




# Professional quality of life of Japanese nurses/midwives providing abortion/childbirth care

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## Abstract

This study explored the relationship between professional quality of life and emotion work and the major stress factors related to abortion care in Japanese obstetric and gynecological nurses and midwives. Between October 2011 and January 2012, questionnaires that included questions concerning eight stress factors, the Professional Quality of Life Scale, and the Japanese version of the Frankfurt Emotional Work Scale, were answered by 255 nurses and midwives working in abortion and childbirth services. Professional Quality of Life scores (compassion fatigue, compassion satisfaction, burnout) were significantly associated with stress factors and emotion work. Multiple regression analysis revealed that of all the evaluated variables, the Japanese version of the Frankfurt Emotional Work Scale score for negative emotions display was the most significant positive predictor of compassion fatigue and burnout. The stress factors “thinking that the aborted fetus deserved to live” and “difficulty in controlling emotions during abortion care” were associated with compassion fatigue. These findings indicate that providing abortion services is a highly distressing experience for nurses and midwives.

## Keywords

Abortion, burnout, emotion work, midwives, nurse, Professional Quality of Life scale

## Introduction

In Japan, hospital-based midwives (MWs) provide childbirth as well as abortion services. Therefore, they manage reproductive health in its broadest sense. Abortion is a complex issue, and controversies regarding abortion exist not only in the general public arena but also within the midwifery and nursing professions. Abortion care involves extreme conflict between personal convictions and professional duty among many nurses and MWs. The Japanese law<sup>1</sup> allows women to request termination of pregnancy or abortion up to 21 weeks of gestation for reasons that are considered justifiable, such as rape, physical health, or

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socioeconomic hardship. The departments of obstetrics and gynecology (maternity units) in the general hospitals of Japan are usually designed to function as outpatient clinics and inpatient units. Therefore, women seeking prenatal care as well as those seeking abortion services are cared for within the same unit. As a result, MWs working in the maternity units of general hospitals assist in childbirth as well as abortion. The effects of this juxtaposition of care for these diametrically opposed situations on nurses and MWs require further investigation. According to a previous qualitative study,<sup>2</sup> many nurses and MWs struggle with the conflict between their personal convictions and emotions and their professional duty when it comes to abortion care.

Compassion fatigue and burnout is an important issue for health care and social workers, and the relationships between different aspects of job satisfaction, compassion fatigue and risk of burnout have been explored.<sup>3,4</sup> Burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that occurs with people-oriented and social work.<sup>5</sup> It is associated with difficulties and feelings of hopelessness while dealing with work or doing a job effectively. These negative feelings usually have a gradual onset. Emotion work and burnout have often been studied in care-giving professionals, such as clinicians, psychologists, social workers, and nurses.<sup>6,7</sup> Indeed, several studies<sup>8,9</sup> have directly measured the emotional aspects of job demands when dealing with emotion work or burnout. However, no studies have investigated the relationship between Professional Quality of Life (ProQOL), that is, compassion fatigue, compassion satisfaction and burnout, and emotion work and stress factors among nursing and health-care professionals, particularly those working in Japanese obstetric and gynecological departments.

## Background

The phenomenon of compassion fatigue was first identified by Joinson<sup>10</sup> in a study of burnout in nurses who worked in an emergency department. This research identified behaviors that were characteristic of compassion fatigue, including chronic fatigue, irritability, dread of going to work, aggravation of physical ailments, and a lack of joy in life. Figley<sup>11</sup> also suggested that compassion fatigue is a state of tension and preoccupation caused by individual or cumulative traumas of clients. On the other hand, burnout is cumulative stress caused by the demands of daily life. It is a state of physical, emotional, and mental exhaustion and is caused by a depletion of the ability to cope with one's environment, particularly work environment.<sup>5</sup> Burnout results from prolonged high levels of stress at work, and if not addressed, it leads to resignation of health-care providers from work.<sup>12</sup> Figley<sup>11</sup> regarded compassion fatigue as a form of burnout. The concepts of compassion fatigue and burnout are closely related and sometimes ambiguously defined. In a study conducted by Leiter et al.,<sup>13</sup> an inverse correlation was found between burnout in nurses and patient evaluations of the quality of care. Their study revealed that nurses felt exhausted or frequently expressed a desire to quit if their patients were less satisfied with the care provided to them. Recently, burnout has been conceptualized as a psychological syndrome that occurs in response to chronic on-the-job interpersonal stressors.<sup>14</sup> According to Zapf et al.,<sup>15</sup> burnout renders individuals incapable of adequately managing their emotions while interacting with clients. A relationship between burnout and emotion work was recently reported in a health-care setting.<sup>6</sup> Health-care professionals, especially nurses, are at a high risk of burnout because their job requires a high level of emotion work.<sup>16</sup>

