



Comparing the views of caseload midwives working with First Nations families in an all-risk, culturally responsive model with midwives working in standard caseload models, using a cross-sectional survey design

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ABSTRACT

Problem: Little is known about midwives' views and wellbeing when working in an all-risk caseload model.

Background: Between March 2017 and December 2020 three maternity services in Victoria, Australia implemented culturally responsive caseload models for women having a First Nations baby.

Aim: Explore the views, experiences and wellbeing of midwives working in an all-risk culturally responsive model for First Nations families compared to midwives in standard caseload models in the same services.

Methods: A survey was sent to all midwives in the culturally responsive (CR) model six-months and two years after commencement (or on exit), and to standard caseload (SC) midwives two years after the culturally responsive model commenced. Measures used included the Midwifery Process Questionnaire and Copenhagen Burnout Inventory (CBI).

Findings: 35 caseload midwives (19 CR, 16 SC) participated. Both groups reported positive attitudes towards their professional role, trending towards higher median levels of satisfaction for the culturally responsive midwives. Midwives valued building close relationships with women and providing continuity of care. Around half reported difficulty maintaining work-life balance, however almost all preferred the flexible hours to shift work. All agreed that a reduced caseload is needed for an all-risk model and that supports around the model (e.g. nominated social workers, obstetricians) are important. Mean CBI scores showed no burnout in either group, with small numbers of individuals having burnout in both groups.

Discussion and conclusion: Midwives were highly satisfied working in both caseload models, but decreased caseloads and more organisational supports are needed in all-risk models.

Statement of significance

Problem

Little is known about the impact on midwives of working in culturally responsive all-risk caseload models for First Nations women compared with midwives in standard caseload models.

What is already known

Midwives working in low-risk caseload models report less burnout and higher professional satisfaction than midwives in standard care. High workload, low support, challenging clinical situations and low clinical autonomy can impact midwives' emotional wellbeing.

What this paper adds

Caseload midwifery is highly satisfying work. All-risk caseload models should be adjusted for acuity, with supports around models in place.

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1. Introduction

Caseload midwifery is a midwife-led continuity of care model where women receive care from a known midwife (with one or two back-up midwives) throughout pregnancy, labour, birth and the early postnatal period. It is considered the gold standard in maternity care given the range of positive outcomes for mothers and babies. [22,42] Caseload is a different way of working for midwives – they are responsible for their own caseload of women, and they work on call, in contrast to working in a model that is shift-based and rostered in advance. [36] A number of studies have explored caseload models in terms of midwives' professional attitudes [12], job satisfaction [25,35] and emotional wellbeing. [14] A scoping review exploring burnout found that midwives working in caseload models had significantly lower burnout compared to midwives working in other models of care. [43] Personal autonomy, independence in decision-making, [1] being able to build relationships with women [37] [18] and working across the full scope of midwifery practice contributed to caseload midwives' job satisfaction. [36] Some studies report that caseload midwifery does not suit all midwives (especially those with caring responsibilities), that caseload might be challenging in terms of work-life balance, [21,50] and for some lead to burnout. [51] While the majority of studies report that caseload is associated with improved outcomes for midwives, [12–14,23] most only include midwives working in models caring for 'low-risk' women with no medical, obstetric or psychosocial complexities.

There are many positive aspects of continuity of care for women with social risk factors, [22,40] but few studies explore the impact on those who provide the care. One study conducted in the Netherlands (in 16 midwifery practice and obstetric units) explored caregivers' perceptions of providing antenatal care for women experiencing psychosocial complexities. This study reported a relationship between high 'antenatal risk management' and increased workload burden. [16] A New Zealand study exploring the impact of caring for disadvantaged women reported midwives experienced emotional, financial and time stressors. [33].

In Australia, Aboriginal and Torres Strait Islander (hereafter called First Nations) people have thrived for over 60,000 years. Skilled practices, underpinned by Indigenous knowledges regarding pregnancy, birth and parenting sustained healthy communities for generations. The impacts of colonisation, such as dispossession of land, violence, disease and the dismantling of protective kinship systems have left a legacy of inequitable health outcomes for First Nations communities. [8] First Nations women experience higher rates of hypertension and diabetes in pregnancy than non-Indigenous mothers (1.6% and 5.7% higher respectively) and are three times more likely to die in the perinatal period. First Nations babies are more likely to be born preterm (14% vs 8% non-Indigenous) or low birthweight (12% vs 6% non-Indigenous), with perinatal mortality 1.7 times higher for babies born to First Nations mothers. [2] Continuity of care and carer have been identified as one of the components of effective culturally safe maternity care to improve outcomes for First Nations women. [30] Continuity of care has been identified as a priority reform area in The Council of Australian Governments (COAG) 'Strategic directions for Australian maternity services' [6] However, even in services where continuity of care is available, the numbers of First Nations women receiving caseload care remains low. [32] Targeted approaches that include continuity of midwife care for First Nations families have been found to reduce the risk of preterm birth, [28] increase the proportion of women attending the recommended five or more antenatal visits, and reduce smoking. [20] A meta-synthesis of qualitative studies of midwifery models of care for First Nations women and babies found that these models are beneficial, particularly when the service had strong community links and was controlled by First Nations communities. [9].

