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Prevalence of Compassion Satisfaction and Compassion Fatigue among Midwives in One Australian Health Service: A Cross-sectional Study

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オーストラリア医療機関で働く助産師の共感満足・共感疲労の実態調査

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[Abstract]

Objective: This study aimed to clarify the extent to which midwives working in a health service experience compassion satisfaction (CS) and compassion fatigue (CF) which includes burnout (BO) and secondary traumatic stress (STS).

Design: Descriptive cross-sectional online survey.

Setting: Three maternity units of a Melbourne metropolitan health service.

Findings: Data from 152 female midwives were analyzed. This cohort had diverse educational qualifications: certificate 16 (10.5%), diploma 17 (11.2%), bachelor 99 (65.1%), postgraduate 11 (7.2%), other postgraduate additional qualifications 9 (6%). The Cronbach's alpha coefficients for the ProQOL v5 instrument subscales were CS $\alpha = 0.884$, BO $\alpha = 0.815$, and STS $\alpha = 0.81$. CS levels were low in 36 (23.7%), moderate 74 (48.7%), and high 42 (27.6%); BO low 38 (25%), moderate 76 (50%), high 38 (25%); STS low 28 (18.4%), moderate 79 (52%), and high 45 (29.6%). The risk of BO showed a significantly higher ratio of low CS level ($p < 0.001$). The CS mean score of full-time employment of 53.13 was significantly higher than the 48.80 of part-time employment ($p = 0.016$). The STS mean score of 46.78 of full-time midwives were significantly lower than the 51.23 of part-time employment ($p = 0.014$).

Key conclusion: Thirty six (23.7%) of the midwives had low CS levels and 81.6% and 75% had moderate-to-high STS and BO levels respectively. Midwives who experienced high STS levels were at risk of similar BO levels. As the findings have workforce implications for managers, factors that could be linked to CS and CF levels should be identified.

[Key words] Burnout, Compassion Fatigue, Compassion Satisfaction, Midwife, Secondary Traumatic Stress

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目的：医療機関で働く助産師が共感満足 (CS) と、バーンアウト (BO) および二次的外傷性ストレス (STS) を含む共感疲労 (CF) の実態を把握すること。

方法：3つの周産期ユニットをもつメルボルン地域の医療機関での記述的横断研究である。

結果：152人の助産師のデータを分析した。教育背景は、資格試験16 (10.5%)、養成所17 (11.2%)、大学99 (65.1%)、助産大学院11 (7.2%) その他の大学院9 (6%) であった。ProQOL尺度のクロンバック α 係数は、CS $\alpha = 0.884$, BO $\alpha = 0.815$, STS $\alpha = 0.81$ 。CSは36人 (23.7%) が低く、74人 (48.7%) で中等度、42人 (27.6%) で高かった。BOは低い 38人 (25%)、中等度 76人 (50%)、高い 38人 (25%)；STSは低い 28人 (18.4%)、中等度 79人 (52%)、高い 45人 (29.6%) であった。BOのリスクは、CS低レベル群で有意に高率であった ($p < 0.001$)。常勤者のCS平均値は53.13に対し、非常勤者の48.80より有意に高値であった ($p = 0.016$)。常勤助産師のSTS平均値46.78は、非常勤者の51.23に比べて有意に低かった ($p < 0.014$)。

結論：助産師36人 (23.7%) はCSレベルが低く、STSとBOレベルは、それぞれ 81.6% と 75% が中程度から高いレベルであった。高い STS レベルを経験した助産師は、BO レベルのリスクに晒されていた。結果からマネージャーの影響を考え、CS および CF に関連する可能性のある要因を特定する必要がある。