Research from the perspective of abortion care is limited, but it has been found that nurses support legislation on abortion and believe that women should make their own decisions regarding abortion.<sup>17</sup> However, when actual abortion care was involved, nurses experienced more of a conflict. Other researchers<sup>18,19</sup> documented that MWs and nurses, in general, were more restrictive in their views about abortion, and they faced serious conflicts in terms of their professional identity when it came to providing abortion care. Few nurses agree to care for women undergoing abortion for gender selection, selective reduction, or personal reasons.<sup>20</sup> In other studies<sup>21,22</sup> that focused on MWs and nurses, researchers found that few nurses felt

inadequate when they encountered women seeking abortion. A previous qualitative study<sup>2</sup> that focused on the experiences of women assisting in abortion care and childbirth showed that Japanese MWs had to face this social/moral issue and the accompanying professional confusion alone. Suppressing their feelings remained the usual way of dealing with the disparity between the two roles they fulfilled.

Several studies have examined the psychological impact of abortion care; however, few studies in Japan have investigated the relationship between ProQOL (compassion fatigue, compassion satisfaction and burn-out) and emotion work and stress factors related to abortion care in nursing and health-care professionals, especially those working in obstetric and gynecological departments.

## **Aim**

This study aimed to explore the relationship between ProQOL and emotion work and stress factors related to abortion care in Japanese obstetric and gynecological nurses and MWs. Although cultural contexts and specific care practices among nurses and MWs exhibit international variation, understanding their impact on nursing and midwifery staff in Japan may help in understanding factors associated with abortion better. A deeper insight into this subject will allow service providers to institute processes, maximize staff well-being, and improve the quality of patient care. This study was initiated as a result of service managers realizing the lack of adequate information on abortion care providers and the need for a greater professional understanding while dealing with patients.

## **Methods**

### *Design*

The study was a cross-sectional survey involving registered nurses (RNs), licensed practice nurses (LPNs), and MWs from 341 Japanese hospitals of similar size and geographical location.

### *Sample*

The research protocol and participant selection processes were initially proposed to 1015 hospitals (obstetrics and gynecology) selected using the Japanese Welfare and Service Network System. Of these, 341 hospitals (33.6%) agreed to participate in this study. Only those nurses and MWs who worked in the maternity units of these hospitals and dealt with childbirth as well as abortion care were included. A suitable sample of nurses and MWs was thus recruited.

### *Data collection*

Between October 2011 and January 2012, we sent self-reported questionnaires and written explanations of this study to the managers of the hospitals that had agreed to participate. These self-reported questionnaires were distributed to nursing and midwifery staff members recruited by the hospital managers. Completed questionnaires were sent directly by nurses and MWs to the researchers by mail.

### *Instruments*

The questionnaire contained questions concerning demographic data (age, number of years as a health-care provider, number of years of experience in obstetrics and gynecology, number of children, religion, and the number of childbirth and abortion cases handled in the previous year), the ProQOL scale, the Frankfurt Emotional Work Scale (FEWS), and eight possible stress factors experienced while working in abortion

care. The stress factors were drawn from several published surveys on experiences of nurses while providing abortion care.<sup>2,21,22</sup> Each stress factor was scored relative to how often participants had experienced the factor: 1 (never), 2 (rarely), 3 (sometimes), 4 (often), and 5 (always).

**ProQOL scale.** The ProQOL scale<sup>23</sup> was developed as part of the Compassion Fatigue Test.<sup>11</sup> The ProQOL scale includes three subscales that measure compassion satisfaction, burnout, and compassion fatigue. These subscales comprise a total of 30 items that are scored on a 5-point Likert scale from 1 (never) to 5 (very often). The scores range from 0 to 50 for each subscale. Because several items require reverse coding in this scale, high scores for all items under each respective subscale indicate high compassion satisfaction, high burnout, or high compassion fatigue. The Japanese version of the ProQOL scale<sup>24</sup> was used in this study. This version is similar to the English version in terms of the item subscales and scoring method.