There is limited evidence regarding midwives' experiences of working in continuity of care models for women having a First Nations

baby. A mixed methods study found that midwives working in a continuity model for remote-dwelling First Nations women in Australia, considered the model had the potential to make a positive impact by providing culturally, physically and personally safe care for women. [24].

Initiated by the Victorian Aboriginal Community Controlled Health Organisation (VACCHO), this partnership project was led by <Blinded for La Trobe University, in collaboration with VACCHO and four maternity services in Victoria, Australia. The project aimed to assess the capacity of the services to implement, embed and sustain a caseload midwifery model of care for women having a First Nations baby (March 6th 2017 to December 31st 2020). [32] The involvement of VACCHO ensured high level community input into the development and implementation of the work. Cultural oversight and guidance for the project was provided by First Nations community leadership on the investigator team and an Aboriginal Advisory Committee. Authorship on this paper includes a First Nations midwife/researcher. First Nations managers of Aboriginal Health Units were involved in model development and implementation at each site. Each of the sites had pre-existing caseload midwifery models in place. The Baggarrook Yurrongi (Woiwurrung language meaning 'Woman's Journey') project aimed to work alongside, and in collaboration with, pre-existing services for First Nations women such as the Koori Maternity Service (KMS), staff within the Aboriginal Health units at the study sites, and Aboriginal Community Controlled Health Organisations (ACCHOs). The KMS service (provided at one site) is a programme developed to provide culturally appropriate maternity care for First Nations women, which focuses on antenatal and postnatal support, not the in-hospital component of care, particularly labour and birth.

1.1. Culturally responsive caseload model

While many First Nations women experience 'low-risk' pregnancies, the new model aimed to provide care for all women having a First Nations baby, including those requiring specialist medical care or additional psychosocial support. The Culturally Responsive (CR) model as reported in this paper was where the needs of First Nations women and families were met through provision of continuity of care from a known midwife (in conjunction with specialist teams as needed), who had received appropriate cultural training. Cultural training (completed prior to/ at commencement of working in the model, and ongoing) aimed to improve the midwives understanding of the impact of colonisation on the health and wellbeing of First Nations people, and place this in the context of women's lives. Training explored working collaboratively with the Victorian First Nations community health sector, including working sensitively with First Nations people and their communities to work together on closing the health gap between First Nations and non-Indigenous people. Midwives supported women to navigate, access and engage with the maternity care system, [9] whilst coordinating and collaborating with community services and agencies. Midwives respected and supported women's cultural beliefs, practices and needs. The model was proactively offered to all women having a First Nations baby at each site. Within the new CR model, women had the option to have all hospital-based care or to have the continuity model of care in conjunction with community Aboriginal Health Services in a shared care arrangement. These shared care arrangements led to greater two way communication between the hospital services and the community health service e.g. Victorian Aboriginal Health Service. Strong linkages were formed as the community service now had a known point of contact within the hospital service (CR midwives). The model was deliberately set up as a separate caseload group and a decision made that this was better than the women being spread across all the caseload groups, so there could be more focused cultural education, but as important, so that the relationships with internal and external First Nations services could be enhanced.

The three metropolitan sites successfully implemented the model,

however the fourth site in regional Victoria was unable to do so due to major ongoing staffing issues. The project resulted in an exponential increase in access to caseload care for women birthing a First Nations baby at the sites, and a high uptake of the culturally responsive model (90% of women accepted the model when offered). [32] One key outcome of the Baggarook Yurrongi project was to explore midwives' views and experiences to inform model sustainability and expansion.

This paper reports on the views, experiences and wellbeing of midwives working in the culturally responsive models at the implementation sites and compares these outcomes with those of midwives in standard caseload models at the same sites.