〔キーワード〕 燃え尽き, 共感疲労, 共感満足, 助産師, 二次的外傷性ストレス

I. Introduction

Substantial evidence has grown on the quality of life healthcare professionals have lived in different moments of their professional practice. Research in the fields of compassion satisfaction (CS) and compassion fatigue (CF) in nursing and midwifery cadres has taken different paths from the traumatic stress of childbirth¹⁾⁻³⁾ to risen concepts of burnout (BO) in relation to work engagement⁴⁾. Currently, mental health is a major concern instead of separate concepts such as BO, secondary traumatic stress (STS), and CS⁵⁾. Mental health in relation to daily professional struggles of the ethical-moral dilemma is observed. These paths have an effect on themselves, the work environment, and the population they save^{1),2)}. Moreover, the mental health of healthcare professionals has also been explored. Symptoms that directly relate to stress were identified, namely, depression, anxiety, and insomnia^{6),7)}.

In this present study, we explored the professional quality of life (ProQOL) of midwives, which is 'life lived' as in either a person private life or as helper explained by Stamm⁸⁾. ProQOL is conceptualized by the CS and CF levels. CF is a construct derived from two subscales which are STS and BO¹⁰⁾. Midwives' ProQOL can either positively or negatively affect quality of life one feels in relation to the capacity to care and to being retained in the workforce.

1. Professional Quality of Life (ProQOL)

Midwives are core caregivers in maternal and child health, and their primary role is to meet the physical and emotional needs of their clients through various tasks attained by midwifery competencies^{9),10)}. Midwifery tasks can either be rewarding or stressful or troubling or both; however, job satisfaction is important in achieving a work-life balance¹¹⁾. As the roles assumed by midwives in observing the beginning and the end of life build empathetic, hopeful, and compassionate connections with their clients, midwives are more likely to be subjected to emotional or physical fatigue¹⁰⁾. Midwives are directly or indirectly exposed to traumatic events in either primary or secondary encounters with their clients. Department of Health in Australia¹²⁾ reports that the average age of Australia's midwifery workforce is 46.9 years; 33.6% are over 55 years old and 98.9% are women who work for 25.66 hours on average per week. Midwives are employed in the public (73.8%) and private (19.5%) sectors, and major cities have 69.9% of the midwifery population. Midwives can be stressed by newborn deaths and their clients dying, and conflicts with doctors¹³⁾. Stress may also be experienced when things do not go well as expected^{3),14),15)}.

Most studies¹⁶⁾⁻²¹⁾ have explored the nursing profession's job satisfaction, CF, BO, and STS. However, there has been a paucity of research about these concepts in the midwifery profession. Although

midwifery research has been conducted with respect to CS, CF, STS, and BO, very few studies have deeply explored these concepts simultaneously²²⁾⁻²⁴⁾. In the present study, we used the professional quality of life version V (ProQOL v5) tool as designed by Stamm⁸⁾ to investigate CS and CF (i.e., STS and BO).

On the other hand, a study that explored trauma and fear in Australian midwives reported the contribution of workplaces to unsupported feelings and fears of being litigated²⁵⁾. The authors argued further that 93.6% of midwives have also reported significant levels of personal or professional traumatic birth experiences which led to fear of childbirth in one out of ten midwives. Midwives' either personal or professional fear of childbirth has significantly contributed to their responses to trauma and anxiety thus, led to unsatisfactory quality of their lives hence, limiting their efforts to enhance quality care.

2. Concepts of compassion fatigue and compassion satisfaction

The conceptual work by Stamm⁸⁾ recognizes that CS and CF (i.e., STS and BO) are affected by work, client, and personal environments. CS is defined as the pleasure derived from helping others and the extent of support received from colleagues²⁶⁾. Compassionate care is likely to increase if midwives are satisfied. In the literature, job satisfaction research has focused on factors such as working environment and remuneration²⁷⁾, type of management²⁰⁾, and job security²⁸⁾. In the Australian context, reports about midwives' job satisfaction are limited. Rodwell and Munro²⁹⁾ found that support from supervisors in the daily demands of clinical staff in one public hospital positively increased the job satisfaction of midwives and nurses. It was found that very low and very high job demands negatively influenced the job satisfaction of Australian midwives and nurses²⁹⁾.