With regard to internal consistency of the ProQOL scale, Cronbach's alpha was 0.90 for the compassion satisfaction subscale, 0.73 for the burnout subscale, and 0.81 for the compassion fatigue subscales.

**FEWS.** The concept of emotional labor was introduced by Hochschild.<sup>25</sup> The concept of emotion work refers to the quality of interaction between employees and clients. The employees are expected to not only work on tasks but also put in mental and physical effort. Controlling their emotions is also considered a part of their job. Emotion work has the following characteristics:<sup>25,26</sup> (a) it involves face-to-face or voice-to-voice interactions with clients; (b) emotions are displayed to influence other people's emotions, attitudes, and behaviors; and (c) the display of emotions has to follow certain rules.

The original FEWS, developed in Germany by Zapf,<sup>27</sup> included 61 self-reported items that measured the frequency of expression of organizationally desired emotions. Responses to the items are provided using a 5-point Likert-type scale ranging from 1 (very rarely or never) to 5 (very often).

FEWS differentiates five factors of emotional labor, that is, the requirement of displaying positive emotions, the requirement of displaying negative emotions, the necessity for displaying sensitivity to the needs of the client (sensitivity requirements), the ability of an employee to decide when to engage in an interaction with a client and when that interaction will end (interaction control), and emotional dissonance.

During validation of the Japanese version of FEWS (FEWS-J) in a sample of 231 human service professionals (nurses and care-givers), the factor structure was modified because of difficulties with scales addressing negative emotions and interaction control. The items of these two scales were merged into one component, which was subsequently named "negative emotion display." The reliability indicators of these modified factors were higher than those of the original German factors, indicating the validity of this approach.<sup>28</sup> Thus, the FEWS-J comprises 21 items under three subscales (six items under negative emotions display, six under positive emotions display, five under emotional dissonance, and four under sensitivity requirements). It includes a 5-point response scale ranging from 1 to 5 for all items. With regard to internal consistency of the FEWS-J scale, Cronbach's alpha was 0.91 for the negative emotions display subscale, 0.77 for the positive emotions display subscale, 0.70 for the emotional dissonance subscale, and 0.72 for the sensitivity requirements subscale.

### **Ethical considerations**

This study was approved by the Ethics Committee of Kanazawa University. The main ethical considerations were participants' right to self-determination, anonymity, and confidentiality. All participants were informed that their participation was voluntary and they were free to withdraw from the study at any point without justification or consequences. The data were collected without individual identifiers. Returned questionnaires were stored in a locked cabinet.

## Data analysis

Analyses were conducted using JMP version 9.0 for Windows (JMP, Cary, NC, USA). Prior to analysis, the data were examined for outliers and missing responses. Descriptive statistics were derived and expressed as means and standard deviations (SDs). Correlations and reliability tests were conducted. Comparisons between qualifications were achieved by applying a one-way analysis of variance test in combination with the Tukey–Kramer method. Spearman’s rank correlation coefficient was used to estimate the size and direction of bivariate statistical associations between outcome variables, that is, ProQOL scores for compassion satisfaction, compassion fatigue and burnout, and stress factors and FEWS-J items, that is, emotion work. Linear multiple regression analysis with forward selection of predictors was used to identify the factors that had the strongest controlled association with the ProQOL scores, that is, the outcome variables. Eligible predictors in the forward selection process included background variables (age, religion, parity, education, qualification, working experience, and number of childbirth and abortion care cases handled in the previous year). These items were selected as independent variables on the basis of confirmed correlations from all survey items. Stepwise hierarchical regression analysis was then applied to determine the significant predictors (independent variables: stress factors, FEWS-J scores, and demographic data) of ProQOL (dependent variable). Values of  $P < 0.05$  were considered statistically significant.

## Results

### *Characteristics of the sample*

Of the 439 participants, 262 respondents agreed to participate (59.7%), of whom 7 later refused to complete the questionnaires. The data were eventually available for 255 participants.