2. Participants, ethics, and methods

2.1. Methods

2.1.1. Design

A descriptive cross-sectional study design was used, with structured questionnaires used for data collection.

Data on the structure of the caseload model, including support staff, and processes at each site, were collected by research midwives at the commencement of the project. Data items included number of midwives per caseload group, the Equivalent Full-time (EFT) total of each group, and the annual caseload per midwife. Any changes to EFT, support structures or personnel were collected at the quarterly site-based steering group meetings.

2.1.2. Specific aims

- a) Explore the views, experiences and wellbeing of midwives working in the culturally responsive caseload models at 'baseline' (defined as six months after model commencement to allow time for the midwives to be orientated and have some experience working within the model) and again after two years, or on exit from the model (whichever came first).
- b) Explore the views, experiences and wellbeing of midwives working in the standard caseload models at the study sites at a given time

point – which was chosen to be no earlier than two years after the culturally responsive model commenced at the respective site, allowing for the model to be embedded and for staff to have the opportunity to observe, and understand the work of the new model.

c) Describe the views, experiences, and wellbeing of the two groups of caseload midwives two years after model implementation to identify any similarities and differences.

2.1.3. Study context: caseload size, structure and supports

The three implementation sites were tertiary women's hospitals located in Melbourne, Australia. Between September 2017 and December 2020, a total of 25 midwives commenced employment in the culturally responsive caseload groups across the three participating sites. The majority of midwives working in the First Nations models completed 'Cultural Safety in Aboriginal Health' training provided by VACCHO. Two midwives were unable to access the VACCHO training however received cultural training 'in-house' conducted by staff from the Aboriginal Health Unit.

Midwives working in the standard caseload groups were able to access in-service education sessions conducted by project research staff in conjunction with each Aboriginal Health Unit. These sessions covered the impact of colonisation on the health and wellbeing of First Nations people's health, why and how to ask the Aboriginal and Torres Strait Islander identification question, and the role of the Aboriginal Health Unit. There was no regular or mandatory cultural awareness or cultural safety training for staff at any site.

Pre-existing standard caseload groups and the new culturally responsive groups differed in their ways of working and in their support structures. Fig. 1 outlines the pre-existing caseload groups and the formation and structure of the culturally responsive caseload groups at each site. The culturally responsive groups were newly formed, stand-alone groups, formed using staff working within the existing caseload Equivalent Full-time (EFT) numbers at Sites 1 and 2, and additional EFT at Site 3. Caseload sizes varied across sites from 35 to 40 women per EFT per year (Site 3 had additional annual leave relief resulting in an effective load of 34 women per EFT). All sites had support from Aboriginal Hospital Liaison Officers (AHLOs), who provide cultural

