infant has died is extremely demanding, difficult and stressful. It is likely that the attitude of nursing staff can influence recovery from a pregnancy loss and nurses with positive attitude to bereavement care can help bereaved parents to cope during their grieving period.

Method. Data were collected through a structured questionnaire; 334 nurses were recruited (63% response rate) from the Obstetrics and Gynaecology unit in five hospitals in Hong Kong during May–August 2006. Outcome measures including attitudes towards perinatal bereavement care, importance on hospital policy and training support for bereavement care.

Results. Majority of nurses in this study held a positive attitude towards bereavement care. Results showed that only 39.3% ($n = 130$) of nurses had bereavement related training. By contrast, about 89.8% of nurses ($n = 300$) showed they need to be equipped with relevant knowledge, skills and understanding in the care and support of bereaved parents and more than 88.0% ($n = 296$) would share experiences with colleagues and seek support when feeling under stress. Regression model showed that age, past experience in handling grieving parents and nurses' perceived attitudes to hospital policy and training provided for bereavement care were factors associated with nurses' attitudes towards perinatal bereavement care.

Conclusions. Hong Kong nurses emphasized their need for increased knowledge and experience, improved communication skills and greater support from team members and the hospital for perinatal bereavement care.

Relevance to clinical practice. These findings may be used for health policy makers and nursing educators to ensure delivery of sensitive bereavement care in perinatal settings and to enhance nursing school curricula respectively.

Key words: bereavement, death, Hong Kong, midwifery, nursing, perinatal care, stillbirth

Introduction

Perinatal loss defies the modern expectation of a healthy outcome for pregnancy and has been demonstrated to be as profound and significant as any other type of bereavement (Gardner 1999, Chambers & Chan 2000). Perinatal loss is frequently dismissed as not being perceived as a true bereavement (Stillbirth and Neonatal Death Society (SANDS) 1991, Chan *et al.* 2004). However, 'losing a newborn is highly stressful ..., especially the mother' (Lundqvist *et al.* 2002) and 'the death of a child is an event of unbearable anguish and sorrow' (SANDS 1991). This type of loss may cause sustained psychological morbidity (Hughes *et al.* 1999, Säflund *et al.* 2004). Feelings of fear, anxiety and helplessness are common and bereaved parents need care and support through sensitive handling and discussion (Hughes *et al.* 1999, Gaze 2000). For many bereaved parents, the care that nursing staff provide may have a crucial effect on their response to such death (Engler & Lasker 2000). However, caring for and supporting parents whose infant has died is extremely demanding, difficult and stressful (Gensch & Midland 2000, Säflund 2004). In some situations the nursing staff may experience a personal failure because 'I feel helplessness because I can really only listen and be there to help ...I cannot lessen this devastating loss' (Robinson *et al.*

1999). Some nurses commented that they needed to distance themselves from the client after the talk because they felt that inadequacy to deal with the immenseness of parental feelings (Paterson & Zderad 1988, Säflund *et al.* 2004). In 2004, a pilot study conducted by the author and his team had reported that Hong Kong nurses emphasized a strong need on perinatal bereavement care knowledge and experience (Chan *et al.* 2004). This study is an extension of this pilot study by recruiting more nursing staff and to exploring factors associated to nurses' attitude to perinatal bereavement care.

Perinatal bereavement care in Chinese culture

In Chinese culture, the principles of Confucianism and Buddhism strongly influence Chinese towards bereavement (Martinson 1998). Integral to the tenets of Confucianism and Buddhism are the notions of dignity and harmony. Death is a taboo subject in Chinese culture (Yam *et al.* 2001, Ping *et al.* 2002) and one should never talk about death in front of a sick person or his/her relative and it could be interpreted as blasphemy (Wu & Tseng 1985). To bereaved couples, this very often means they avoid any discussion of death to protect their relatives such as their parents or siblings (Gao *et al.* 1996). As the family is the centre of Chinese culture, the wish of the bereaved couples

must be respected. As the family interaction pattern is determined by the hierarchical family structure, nurses have to be very prudent in their approach to minimize any extreme of emotion from them and to avoid situations that may imperil the existing couple relationship. As the Chinese often avoid open display of emotions or discussion of their feelings, especially to people outside the family, nurses must be able to pick up the subtle and non-verbal ways of expressing emotion (Yam *et al.* 2001, Ping *et al.* 2002). Studies showed that Chinese people very often present emotional problems as somatic complaints (Wu & Tseng 1985). Due to these Chinese cultural values or traits, Chinese bereaved parents may not easily show their need for help in the bereavement process.