Table 1 shows the demographic and professional characteristics of the study participants. The majority of respondents were RNs or LPNs ( $n = 169$ ; 66.3%), while 33.7% were MWs ( $n = 86$ ). All participants were females aged 21–70 years (mean = 42.9 years; SD = 10.1). Approximately 70% of the participants specified no religion. The participants had worked in abortion services for 1–40 years (mean = 13.8 years; SD = 9.2). They had been involved 1–350 (mean = 72.1; SD = 93.9) times in childbirth care, 1–80 times (mean = 24.8; SD = 27.3) in first-trimester abortion care, and 0–12 times (mean = 3.0; SD = 5.3) in second-trimester abortion care during the previous year. All participants had participated in both childbirth and first- or second-trimester abortion care. MWs had been involved with the highest number of childbirths in the previous year, whereas LPNs had been involved with the highest number of abortion care cases in the previous year.

### *Relationship between the ProQOL scores and the FEWS-J scores and stress factors*

Table 2 shows the ProQOL and FEWS-J scale scores and the additional stress factors for the MWs, RNs, and LPNs. The MWs exhibited significantly higher positive emotions display and emotional dissonance compared with the nurses. However, no significant differences were found in the ProQOL scale score between the MWs, RNs, and LPNs. On the other hand, MWs did report higher scores for positive emotion and emotion dissonance compared with RNs and LPNs. The nurses and MWs reported that the most stressful aspects of working in abortion care were linked to the aborted fetus. The stress factor “inability to accept abortion care as a job” was highly rated by the participants. The mean (SD) ProQOL scale scores for the three ProQOL subscales were as follows: compassion satisfaction = 33.5 (SD = 6.8); burnout = 26.9 (SD = 5.2), and compassion fatigue = 21.3 (SD = 5.5). On the basis of the screening results reported by Stamm,<sup>29</sup> scores  $\geq 42$  for compassion fatigue and burnout defined high-risk cases. High compassion satisfaction was also defined by a score of  $\geq 42$ . Therefore, there were no high-risk cases of compassion

**Table 1.** Demographic characteristics and professional characteristics of the sample ( $N = 255$ ).

	Total ( $N = 255$ )	MWs ( $n = 86$ )	RNs ( $n = 73$ )	LPNs ( $n = 96$ )	$P$ -value	
Age, mean (SD)	42.9 (10.1)	43.3 (10.3)	39.4 (7.8)	45.4 (10.7)	$P = 0.007$	RN < MW, LPN
Parity $n$ (%)						
No children	59 (23.3)	27 (31.4)	17 (23.3)	15 (15.6)	$P = 0.17$	
1–2 children	139 (54.9)	42 (48.8)	42 (57.5)	58 (60.4)		
3–4 children	55 (21.7)	17 (19.8)	14 (19.2)	23 (24.0)		
Religion $n$ (%)						
No religion	187 (73.9)	64 (74.4)	56 (77.8)	65 (67.7)	$P = 0.54$	
Buddhism	62 (24.5)	21 (24.1)	15 (20.8)	26 (28.3)		
Christian	4 (1.6)	2 (2.3)	1 (1.4)	1 (1.1)		
Work experience in health care (years)						
Mean (SD)	17.9 (9.6)	18.6 (9.6)	14.0 (6.8)	20.6 (10.6)	$P < 0.001$	RN < MW < LPN
Median (range)	17 (1–52)	20 (3–42)	14 (1–30)	20 (1–52)		
Work experience in abortion care (years)						
Mean (SD)	13.8 (9.2)	17.1 (9.3)	8.4 (6.2)	15.3 (9.6)	$P < 0.001$	RN < LPN < MW
Median (range)	12 (1–40)	18 (2–40)	7 (1–30)	15 (1–40)		
Number of times childbirth care was performed in previous year						
Mean (SD)	72.1 (93.9)	85.9 (105.5)	58.8 (13.5)	68.8 (71.0)	$P = 0.003$	RN < LPN < MW
Median (range)	50 (1–350)	60 (5–350)	30 (1–100)	50 (1–300)		
Number of times first-trimester abortion care was performed in previous year						
Mean (SD)	24.8 (27.3)	15.8 (20.5)	27.6 (29.6)	32.3 (29.7)	$P < 0.001$	MW < RN < LPN
Median (range)	15 (1–80)	10 (1–50)	20 (2–78)	30 (1–80)		
Number of times second-trimester abortion care was performed in previous year						
Mean (SD)	3.0 (5.3)	3.3 (6.2)	2.0 (2.9)	3.8 (5.6)	$P = 0.03$	RN < MW, LPN
Median (range)	2 (0–12)	2 (1–5)	1 (0–12)	2 (1–10)		

MW: midwives; RN: registered nurses; LPN: licensed practice nurses.

fatigue and burnout in this study. Qualifications, age, religion, work experience, and the number of second-trimester abortion cases handled in the previous year had no statistically significant correlations with the ProQOL and FEWS-J scores.