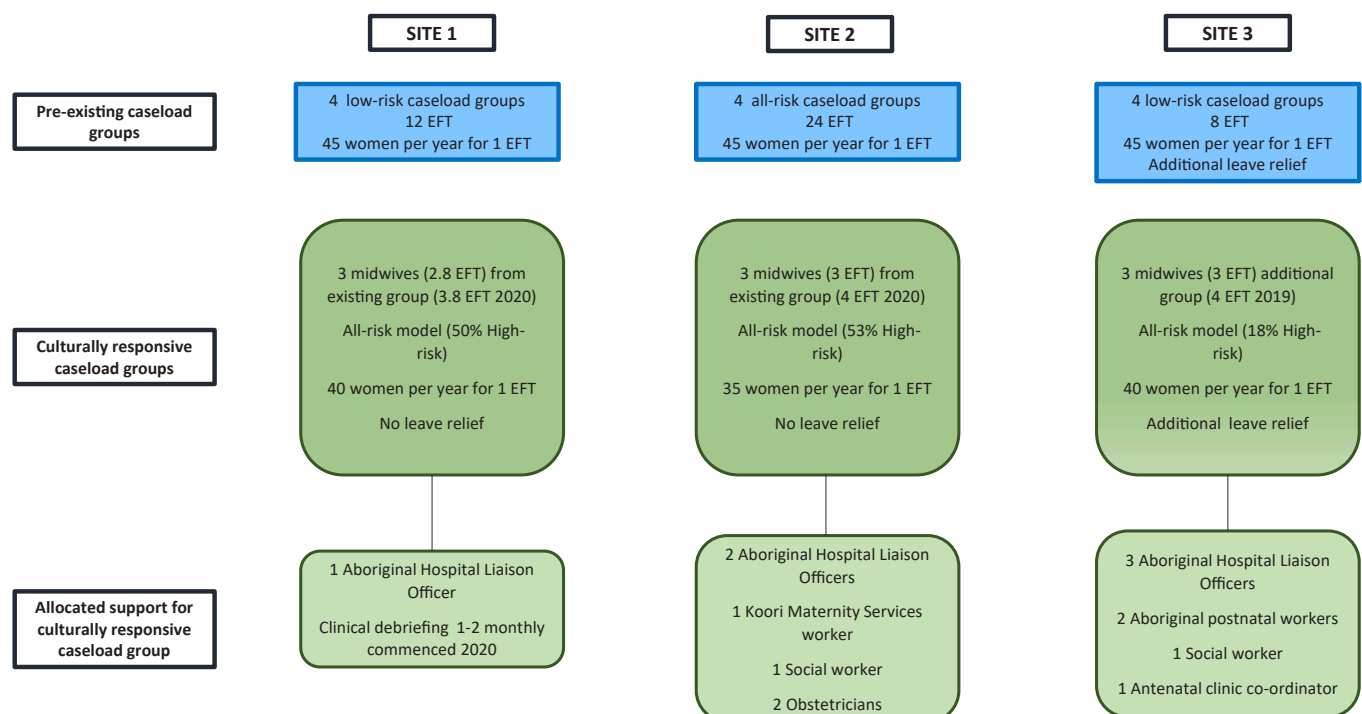


Fig. 1. Pre-existing caseload groups and newly formed culturally responsive models by site.

support and advocacy for First Nations families. Site 2 also had one KMS worker and Site 3 had additional Aboriginal postnatal health workers. Site 2 received support from model-specific allocated obstetricians, and Sites 2 and 3 had support from allocated social workers. [32] (Fig. 1).

Women of ‘any’ risk status were eligible for care in these models, and the percentage of women requiring specialist obstetric or medical input varied between the sites (Fig. 1). Over the course of the project all three sites experienced an increase in the number of First Nations women and non-Indigenous women having a First Nations baby booking for care. Site 1: 80 women in the first year to 135 in the final year (69% increase). Site 2: from 117 women in the first year to 129 in the final year (10% increase) Site 3: 57 women in the first year to 79 in the final year (38% increase).

2.1.4. Participants

All midwives working in either the standard or culturally responsive caseload groups at one of the three partner sites were eligible. Participation was voluntary and completion of the survey was considered consent.

2.1.5. Recruitment

Participant recruitment commenced in October 2017 at Site 1, May 2018 at Site 2 and October 2018 at Site 3, six months after the culturally responsive models commenced at the respective sites. Caseload midwives working in the new model were sent an email invitation to complete the baseline survey after six months working in the model. Study aims, a link to the online survey and instructions for completion were included. Reminder emails were sent two and four weeks later. Midwives were invited to complete a second survey after they had been working in the model for two years, or on exit from the model (whichever came first).

Midwives working in standard caseload models were sent an invitation to participate in the study, via their manager, approximately two years after the culturally responsive model commenced at their site. Reminders were sent two and four weeks later.

2.1.6. Data collection tools

Data collection tools included previously developed questions that explored midwives’ views and experiences of working in caseload, views regarding different ‘risk’ models, and intentions for continued work in the model. [5,34] Demographic questions included age, education, years of experience, years in current employment, years as a caseload midwife, number of women in their caseload and hours of employment. Participants were also provided with opportunities to provide further detail through free text responses.

Perspectives on professional roles were measured by the Midwifery Process Questionnaire (MPQ) [49] focusing on professional support, professional satisfaction, professional development and client interaction. The tool contains twenty Likert-type scale questions, with response options ranging from (1) Strongly agree to (5) Strongly disagree.

Burnout was measured using the Copenhagen Burnout Inventory (CBI). [29] The CBI has a series of five-point Likert-type scale questions, exploring the domains of personal, work-related and client-related burnout.

Midwives working in the culturally responsive model were asked additional questions about working with First Nations families and community organisations, individual and organisational cultural safety using scale items with responses ranging from (1) ‘Strongly agree’ to (5) ‘Strongly disagree’. Midwives who left the model were asked about their employment plans, if they would consider working as a caseload midwife or in a culturally responsive model again, with opportunities to comment further on their responses through free text.

The questionnaires were piloted by four research team members who were midwives, resulting in some re-wording of questions prior to further piloting by five clinical midwives, including one First Nations midwife. No midwives involved in piloting were eligible for study

participation.