Perinatal bereavement care supports in Hong Kong

In 2003, the perinatal mortality rate was above 3.1 per 1000 total births (Hospital Authority of Hong Kong (HAHK) 2004). Many hospitals in Hong Kong have, therefore, developed perinatal bereavement programmes, which help the staff to inform, counsel and support the bereaved parents. The role of these teams is to offer emotional care to bereaved couples and to facilitate their recovery as they go through the grieving process. However, a current study showed that bereaved families did not have information on local bereavement services (Ping *et al.* 2002). Another local study by Li *et al.* (1998) found that nursing staff who worked in an emergency care unit viewed care of critically ill patients as more important than bereavement care, especially when they were busy and short of staff. The authors suggested that awareness of the potential value of bereavement services needed to be promoted among health professionals. In 2002, the Midwives Council of Hong Kong (MCHK) conducted a postregistration education in midwifery (PEM) lifelong learning exercise for the nurses or midwives in Hong Kong (MCHK 2005). The PEM requirement is expressed in PEM points. Each practising certificate is valid for three years. Every Registered Nurse or midwife must undergo PEM worth a minimum of 45 PEM points in this three-year period before Council's approval can be granted for the renewal of the practicing certificate. In this exercise, a list of PEM activities was developed and midwives can get points if they complete these activities. One of the activities was the 'social sciences related to care enhancement e.g. bereavement, communication, teaching skills'. However, this is only a guideline and as the Council do not provide any courses for them to study locally, they have to look for sources outside Hong Kong (The Midwives Council of Hong Kong (MCHK) 2005).

Nurses' attitudes towards perinatal bereavement care

Caring for and supporting parents whose baby has died is extremely demanding, difficult and stressful. Therefore, nurses involved in the care and support of bereaved parents need to be trained with the relevant knowledge, skills and understanding to acquire sufficient confidence in their ability to provide adequate and appropriate care. It is recommended that basic, postbasic and in-service training be provided for nurses who care for those who have lost a baby. Thus, special skills are needed to help bereaved parents. After appropriate training, it is logical to assume that nurses are better equipped to cope with perinatal bereavement (SANDS 1991). In dealing with bereavement care, the most important attitude is caring. The attitudes of nurses can affect the quality of care provided to patients. Nursing care may not be based on individual patient care, but rather on the attitudes of nurses (Birtwistle *et al.* 2002). When nurses provide bereavement care, negative attitudes may distract from the provision of good care; whilst positive attitudes can help bereaved couples to cope with the grieving process and create memories for the future. In Hong Kong, there is little information available on identifying factors affects nurses' attitudes towards perinatal bereavement care and so we decided to conduct a quantitative study with the aim of helping to fill this gap.

Purpose

The aim of this research was to study nurses' attitudes towards perinatal bereavement care. Two specific research objectives were formulated:

- To examine level of nurses' attitudes towards perinatal bereavement care.
- To determine factors associate with nurses' attitudes towards bereavement care.

Methods

Design and sample

Convenience sampling was chosen for this study and sampling involved selecting nurses working in the Department of Obstetrics and Gynaecology (OAG) in five hospitals in Hong Kong, which included all full time junior (student/enrolled/Registered Nurses) and senior (nursing officers, ward managers and nurse specialists) nursing staff. There are 41 public hospitals provided serve in Hong Kong and 16 hospital had OAG department (HAHK 2004) and in our study, among these five hospitals, some of them are established < 10 years,

so, nurses who worked in these hospitals were new or younger compared with those hospitals while serving >30 years. The power analysis of the study was based on one of the interest, correlation of attitudes on training for bereavement care and attitudes towards perinatal bereavement care. A multiple regression model was used and eight covariates were expected in the model (Chan *et al.* 2004). And with an expected squared multiple correlation of 0.50, a sample size of 340 were required and this setting can achieved 80% power at 5% significant level (nQuery Advisor 2001). A structured self-reported questionnaire was used to collect data in this study. Permission was obtained from both the ethical committee of the University and the Hong Kong Hospital Authority. The questionnaire was distributed to nurses at their workplace through their ward managers from May to August 2006. Instructions were given to the ward manager, is to first deliver the information sheet to all nurses in their ward to explain the aim of the study. Then, a consent form and the questionnaire were sent to each nurse. Two boxes were placed in each unit to collect the consent and questionnaire and they were asked to put it into the boxes separately. Staff ID or name was not required on the returned questionnaire. They were asked to complete and return the consent and questionnaire within two weeks. After two weeks, the research team collected the boxes for data analyses. These procedures minimized the possibility of the ward manager knowing who participated in the study.