Table 3 shows the relationship between the ProQOL scores for compassion satisfaction, compassion fatigue and burnout and the stress factors and FEWS-J scores. Statistically significant relationships were found between ProQOL scores for compassion fatigue and all stress factors and FEWS-J scores. The FEWS-J scores for negative emotions, emotional dissonance, and sensitivity requirements and the stress factors “difficulty in controlling emotions during abortion care,” “thinking that the aborted fetus deserved to live,” and “difficulty in supporting patient behavior while providing abortion care” had a significantly positive relationship with the ProQOL scores for compassion fatigue. The ProQOL score for compassion satisfaction had a significant relationship with the FEWS-J score for positive emotions display, whereas no correlations were found between the ProQOL score for compassion satisfaction and any of the stress factors.

To determine the strongest predictors of ProQOL, multiple regression analyses were performed with forward stepwise inclusion of independent variables. The following significant ( $P < 0.05$ ) bivariate associations were observed: the number of first-trimester abortion cases handled in the previous year was positively correlated with burnout ( $F = 3.12$ ;  $P = 0.046$ ) and negatively correlated with compassion satisfaction ( $F = 4.55$ ;  $P = 0.034$ ), the number of childbirth cases handled in the previous year was positively correlated with compassion satisfaction ( $F = 3.34$ ;  $P = 0.041$ ), and parity was negatively correlated with compassion fatigue ( $F = 8.23$ ;  $P = 0.005$ ).

**Table 2.** Score of ProQOL and FEWS-J and stress factors in the groups of MW, RN, and LPN ( $n = 255$ ).

Variables	Total Mean (SD)	MWs Mean (SD)	RNs Mean (SD)	LPNs Mean (SD)	P-value
<b>ProQOL</b>					
Satisfaction	33.6 (6.8)	34.6 (6.4)	33.3 (6.9)	32.7 (7.0)	$P = 0.15$
Fatigue	21.3 (5.5)	22.1 (5.2)	20.4 (5.5)	21.1 (5.8)	$P = 0.86$
Burnout	26.9 (5.3)	27.0 (4.9)	26.6 (4.9)	26.9 (5.9)	$P = 0.11$
<b>FEWS</b>					
Negative emotions	11.4 (2.9)	11.6 (3.1)	11.2 (2.7)	11.3 (2.9)	$P = 0.67$
Positive emotions	20.7 (5.0)	21.9 (4.8)	19.9 (4.8)	20.1 (5.2)	$P = 0.02$ ; RN, LPN < MW
Emotional dissonance	14.8 (4.1)	15.4 (3.9)	14.3 (4.0)	14.6 (4.3)	$P = 0.04$ ; RN, LPN < MW
Sensitivity requirements	12.1 (3.2)	12.8 (2.9)	11.7 (3.3)	11.8 (3.4)	$P = 0.20$
<b>Stress factors</b>					
Thinking that the aborted fetus deserved to live	3.2 (1.2)	3.3 (1.2)	3.2 (1.1)	3.1 (1.2)	
Touching the aborted fetus for the purpose of measurement	3.4 (1.3)	3.3 (1.3)	3.6 (1.2)	3.2 (1.3)	
Providing abortion care despite disagreeing with the reason for abortion	2.9 (1.1)	3.1 (1.1)	2.9 (1.0)	2.8 (1.0)	
Difficulty in supporting patients' behavior while providing abortion care	2.9 (1.1)	2.9 (1.1)	2.8 (1.0)	2.9 (1.2)	
Inability to accept abortion care as a job	3.1 (1.2)	3.2 (1.2)	3.0 (1.1)	3.0 (1.2)	
Inability to provide good abortion care	2.7 (1.0)	2.9 (1.0)	2.6 (0.8)	2.8 (1.1)	
Inability to refuse involvement in abortion care	2.4 (1.2)	2.4 (1.1)	2.3 (1.1)	2.5 (1.1)	
Difficulty in controlling emotions during abortion care	2.2 (0.8)	2.3 (0.9)	2.1 (0.7)	2.2 (0.8)	

FEWS-J: the Japanese version of Frankfurt Emotional Work Scale; ProQOL: Professional Quality of Life scores; MW: midwives; RN: registered nurses; LPN: licensed practice nurses.