3. Compassion fatigue: secondary traumatic stress

The ProQOL v5 STS is a subscale of CF. In the present study, STS is defined as a negative feeling driven by fear. STS includes work-related trauma^{14), 22)}. STS can result from being involved with clients who have had or who are experiencing enduring trauma³⁰⁾. The consequences of STS may lead to the helper's sleep deprivation, involuntary images, and reminders of traumatized client incidences^{8), 18)}. STS can hamper

critical reflective practice and therefore can negatively affect midwifery decision-making and clinical practice³¹⁾.

4. Compassion fatigue: burnout

Burnout is an occupational phenomenon experienced by all professional healthcare providers as a response to excessive and prolonged exposure to STS^{8), 32)}. BO is an effect of certain characteristics of the work environment and has significantly impacted the emotional stability of healthcare providers³³⁾ as well as the organizations they work for^{32), 34), 35)}. In their study, Morgantini et al.³⁵⁾ explored the BO levels of healthcare providers in 60 countries during the COVID-19 pandemic and have addressed various issues of BO prevalent in high-income countries. They also asserted that high workload, work stress, and limited time and organization support have influenced the BO levels of various healthcare providers. BO has also been explored as a subscale of CF and defined as the result of negative consequences of caring⁸⁾. BO is further associated with psychological and physical exhaustion as a result of exposure to incidents that are emotionally demanding^{26), 35)}. Moreover, BO has been associated with the loss of hope and decreased capacity to handle job demands⁸⁾.

In the midwifery profession, the empathetic connection of midwives with their clients has significantly influenced their experienced BO levels. Several study findings have shown that job demands such as shortage of midwives^{2), 36), 37)}, type of shift, and time pressure³⁸⁾ at work add to the BO experienced by midwives. Midwifery BO has been explored by cross-sectional studies that used the Copenhagen Burnout Inventory tool in Sweden³⁸⁾ and Australia³⁹⁾. Both studies found that BO was associated with inadequate resources, high demands during clinical activities, and inadequate compensation for the work performed. BO was also studied using the Maslach Burnout Inventory employed by Yoshida and Sandal²⁾ in England and by Oncel et al.²⁸⁾ in Turkey. These studies found that unsupportive working environments in maternity units²⁾ and less than ten years of professional experience²⁸⁾ increased the likelihood of BO. Mollart et al.⁴⁰⁾ found that Australian midwives' BO levels were influenced by emotional exhaustion (60.7%), depersonalization (30.3%), and low personal accomplishment (30.3%). Mollart et al.⁴⁰⁾ also found

that a rotating day and night shift had a positive correlation with high BO scores of low personal accomplishments. On the other hand, a scoping review has explored further on an additional factor of work model of either caseload or continuity to have lowered the BO levels in midwives³⁶⁾.

The purpose of the present study was to investigate the prevalence of CS and CF among midwives. A description of the extent of midwives experiencing CS and CF will be provided.

II. Methods

1. Study design

A cross-sectional study design was used.

2. Study setting and participants

The health service involved was located in metropolitan Melbourne, Australia. The health service had maternity services and units in three different geographical sites. All midwives working in these units (approximately 470) were invited to participate in the study. The inclusion criteria were that the participants must be registered midwives and employed in a part-time or full-time basis at one or more of the health service maternity units in 2015. Midwives with casual employment by the institution and midwives who were not employed by the institution (e.g., agency staff) were excluded. A convenience sampling technique was used and recruitment occurred by word of mouth. Information sessions about the study rationale and eligibility criteria were offered onsite in each of the hospital's maternity units.

An online survey approach to data collection was used. An invitation to participate, an information sheet, and the survey link were sent to midwives through the hospital's intranet e-mails by the Maternity Unit Managers. All surveys remained anonymous throughout the study, and consent was considered implied upon a respondent's submission of the survey. The survey remained open to respondents over a two-month period (July–August 2015). A total of 152 midwives submitted the survey.