Instrument

In 2004, the research team developed a questionnaire to assess the attitudes of nurses towards perinatal bereavement care in Hong Kong (Chan *et al.* 2004). The instrument had three parts. Part one comprised demographic data (i.e. age, education level, recent ranking and religious background), experience aspects (i.e. personal grieving, handling grieving clients and years of work in the OAG unit) and training aspects (i.e. midwifery and bereavement care). This information provides knowledge about participants and is used to determine differences between or within groups related to the data obtained (i.e. attitudes scores). In the original version, part two comprised nine attitude statements formulated to measure nurses' attitudes towards bereavement care but one question 'All those who care for and support the bereaved parents should have access to support for themselves' is removed because of its low factor loading (=0.49) in our pilot study, therefore, a total of eight questions were used in this study. Part three is composed of two sections: the first section comprised four statements to evaluate nurses' attitudes on the

importance of hospital policy on perinatal bereavement but one question 'Nurses should feel assured that they are working within an operational policy which is adequate and appropriate' is removed as well because of its low factor loading (=0.49) in our pilot study, therefore only three questions were used. The second section comprised eight statements to evaluate nurses' attitudes on the importance of formal training to deal with perinatal bereavement care. Respondents were asked to rank each item, in each part, on six-point Likert-type scales: (0) not applicable, (1) Very unimportant or Very disagree, to (5) Very important or Very agree. For all statements in part two, a high score indicates a positive and favourable attitude towards perinatal bereavement support. In part three, a high score indicates attitudes that are highly influenced by policy and a high demand for nurses with perinatal bereavement care training. The validity and reliability were performed in the next section.

Instrument validity and reliability

Confirmatory factor analysis rather than traditional exploratory factor analysis was conducted to establish the construct validity for the instrument. Unlike traditional factor analysis, confirmatory factor analysis enables researchers to construct and statistically test hypotheses about the relationship between observed variables and the constructs they are assumed to measure (Jöreskog & Sörbom 1993). We conducted confirmatory factor analyses using AMOS 4 (Arbuckle 1999). A three factor models corresponding to three attitudes scales was assessed. A covariance matrix was used as the starting point for the estimation process and the maximum-likelihood function was used to estimate the parameters. The assessment of fit of the present study was based on (i) the χ^2 likelihood ratio; (ii) the ratio of the χ^2 to its expected value ($\chi^2/d.f.$), a ratio of two or less being judged as an acceptable fit; (iii) the goodness-of-fit index (GFI); (iv) the adjusted goodness-of-fit index (AGFI); (v) the comparative fit index (CFI), a revised normed fit index corrected for sample-size dependency; and (vi) the root mean square residual (RMR), an index of the average discrepancy between the observed and the hypothesized covariance matrices (Marsh & Hocevar 1985, Bentler 1990). Table 1 presents the GFIs of a three-factors model assessed for the instrument. For the instrument, the χ^2 -value ($p = 0.090$) indicates that there was little variance in the data set unaccounted for by the three-factor model postulated in this instrument. The χ^2 ratio was under the critical value ($0.73 < 2.00$) and the CFI is 0.92, GFI, AGFI and RMR all indicated an acceptable fit to the data. The Cronbach's alpha was used to examine the internal consistency of the three attitudes scales. For the nurses'

Table 1 Goodness-of-fit indices of the 3-factors model and internal consistency (Cronbach's α) of the instrument ($n = 334$)

Factors	Cronbach's α	Model	χ^2	<i>d.f.</i>	<i>p</i> -value	$\chi^2/d.f.$	GFI	AGFI	CFI	RMR
Attitudes of perinatal bereavement care	0.892	3-factor	215.68	294	0.23	0.73	0.92	0.84	0.91	0.05
Attitudes on the importance on hospital policy to bereavement care	0.865									
Attitudes on the training for bereavement care	0.909									

GFI, goodness-of-fit index; AGFI, adjusted goodness-of-fit index; CFI, comparative fit index; RMR, root mean square residual.

attitudes on perinatal bereavement care scales, attitudes on the importance of hospital policy scales and attitudes toward perinatal bereavement care education scales was 0.89, 0.87 and 0.91 respectively. These results demonstrated satisfactory internal reliability based on the typical alpha (>0.85) threshold for a new instrument (Nunnally 1978).