Table 4 shows that negative emotions display, sensitivity requirements display, and the stress factor “thinking that the aborted fetus deserved to live” had the highest statistically significant power as a predictor of compassion fatigue in the nursing and midwifery staff. The positive emotions display was clearly the variable with the strongest relationship with compassion satisfaction, and it was also a negative predictor of burnout. The number of first-trimester abortion cases handled in the previous year was a positive predictor of burnout and a negative predictor of compassion satisfaction. In contrast, the number of childbirth cases handled in the previous year was a positive predictor of compassion satisfaction.

## Discussion

The present study provides important information on the association between stress factors and emotion work related to abortion care and ProQOL in Japanese nurses and MWs. A high percentage of hospital managers (66.4%) chose not to participate in this study for unknown reasons. The low participation rate may have led to an overestimation of negative emotional feelings and stress factors among the abortion care-givers. However, the results obtained in this study could also underestimate the extent of these problems among Japanese nurses and MWs.



**Table 3.** Correlations between stress factors related to abortion care and FEWS-J and ProQOL scores among Japanese nurses and midwives ( $n = 255$ ).

Variables	ProQOL		
	Compassion fatigue	Burnout	Compassion satisfaction
<b>FEWS-J</b>			
Negative emotions	0.32***	0.14*	0.09
Positive emotions	0.23***	-0.06	0.32***
Emotional dissonance	0.30***	0.09	0.15*
Sensitivity requirements	0.30***	0.07	0.21***
<b>Reasons</b>			
Thinking that the aborted fetus deserved to live	0.28***	0.14*	0.06
Touching the aborted fetus for the purpose of measurement	0.18**	0.11	-0.04
Providing abortion care despite disagreeing with the reason for abortion	0.25***	0.14*	-0.03
Difficulty in supporting patients' behavior while providing abortion care	0.27***	0.16**	-0.02
Inability to accept abortion care as a job	0.24***	0.10	0.05
Inability to provide good abortion care	0.20**	0.09	0.06
Inability to refuse involvement in abortion care	0.16*	0.17**	-0.01
Difficulty in controlling emotions during abortion care	0.31***	0.16*	0.05

FEWS-J: the Japanese version of Frankfurt Emotional Work Scale; ProQOL: Professional Quality of Life scores; MW: midwives; RN: registered nurses; LPN: licensed practice nurses.

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

**Table 4.** Multiple regression analysis showing the most important predictors of ProQOL ( $n = 199$ ).

Statistically significant variables	ProQOL		
	Compassion fatigue $\beta$	Burnout $\beta$	Compassion satisfaction $\beta$
<b>FEWS-J</b>			
Negative emotions	0.21***	0.17*	
Positive emotions		-0.15*	0.36***
Emotional dissonance			
Sensitivity requirements	0.18**		
<b>Stress factors</b>			
Thinking that the aborted fetus deserved to live	0.20**		
Difficulty in controlling emotions during abortion care	0.16*	0.14*	
<b>Background variances</b>			
Number of times childbirth care was performed in previous year			0.15*
The number of times first-trimester abortion care was provided		0.15*	-0.16*
Parity	-0.11*		
Adjusted $R^2$	0.24	0.15	0.19

FEWS-J: the Japanese version of Frankfurt Emotional Work Scale; ProQOL: Professional Quality of Life scores.

\* $p < 0.05$  \*\* $p < 0.01$  \*\*\* $p < 0.001$ .

The ProQOL scores in this study were significantly associated with stress factors and emotion work. Multiple regression analysis revealed that of all the evaluated stress factors and FEWS-J items, negative emotion display was the strongest predictor of compassion fatigue and burnout. The stress factor "thinking



that the aborted fetus deserved to live” and “difficulty in controlling emotions during abortion care” were associated with compassion fatigue.