3. Instruments

Data were collected using one questionnaire with two sections: demographic questions developed by the researchers, and the validated ProQOL v5. The

demographic questionnaire contained items related to the respondents' personal social demographics (e.g., age, gender, and ethnicity), professional qualifications and work experience, and their current employment (e.g., role, professional employment grade, roster patterns, normal sites, and areas of clinical practice). ProQOL v5 is a 30-item instrument that uses a 5-point Likert scale to examine the worker's levels of CS and CF associated with their work during the past 30 days. There are three subscales in the instrument: CS, STS, and BO. The scores to measure levels of CS, STS, and BO are represented by 22 or less (Low), around 23–41 (Moderate), and 42 or more (High). However, the total scores of all 30 items if is 43 or less (Low), around 50 (moderate), and 50 or more (high). ProQOL v5 and its previous versions have been used extensively, and they have good internal consistency and construct validity⁸⁾. The instruments were pilot tested before being used with the respondents.

The reliability of ProQOL v5 in the present study was very good as the Cronbach's alpha coefficient (α) for the subscales was above the recommended value of $\alpha = 0.7$: CS ($\alpha = 0.884$), BO ($\alpha = 0.815$), and STS ($\alpha = 0.810$).

4. Data management and analysis

All responses received through Survey Monkey software were imported to International Business Machine Statistical Package for Social Science (IBM SPSS) version 20 for statistical analysis. The imported surveys were assigned unique codes to maintain anonymity throughout the study.

Responses from ProQOL v5 were interpreted in cut scores⁸⁾ that indicated high, average, and low scores of CS, BO, and STS elements. The mean scores were determined. Also, the responses on these elements were compared by χ^2 . Demographic information was managed as nominal data. Further analysis was performed using ANOVA and independent t-test to explore relationships between the demographic data and the ProQOL v5 variables. In all these statistical tests, significance was considered at $p < 0.05$. Correlational relationships were investigated using Cronbach's alpha coefficient.

5. Ethical considerations

Ethical approval for this research was granted by the Monash University Human Research Committee

(Project CF 15/1706-2015000860) and by the ethics committee of the selected health service.

III. Results

1. Demographic data

Surveys were returned by 160 midwives, giving an initial response rate of 34%. However, eight respondents submitted incomplete questionnaires and were thus excluded from analysis. As a result, the final number of respondents was 152 midwives, and the response rate was 32%. The respondents had a wide range of demographic characteristics (Table 1). The mean age of the participants was 39.16 years (range:

22-61 years); the years of professional experience equivalent to full-time service were less than 12 months in 13 (8.6%) and more than 12 months in 139 (91.4%).

The demographic information enabled exploration of specific subgroups and characteristics of the participating midwives. Their qualifications were midwifery 42 (27.6%) and both nursing and midwifery 110 (72.4%). The highest qualifications of these midwives were as follows: certificate 16 (10.5%), diploma 17 (11.2%), and bachelor's degree 99 (65.1%); postgraduate additional qualifications at the levels of a certificate and a diploma were 9 (6%) and postgraduate degree which includes master's and PhD 11 (7.2%). Moreover, their employment status was clarified to be either full-time staff 42 (27.6%) or part-time staff 110 (72.4%). The work roles performed by the midwives were categorized in three at the registered level 87 (57.3%), specialized services 32 (21%), and administrative roles 33 (21.7%). The midwives worked in units A 64 (42.1%), B 47 (30.9%), and C 33 (21.7%), with 8 (5.3%) working across the three units.