Statistical methods

Descriptive statistical analysis of the quantitative data was conducted using SPSS 12 (SPSS 12 2001). Several statistical techniques were employed for data analysis. Descriptive statistics were used to analyse background variables. In addition, means and standard deviations (SD) for each of the variables were calculated. Cronbach's alpha coefficients were used to examine the internal reliability of each part of the instrument. To examine which variables contribute to the attitudes scores, bivariate analyses including independent *t*-test and analysis of variance were used to examine different and Pearson's correlation coefficients (*r*) was used to quantify the relationship between factors and nurses' attitudes towards bereavement care. Variables with $p < 0.05$ in the bivariate analysis were included in the multiple regression (stepwise) analysis. As there are difference on nurses' demographic factors, so educational level, years of working experiences in OAG, experience of personal grieving and training on bereavement care were used in the regression model as an adjusted factors for the final model. In the final model, all *p*-values <0.05 were taken as statistically significant.

Findings

Sample profile

In this study, 530 questionnaires, in average approximate 100–110 nurses per hospital, were sent out and 334 (63% response rate) were received within two weeks. The personal characteristics of the sample are shown in Table 2. The sample consisted of 334 nurses, who were mainly divided into two categories: 66 senior nurses (19.8%) including

nursing officer, ward manager, APN and nursing specialist and 267 (80.2%) were junior level including student, enrolled and Registered Nurses and one did not fill in her ranking. More than 60% ($n = 190$) were aged 31 or above, 38.1% ($n = 127$) had a religious background and more than 40% ($n = 145$) of them had more than 11 years working experience in the OAG unit. There were 25.6% ($n = 84$) of nurses held a Master degree in nursing, 32.3% ($n = 106$) held a Bachelor degree in nursing and the remainder (42.1%) held a diploma or certificate in nursing. There were 69.9% ($n = 230$) had experience in handling grieving clients, but only 37.5% ($n = 124$) had a personal grieving experience and 39.3% ($n = 130$) had taken a bereavement care course. Significant differences were observed between the nurses among the five hospitals on some demographic variables. These including age ($p < 0.001$), educational level ($p < 0.001$), working experiences in OAG ($p < 0.001$), taken training/courses related to bereavement care ($p < 0.001$) and past experiences in handling grieving clients ($p = 0.025$). This suggested that this group of nurses had heterogeneity group on some demographic factor. Therefore, all these variables were used in the multiple regression analysis to adjust the risk factors in the final regression model.

Nurses' attitudes towards perinatal bereavement care

Table 3 displays the frequencies with which nurses responded to items on nurses' attitude towards bereavement care (statements one to eight). Most nurses ($n = 295$, 88.4%) strongly agreed/agreed that the Grief Counselling Programme and the parent should be supported in making their own decisions about what happens to them. There were 89.5% ($n = 299$) of nurses who strongly agreed/agreed that parents should be given time to grieve and 92.5% ($n = 309$) should be treated with respect and dignity. However, 17.7% ($n = 59$) of nurses were disagree/uncertain that the 'Good-bye Baby' Parent Support Group provides supports to parents with similar and 11.7% ($n = 39$) of nurses who disagree/uncertain that all involved in the care of bereaved parents should be well informed.