2.1.7. Data management and analysis

Data were collected via online surveys using the RedCap (Research and Electronic Data Capture) data management system [19] then downloaded to Stata Statistical Software V.16 [44] for analysis. Data cleaning included range and logic checks. Descriptive statistics were used, and categorical data were summarised using frequencies and percentages. Means and standard deviations were presented for continuous data, unless the data were skewed, when median and range are provided.

A mean score was calculated for each participant for each subscale of the CBI. Group subscale mean scores were calculated separately for standard and culturally responsive caseload midwives across the sites, then by group by site. CBI scores ≥ 50 indicate a high degree of burnout for any subscale. [4] The MPQ was coded to produce scores ranging from minus two (negative responses) to plus two (positive responses). [48] Mean scores were calculated for each subscale for individual participants, as well as per caseload group at each site and per caseload group with sites combined. The CBI and MPQ individual scores for midwives in the culturally responsive model were presented as baseline survey and either a two year, or exit survey, to explore any changes over time.

Descriptive statistics for other variables are presented by caseload group but given the small sample size, statistical comparisons between the groups have not been made.

Content analysis was used to identify codes and categories within free text responses in the survey. [15] Two of the authors (MN and SH) analysed the open-ended responses separately, then together reached consensus on codes, grouping comments of similar topics together, with a third author (FM) involved in further reading and discussion of codes, with categories developed and agreed between all three. Vignettes have been used to illustrate the categories and have been attributed by site, caseload model and an allocated identifier.

2.1.8. Findings

2.1.8.1. Midwives’ outcomes. Fig. 2 shows the culturally responsive and standard caseload midwives’ study participation. Of the 22 eligible culturally responsive midwives 18 (82%) completed the baseline survey. Four midwives completed a two-year survey. Four of 10 midwives who left the model completed the exit survey (of whom one had not completed the baseline survey). The 38 midwives who worked in the standard caseload groups across all sites in June 2019 were invited to participate. Data collection was completed by December 2020 at two sites, however as there had been no responses from midwives from one site it was extended at that site until March 2021, as we wanted to provide further opportunity for midwives to respond to provide a comparison for the culturally responsive midwives’ data. Overall, 16/38 standard caseload midwives participated.

2.1.9. Participant characteristics

The groups were similar overall; most midwives were under 40 years of age, had less than 10 years’ experience as a midwife and worked fulltime (Table 1). A higher percentage of midwives working in the culturally responsive group had less than one years’ experience working in a caseload model (44% compared to 25% in the standard group), and over half (53%) had less than five years’ midwifery experience (compared with 31% in the standard group). Midwives working in standard caseload were more likely to have a postgraduate qualification (44% versus 16%). One midwife identified as First Nations, but responses are not categorised by First Nations status to avoid identification.

2.1.9.1. Midwives’ views of working in the caseload model. Most midwives across both groups reported the importance of continuity of care