Table 1. Characteristics of respondents (N = 152)

	n	%
Qualification		
Midwifery	42	27.6
Both Nursing and Midwifery	110	72.4
Education background		
Certificate	16	10.5
Diploma	17	11.2
Bachelor	99	65.1
Postgraduate additional qualifications	9	6
Postgraduate	11	7.2
Employment status		
Full time	42	27.6
Part time	110	72.4
Work roles		
Registered midwives	87	57.3
Specialized services	32	21
Administrators	33	21.7
Health service location		
A	64	42.1
B	47	30.9
C	33	21.7
More than one center	8	5.3

2. Compassion satisfaction and compassion fatigue (including secondary traumatic stress and burnout)

The midwives indicated a range of CS, BO, and STS scores (Table 2). As for CS, 42 (27.6%) of the midwives showed a high level, 74 (48.7%) moderate level, and 36 (23.7%) low level. As for the midwives who experienced negative aspects of caring for BO, 38 (25%) had a high level, 76 (50%) moderate level, and 38 (25%) had low level. As for the STS scores, 45 (29.6%) showed a high level, 79 (52%) moderate level, and 28 (18.4%) low level.

Further analysis was performed to clarify the relationship between CS, BO, and STS (Table 3).

Table 2. Relationship between Compassion Satisfaction and Compassion Fatigue (N = 152)

	N=152						
	ProQOL subscales						
	Low		Moderate		High		
	n	%	n	%	n	%	
Compassion Satisfaction	36	23.7	74	48.7	42	27.6	
Compassion Fatigue	BO ¹	38	25	76	50	38	25
	STS ²	28	18.4	79	52	45	29.6

¹ BO: Burnout

² STS: Secondary Traumatic Stress

There was a significant relationship between CS and BO ($\chi^2 4.79, p < 0.001$). Midwives who experienced low and moderate levels of CS and were at risk of a high level of BO were 99 (90.0%), whilst low and moderate levels of CS 11 (10%) corresponded with low and moderate risk of BO. There was no significant association between the low and moderate levels of CS and the risk of high STS 93 (84.5%), and low and moderate levels of CS 17 (15.5%), and the low and moderate levels of STS.

In Table 4, both BO and STS had a significant relationship ($\chi^2 1.07, p < 0.001$). The number of midwives at risk of high levels of STS and who were at risk of high levels of BO were 104 (83.9%), whereas those who were at risk of high levels of STS and had a risk of low and moderate levels of BO were 20 (16.1%). Additionally, midwives who were at risk of low and moderate levels of STS were 18 (64.3%) and those who were at risk of high levels BO were 10 (35.7%).

IV. Discussion

The concept of ProQOL in midwives has been explored by few studies particularly in both aspects of

CS and CF. The results of the present study indicated a significant association between employment status and both positive (CS) and one of the components of negative (STS) aspects of caring. This finding is unique as none of the studies explored had similar findings to this in particular at the employment status factor.

A cross-sectional survey was conducted on 93 midwives in Israel, and the participants were from four different medical centers⁴¹. This previous study also included midwives' brief descriptions which explored the CS and CF concepts using ProQOL in midwives. More than 74% of the participants scored high in CS; however, the initial scores were correlated with demographic characteristics and negative correlation between CS and BO ($r = -.40, p < 0.05$) as well as CS and STS ($r = -.44, p = 0.001$); a positive correlation between BO and STS ($r = .06, p < 0.01$) was reported. These previous findings are congruent to the present study's significant findings between CS and BO ($p = 0.001$) and BO and STS ($p = 0.001$), and there was no significant association between CS and STS. The latter findings highlight the fact that repeated exposure to stress can lead to STS; the persistence of STS

Table 3. Relationship between Compassion Satisfaction and Risk of Burnout
N=152

		Compassion Satisfaction				X ²	p-value
		High		Low and Moderate			
		n	%	n	%		
Risk of BO ¹	High	15	35.71	99	90	4.79	0.001
	Low and Moderate	27	64.29	11	10		
Risk of STS ²	High	31	73.8	93	84.5	NS ³	NS ³
	Low and Moderate	11	26.2	17	15.5		

¹ BO: Burnout

² STS: Secondary Traumatic Stress

³ NS: Not Significant

Table 4. Relationship between Secondary Traumatic Stress and Risk of Burnout
N=152

		Risk of STS ¹				X ²	p-value
		High		Low and Moderate			
		n	%	No	%		
Risk of BO ²	High	104	83.9	10	35.7	1.07	0.001
	Low and Moderate	20	16.1	18	64.3		

¹ STS: Secondary Traumatic Stress

² BO: Burnout

aggravates BO. However, CS averts the development of STS from stressful events once rewarding moments are present⁸⁾. This present finding suggests that the quality of life of midwives is affected by the prevalence of CS, BO, and STS.