Table 2 Demographic data of sample by hospital

Variables	Total <i>n</i> (%)	Hospital (<i>n</i> = 334)					<i>p</i> -value
		A <i>n</i> (%)	B <i>n</i> (%)	C <i>n</i> (%)	D <i>n</i> (%)	E <i>n</i> (%)	
Age (years)*							
20–25	51 (16.3)	25 (30.5)	25 (28.7)	0 (0.0)	0 (0.0)	1 (2.2)	< 0.001
26–30	72 (23.0)	22 (26.8)	29 (33.3)	6 (10.7)	3 (7.1)	12 (26.1)	
31+	190 (60.7)	35 (42.7)	33 (37.9)	50 (89.3)	39 (92.9)	33 (71.7)	
Ranking†							
Junior	267 (80.2)	65 (79.3)	70 (80.5)	49 (76.6)	40 (93.0)	43 (75.4)	0.211
Senior	66 (19.8)	17 (20.7)	17 (19.5)	15 (23.4)	3 (7.0)	14 (24.6)	
Education level‡							
Diploma or below	138 (42.1)	49 (59.8)	55 (63.2)	4 (6.3)	23 (60.6)	5 (8.8)	< 0.001
Bachelor	106 (32.3)	33 (40.2)	32 (36.8)	21 (32.8)	6 (15.8)	14 (24.6)	
Master	84 (25.6)	0 (0.0)	0 (0.0)	39 (60.9)	9 (23.7)	38 (66.7)	
Experience in obstetrics and gynaecology (years)§							
< 5	93 (28.1)	38 (46.3)	37 (42.5)	7 (11.1)	1 (2.4)	10 (17.5)	< 0.001
5–10	93 (28.1)	24 (29.3)	30 (34.5)	17 (27.0)	2 (4.8)	20 (35.1)	
11+	145 (43.8)	20 (24.4)	20 (23.0)	39 (61.9)	39 (92.9)	27 (47.4)	
Religious belief¶							
Yes	127 (38.1)	32 (39.0)	35 (40.2)	26 (40.6)	14 (32.6)	20 (35.1)	0.886
No	206 (61.9)	50 (61.0)	52 (59.8)	38 (59.4)	29 (67.4)	37 (64.9)	
Personal grieving experiences‡							
Yes	124 (37.5)	25 (30.5)	27 (31.0)	28 (44.4)	17 (40.5)	27 (47.4)	0.131
No	207 (62.5)	57 (69.5)	60 (69.0)	35 (55.6)	25 (59.5)	30 (52.6)	
Taken training/courses related to bereavement care§							
Yes	130 (39.3)	24 (29.3)	26 (29.9)	20 (32.3)	15 (34.9)	45 (78.9)	< 0.001
No	201 (60.7)	58 (70.7)	61 (70.1)	42 (67.7)	28 (65.1)	12 (21.1)	
Past experience in handling grieving parents§							
Yes	230 (69.9)	49 (59.8)	57 (65.5)	47 (73.4)	29 (74.4)	48 (84.2)	0.025
No	99 (30.1)	33 (40.2)	30 (34.5)	17 (26.6)	10 (25.6)	9 (15.8)	

Junior including enrolled/Registered Nurse/midwife; Senior including nursing officer/ward manager/advanced practice nurse/nursing specialist. *21 missing data, †one missing data, ‡six missing data, §three missing data, ¶five missing data.

Nurses' attitudes on the importance on hospital policy to bereavement care

Three items (statements 9–11) were related to hospital policy support for bereavement practices (see Table 3). There were 92.5% (*n* = 309) of nurses who claimed that it is very important/important that there should have a clear policy for the management of bereavement care in the obstetric unit. Over 91% of nurses claimed that it was very important/important that the policy should be well informed (*n* = 306) and understood (*n* = 305) by all staff.

Nurses' attitudes on the training and supports for bereavement care

Eight items (statements 12–19) reflected the responses of nurses on the need for formal education and training on grief counselling (see Table 3). In general, most of the respondents perceived training to be very important/important. About 89.8% of nurses (*n* = 300) revealed that they need to be

equipped with relevant knowledge, skills and understanding in the care and support of bereaved parents. There were 87.1% (*n* = 291) of respondents who replied that it was very important/important to have opportunities to express their own feelings and needs and more than 88.0% (*n* = 296) said that they would share experiences with colleagues and seek support when feeling 'burnout' (*n* = 297). The results, in general, showed that nurses feel that formal education and training on bereavement care are very important/important in supporting this kind of services.