Potter et al.<sup>30</sup> suggested that the number of years of providing general health care and work experience were related to compassion fatigue and burnout. Najjar et al.<sup>31</sup> argued that higher licensures and corresponding education degrees characterized professionals who had higher expectations of work satisfaction. However, this study found that there was no relationship between ProQOL scores and qualifications and work experience. Although there was no correlation between qualification and FEWS-J, the MWs had handled a higher number of abortion and childbirth care cases in the previous year, and they experienced significantly higher emotional dissonance compared with the nurses. As shown by this study, nursing and midwifery staff had negative feelings about accepting abortion care as their work. This factor was significantly associated with the ProQOL score for compassion fatigue. There was a conflict between the idealistic and realistic aspects of their job when they were required to provide childbirth and abortion services simultaneously. This result was consistent with of an American study on emotional distress in nurses who assisted in abortions.<sup>18</sup>

Professional confusion, which is not satisfactorily dealt with in the current professional code or hospital guidelines, is preferable to shock or suppressed distress. It also contributes to decreased job satisfaction, attrition, and unsafe patient care.<sup>32,33</sup> Caring for patients incurs significant work-related stress, which can result in employee dissatisfaction and mental exhaustion.<sup>29</sup> Compassion fatigue, which is trauma resulting from efforts to help others, is a relational stress that weighs heavily on nurses and MWs working in obstetrics and gynecology departments, especially when they have to provide care for both women giving birth and those undergoing abortions. Furthermore, they have to care for aborted fetuses as well as newborn babies. These results also indicate that their jobs require a high level of emotion work. Nursing staff who had been involved in a higher number of first-trimester abortion care cases in the previous year had a higher risk of compassion fatigue and burnout, while they also had lower compassion satisfaction. Breslau et al.<sup>34</sup> reported that those exposed to repeated stressors are at greater risk of adjustment disorder or posttraumatic stress disorder, even if the trauma occurred in the distant past. Kovacs et al.<sup>6</sup> reported that emotional dissonance and negative emotions display were related to emotional exhaustion and depersonalization. However, positive emotions display and the number of childbirth cases handled in the previous year were the strongest predictors of compassion satisfaction. Zapf et al.<sup>15</sup> suggested that the intentional expression of positive emotions usually increases the probability of the interaction partner reciprocating positive emotions. This can be perceived as a positive feedback that contributes to employee satisfaction and self-esteem. Therefore, working in abortion services can be highly distressing for nurses and MWs. The hospitals need to improve the work environment and develop a better approach for reducing emotion work and professional confusion among nurses and MWs. Smith et al.<sup>35</sup> suggested that patients and worker safety are linked through emotions at work. In order to provide abortion and childbirth care for women, it is essential to ensure good working conditions for staff, ensure that the staff are able to manage their emotions, promote their physical and psychological health, and increase feelings of competence and job satisfaction.

No difference was observed between the responses of nurses and those of MWs. A professional code of conduct provides guidelines for professional behavior, and to a certain extent, it gives a summary of the ethical debate concerning the aims, values, and norms of members involved in these professions. The lack of a clearly defined mandate in relation to the care surrounding abortion is a serious shortcoming in Japan.<sup>36</sup> The professional code of conduct for nurses and MWs in Japan should include professional behavior, values of care, and norms associated with abortion care. Regular reference to a professional code of conduct is necessary to alleviate the emotional distress associated with the moral dilemmas faced by these workers.

## Study limitations

This study had several limitations. First, those who chose not to respond to the survey could have had higher or lower risk for burnout and compassion fatigue. Second, this study had a cross-sectional design, so the analysis does not provide an understanding of whether the prevalence of burnout and compassion fatigue varies over time. Third, in addition to the measured variables, there may have been others that could have aided in the prediction of ProQOL in these participants. Fourth, working conditions and educational background also affect professional confusion and ethical dilemmas;<sup>21</sup> these factors were not considered in this study. Future studies should assess the working environment of participants, the method of abortion, and the relative contribution of different exposure levels to the development of stress symptoms in the participants.

## Conclusion

This study showed that there was a lack of awareness regarding the relationship between ProQOL and emotion work in nursing and midwifery staff providing abortion and childbirth services in Japan. ProQOL scores obtained for the respondents in this study suggest that providing abortion services was a highly distressing experience. In addition, their jobs required a high level of emotion work. Nursing staff who were involved in a higher number of first-trimester abortion cases handled in the previous year had a higher risk of compassion fatigue and burnout, while they also had a lower degree of compassion satisfaction. This situation could be improved by increasing awareness about the significant impact of abortion care on nurses and MWs working in obstetrics and gynecology departments. Decreasing the professional confusion and distress related to abortion care in nursing and midwifery professionals in Japan should be a priority. In addition, the expectations of abortion care-givers should be clarified, and the system must be altered to reduce distress symptoms in hospital staff and help them acquire enhanced skills for dealing with stress.

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## Conflict of interest

The authors declare that there is no conflict of interest.

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