A similar methodological approach of a study conducted on 291 geriatric nurses from 97 centers in 51 cities of Spain showed that the levels of CS and CF were determined using the ProQOL tool¹⁶⁾. The authors assert the exposure of midwives to CS and CF (i.e., BO and STS); CS scores were low in 1.4%, moderate in 70.3%, and high in 28.3%, whereas BO scores were low in 24.5%, moderate in 75%, and high in 0.5% of the participating geriatric nurses. There was a significant association between CF and years of geriatric nurses' professional experience ($t = 9.25$, $p = 0.02$). The midwives' years of professional experience in this present study had no significant difference with either CS or CF. The findings of Sarabia et al.¹⁶⁾ were related to our findings in particular for the high level of CS and the low level of BO of geriatric nurses; the midwives in this study had high level of CS at 27.6% and the low level of BO at 25%. These present study's levels are indicative of the coexistence of CS and BO. The co-existence of CS and BO is indicative of good coping strategies in a population of these midwives once exposed to rewarding and stressful or troublesome moments of their patients during care.

In the small population of midwives of the present study ($n = 152$), the results indicate that midwives who worked full-time presented higher levels of CS than midwives who worked part-time. Midwives in a full-time employment who are satisfied with their jobs might have influenced the CS results. However, the coexistence of CS and BO is alarming to this cohort of caring profession as BO is associated with a heavy workload and unsupportive environments^{2), 8), 36)}. Thus, there is a need for hospital midwife leaders to grasp the necessity of exploring further working conditions that have an impact on CS and CF. Hospital management and researchers are urged to explore further the relationship between part-time job and CS and CF. There is also a need to devise methods that will further improve midwives' CS and prevent BO.

V. Study limitations and further research

Although this study collected information from

participants at one point and time (cross-sectional) for a period of 30 days in 2015, the findings remain useful at present. The sample size of this study might have influenced some of the findings that were not significant due to low power. However, the occurrence of any event at that particular time could have influenced the response given by the participants. Hence, there is a need for the study to be conducted at different intervals to be able to draw suitable conclusions pertaining to CS and CF (i.e., BO and STS) of midwives involved in this study. The study findings cannot be generalized due to the different populations of midwives despite the fact that the response rate was good for a survey.

VI. Conclusion

Midwives are key players in delivering maternity services to women. Therefore, the well-being of midwives in the aspects of their professional quality of life is essential. Supportive environments can assist midwives to render compassionate care to clients. Despite such understanding, 23.7% of the midwives had low levels of CS and 81.7% and 75% had moderate-to-high levels of STS and BO respectively. Midwives who experienced average-to-low levels of STS were at risk of similar levels of BO. Both CS and STS were linked to being either a full-time or part-time employee, respectively. This study asserts that midwives experience both positive (CS) and negative (STS) aspects of caring as the nature of the roles they play in their professional lives. However, the study's power is low and hence might have contributed to non-significant findings. Thus, there is a need for further research of these concepts in midwifery with the increased number of respondents. As the findings have workforce implications for midwifery managers, factors that could be linked to the identified levels of CS and CF need to be identified. The Victorian government needs to roll out self-health programs that will increase stress awareness and coping strategies like the happy people 2017 program.

Conflicts of interest

The authors declare that they have no conflicts of interest associated with this study.

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Authors' contributions

MJM and CM conceptualized and designed the study. MJM collected data, MJM, CM, and SH analyzed the data, and drafted the manuscript. All authors read and approved the final manuscript.

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