Factors associate with nurses' attitudes towards perinatal bereavement care

To determine which variables might associate with nurses' attitudes towards bereavement care, a multivariate analysis was performed. Firstly, a bivariate analysis used (see Table 4). Significant differences were found in the factors of age ($p < 0.001$), ranking ($p < 0.001$), educational level

Table 3 Responses of nurses ($n = 334$) on each item

Item	Response ($n = 334$)					
	(0) n (%)	(1) n (%)	(2) n (%)	(3) n (%)	(4) n (%)	(5) n (%)
Attitudes of perinatal bereavement care*						
1 I believe that the Grief Caring Programme can provide psychological support to the bereaved couple.	0 (0.0)	0 (0.0)	2 (0.6)	37 (11.1)	216 (64.7)	79 (23.7)
2 I agree that the 'Good-bye Baby' Parent Support Group provides support to parents with similar experience.	0 (0.0)	0 (0.0)	5 (1.5)	54 (16.2)	219 (65.6)	56 (16.8)
3 I agree that parents should be supported in making their own decisions about what happens to them.	0 (0.0)	0 (0.0)	3 (0.9)	36 (10.8)	208 (62.3)	87 (26.0)
4 I respect the bereaved parent's feelings and needs.	0 (0.0)	0 (0.0)	3 (0.9)	35 (10.5)	186 (55.7)	110 (32.9)
5 I will communicate with parents in a clear, sensitive and honest manner.	0 (0.0)	0 (0.0)	3 (0.9)	31 (9.3)	177 (53.0)	123 (36.8)
6 I agree that parents should be given time to grieve.	0 (0.0)	0 (0.0)	3 (0.9)	32 (9.6)	166 (49.7)	133 (39.8)
7 I agree that parents should be treated with respect and dignity.	0 (0.0)	0 (0.0)	3 (0.9)	22 (6.6)	184 (55.1)	125 (37.4)
8 All those involved in the care of bereaved parents should be well informed.	0 (0.0)	0 (0.0)	2 (0.6)	37 (11.1)	205 (61.4)	90 (26.9)
Attitudes on the importance on hospital policy to bereavement care†						
9 The unit should have a clear policy for the management of bereavement.	0 (0.0)	0 (0.0)	2 (0.6)	23 (6.9)	178 (53.3)	131 (39.2)
10 All staff involved should be well informed about the policy.	1 (0.3)	0 (0.0)	2 (0.6)	25 (7.5)	198 (59.3)	108 (32.3)
11 All staff involved should understand the policy.	1 (0.3)	0 (0.0)	6 (1.8)	22 (6.6)	191 (57.2)	114 (34.1)
Attitudes on the training for bereavement care‡						
12 Nurses involved in the care and support of bereaved parents need to be equipped with relevant knowledge, skills and understanding.	0 (0.0)	0 (0.0)	1 (0.3)	33 (9.9)	145 (43.4)	155 (46.4)
13 Nurses need to feel confident that they are providing adequate and appropriate care.	0 (0.0)	0 (0.0)	3 (0.9)	21 (6.3)	180 (53.9)	130 (38.9)
14 Nurses need to know that they have limitation when provide perinatal bereavement care.	0 (0.0)	0 (0.0)	2 (0.6)	42 (12.6)	180 (53.9)	110 (32.9)
15 Nurses need opportunities to express their own feelings and needs.	0 (0.0)	0 (0.0)	0 (0.0)	43 (12.9)	167 (50.0)	124 (37.1)
16 Joining training programme on bereavement care.	0 (0.0)	0 (0.0)	1 (0.3)	28 (8.4)	176 (52.7)	129 (38.6)
17 Participating in bereavement care.	0 (0.0)	0 (0.0)	0 (0.0)	39 (11.7)	191 (57.2)	104 (31.1)
18 Sharing experience with colleagues and working as a team.	0 (0.0)	0 (0.0)	2 (0.6)	36 (10.8)	179 (53.6)	117 (35.0)
19 Seeking support when feeling 'burnout'.	0 (0.0)	0 (0.0)	1 (0.3)	36 (10.8)	165 (49.4)	132 (39.5)

* (5) strongly agree, (4) agree, (3) uncertain, (2) disagree, (1) strongly disagree, (0) not applicable; † (5) very important, (4) important, (3) uncertain, (2) unimportant, (1) very unimportant, (0) not applicable.

($p = 0.009$), experiences in OAG ($p < 0.001$), status on person grieving experiences ($p = 0.02$), taking bereavement care training/courses ($p = 0.001$) and past experiences in handling grieving clients ($p < 0.001$) and attitudes on importance of hospital policy ($p < 0.001$) and training for bereavement care ($p < 0.001$). Secondly, a multiple regression (stepwise) analysis was used to identify a model to predict attitudes scores (see Table 5). The results showed that age (Beta = 0.87, $p = 0.001$), experience in handling grieving clients (Beta = 1.04, $p = 0.013$), nurses' attitudes towards

importance of hospital policy (Beta = 0.42, $p = 0.003$) and training for bereavement care (Beta = 0.36, $p < 0.001$) were significant risk factors for nurses' attitudes towards bereavement care. Finally, this model was adjusted by educational level, years of working experience in OAG, experiences of personal grieving and status of training on bereavement care because these variables had showed differences among hospitals. The final results did not show too much change with the unadjusted model on all risk factors with an adjusted R^2 to 0.39.

Table 4 Univariate comparison on attitudes towards bereavement care scores by sample's demographic data

Variables	Attitudes (<i>n</i> = 334) Bereavement care	
	Mean ± SD	<i>p</i> -value
Age (years)*		
20–25	31.3 ± 2.3	< 0.001 ⁺
26–30	32.5 ± 4.5	
31+	34.3 ± 3.6	
Ranking [†]		
Junior	33.0 ± 3.9	< 0.001 ⁺⁺
Senior	35.2 ± 2.8	
Hospital		
A	33.1 ± 3.6	0.219 ⁺
B	33.2 ± 3.6	
C	34.2 ± 3.5	
D	34.1 ± 4.7	
E	32.9 ± 4.1	
Education level [‡]		
Diploma or below	32.8 ± 3.8	0.009 ⁺
Bachelor	34.3 ± 3.3	
Master	33.5 ± 4.1	
Experience in obstetrics and gynaecology (years) [§]		
< 5	31.8 ± 3.8	< 0.001 ⁺
5–10	33.6 ± 3.6	
11+	34.3 ± 3.7	
Religious belief [¶]		
Yes	33.7 ± 3.4	0.268 ⁺⁺
No	33.2 ± 4.1	
Personal grieving experiences [¶]		
Yes	34.0 ± 3.6	0.020 ⁺⁺
No	33.0 ± 3.9	
Taken training/courses related to bereavement care [§]		
Yes	34.3 ± 3.6	0.001 ⁺⁺
No	32.9 ± 3.9	
Past experience in handling grieving parents [§]		
Yes	34.1 ± 3.6	< 0.001 ⁺⁺
No	31.9 ± 3.7	
Attitudes on importance of hospital policy to bereavement care, <i>r_s</i>	0.48	< 0.001 ⁺⁺⁺
Attitudes on training for bereavement care, <i>r_s</i>	0.56	< 0.001 ⁺⁺⁺

Junior including enrolled/Registered Nurse/midwife; Senior including nursing officer/ward manager/advanced practice nurse/nursing specialist.

*21 missing data; [†]one missing data; [‡]six missing data; [§]three missing data; [¶]five missing data; +, ANOVA; ++, *t*-test; +++, spearman coefficient.

Discussion

Responses to the survey indicated that perinatal bereavement and caring for bereaved parents have a tremendous

impact on nurses in Hong Kong. In this study, our findings confirm the findings of our pilot study that nurses' attitudes in Hong Kong towards perinatal bereavement care emphasized their need for increased knowledge and experience, improved communication skills and greater support from team members. Psychological and emotional support to nurses is needed for them to be able to support bereaved parents (Gardner 1999). Willing colleagues with whom to express feelings, to discuss dilemmas and to debrief after ministering to the bereaved is essential to them (Birtwistle *et al.* 2002). Supportive care practices for nurses should be established, understood and practiced by all members of the perinatal care team (Beem *et al.* 1998). In the OAG unit, novice nurses need the guidance of more experienced colleagues when giving bereavement care. A mentoring approach would provide a more informative and less stressful experience, increase the confidence and expertise of novices in a more timely manner and lead to increase quality of care for the bereaved.

The attitude scores showed that there are no statistically significant differences with most of the factors except age, past experience in handling grieving parents and nurses' perceived attitudes on hospital policy and training provided for bereavement care. The findings suggested that these factors are affecting nurses' attitudes towards bereavement care. In general, most of the nurses had a positive attitude towards respecting bereaved parents' feelings and needs (88.6%, *n* = 296). More than 89% (*n* = 299) of the nurses agreed that parents should be given time to grieve and agreed that the Grief Counselling Programme and the 'Good-bye Baby' Parent Support Group provided psychological and emotional support to bereaved clients. They also believed that nurses working in the unit should be well informed with clear policy for management of bereavement and provide information that would help bereaved parents make acceptable plans and decisions for themselves.

Paterson and Zderad (1988) found that some bereaved parents had experienced that the care provided by nursing staff could also make them powerless. They suggested that this phenomenon may occur when the healthcare professionals do not focus on the whole person but only on some limited aspect, such as being treated as an object made the parents keep their thoughts to themselves or they felt that the nursing staff neglecting their thoughts and all these aspects will lead to insecurity and discouragement (Lundqvist *et al.* 2002). In this study, nurses have a very positive attitude towards grief counselling programmes suggested that they will try to minimize these aspects in the clinical setting. However, almost all of them viewed their relevant level of knowledge and understanding on grief counselling as

Table 5 Adjusted and unadjusted multiple regression on nurses' attitudes towards bereavement care by factors ($n = 303$)

Variables	Unadjusted model			Adjusted model		
	Beta	t -statistics	p-value	Beta	t -statistics	p-value
Intercept	14.92	8.41	< 0.001	13.43	6.18	< 0.001
Demographic						
Age (1 = 20–25 years, 2 = 26–30 years, 3 = 30+ years)	0.87	3.44	0.001 ⁺⁺	1.09	2.83	0.005 ⁺⁺
Educational level (1 = Diploma or below, 2 = Bachelor, 3 = MSc)				0.35	1.38	0.168
Practical experience						
Years of working experience in OAG (1 = < 5, 2 = 5 to 10, 3 = more than 10)				0.001	0.003	0.998
Experience of personal grieving (1 = no, 2 = yes)				0.13	0.335	0.738
Past experience in handling grieving parents (1 = no, 2 = yes)	1.04	2.51	0.013 ⁺	1.20	3.02	0.003 ⁺⁺
Training						
Training on bereavement care (1 = no, 2 = yes)				0.54	1.35	0.177
Attitudes scores (co-variances)						
Importance on hospital policy to bereavement care	0.42	3.01	0.003 ⁺⁺	0.42	3.02	0.003 ⁺⁺
Training for bereavement care	0.36	6.48	< 0.001 ⁺⁺	0.38	6.69	< 0.001 ⁺⁺

Unadjusted model: adjusted $R^2 = 0.39$; +, significant at $p < 0.05$; ++, significant at $p < 0.01$; adjusted model: adjusted $R^2 = 0.39$

insufficient. Only 39.3% ($n = 130$) had taken courses related to bereavement care. The nurses showed a strong positive response to grief training, such as, joining a training programme (91.3%, $n = 305$), participating in bereavement care (87.3%, $n = 96$), sharing experiences with colleagues (88.3%, $n = 295$) and seeking support when feeling 'burn-out' (88.9%, $n = 297$). This finding is supported by studies that have found that support and education were necessary to help nurses in their work with the bereaved (Yam *et al.* 2001). This implied that the goal of quality bereavement care can only be achieved when nurses' education and training needs are addressed. Otherwise, caring for bereaved family creates a crisis situation for nurses.

Limitation and further studies

This study had a few limitations affecting the outcome. Firstly, the potential limitation is that data for this study used a self-report questionnaire, which may cause possible response bias from each responder (Polit & Hungler 1995). Secondly, the current study focused on quantitative data, qualitative study to explore common feelings via focus group interview to collect their feelings towards such care is recommended.

Acknowledgements

This work was supported in part by a grant from the Hong Kong Polytechnic University, A-PH28. The author especially thanks the study hospitals (ob-gyn unit in Tuen Mun Hospital, Hong Kong Baptist Hospital, and Kwong Wah Hospital) having allowed us to conduct the study.

Contributions

Study design: MFC, FLL, DGA, LHW, FLC, LYFC, PL & MSR; data collection and analysis: MFC and manuscript preparation: MFC.

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