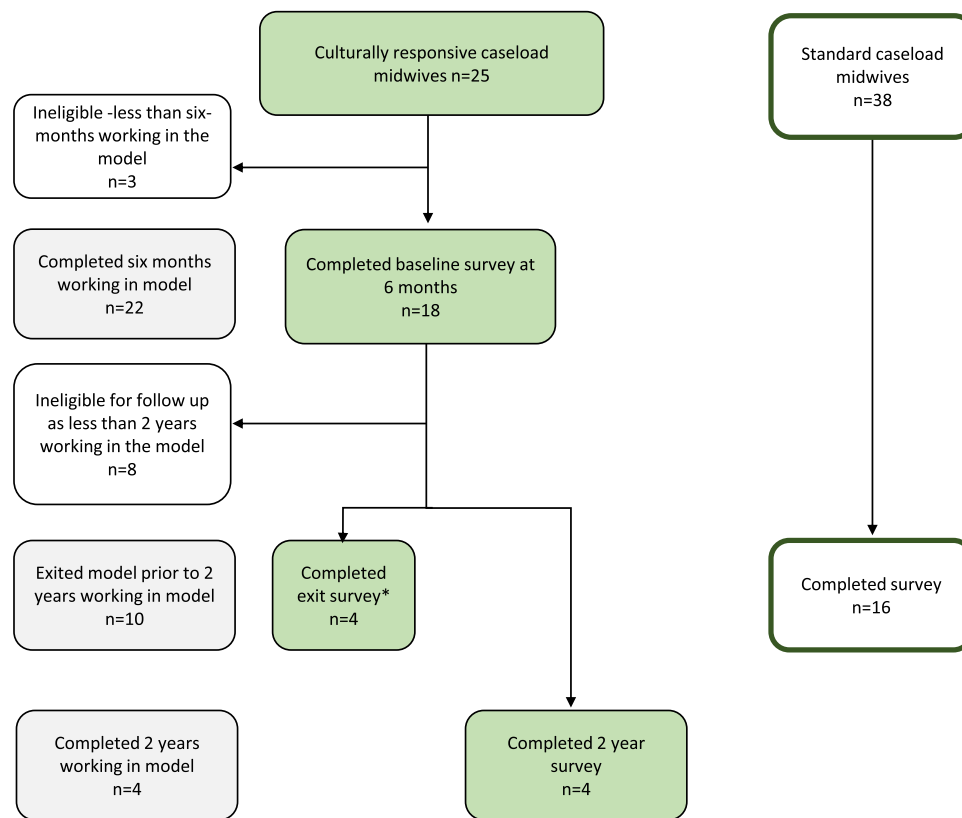


Fig. 2. Online survey completion flowchart, 1 midwife completed exit survey but did not complete baseline survey.

for women, the satisfaction associated with developing close relationships with women, and knowing the women they were looking after in labour (Table 2). Midwives indicated that working closely with a small number of midwives was attractive. Around half the midwives in both groups 'Agreed' or 'Strongly agreed' that maintaining a work life balance was difficult in caseload. For caseload work, support from family and friends was seen as important, as was having protected days off. Long hours on call was identified as a potential deterrent to working in the model.

2.1.9.2. Midwives' ongoing work plans. We asked about midwives' ongoing plans for working in their respective caseload groups. The majority from both groups reported planning to continue to work in caseload for another year or more (CR n = 13/18, SC n = 13/16). Four were planning on leaving soon or had already resigned (two from each group), and four were not sure (two from each group).

We were also interested in the reasons for midwives' responses regarding ongoing work plans, and a range of free-text responses were provided (11 SC, 19 CR, including two from the two-year survey). Factors that supported continued work in the models were identified by both groups and related to overall role satisfaction (SC n = 8, CR n = 6), and aspects of the role which facilitate sustainability (SC n = 1, CR n = 2).

Positive attitudes towards the purpose and goals of a tailored culturally specific model were mentioned by midwives working in the culturally responsive model (n = 3).

I was keen to be part of the caseload group from the first time I heard about it. I spent a few years working [in standard caseload] so feel happy to care for Aboriginal families. (Site 1, CR model, Midwife 3)

[Site 2] has developed a sustainable caseload model of care. It is recognised that working with Aboriginal and Torres Strait Islander women requires a reduced caseload to meet the needs of this cultural group. This

reduced caseload makes the model sustainable for the midwives working in it. Well done. (Site 2, CR model, Midwife 20)

Factors seen as limiting midwives' continuing with caseload work were described, with some not related to the work in caseload, but based on future plans for their career (n = 4) or personal life (n = 8).

I'm going on maternity leave soon, [so] ... I'm not sure if I'll return at a part time capacity or change roles when I'm back. I love the job and find it is more rewarding and [makes me] less burnt out than regular shift work so hoping to come back to caseload. (Site 2, SC, Midwife 12)

Some felt their time in caseload would be limited by the on-call requirements (SC n = 2, CR n = 3), poor work-life balance (SC n = 2, CR n = 3), working in a caseload model with women of all-risk (CR n = 3) and a lack of organisational support (SC n = 1, CR n = 3).

Have been on call now for 3.5 years and feeling fatigued by lack of work-life balance. (Site 3, SC model, Midwife 14)

I'm not sure how long I would like to work in this model, would probably depend on a number of factors including overall organisational support/policy, contract vs permanent position. (Site 1, CR model, Midwife 18)

My decision to stop working would not be because of the families themselves but the energy it requires to work within the system. The system is stressful not the people. For example, getting individualised support if support is needed is very hard because quite often the support services are underfunded or only provide specific things like cots and baby clothes instead of things that women or families are saying they actually need. (Site 2, CR model, Midwife 21)

2.1.9.3. Caseload hours, on-call work. Midwives were asked to respond to questions regarding hours worked, additional hours worked above their EFT and aspects related to working on-call. Around a quarter of both groups usually worked above their contracted hours each week,

Table 1
Participant characteristics.

	Culturally responsive model caseload midwives* n=19		Standard caseload midwives n=16	
	n	%	n	%
Hospital				
Site 1	7	37	7	44
Site 2	8	44	5	31
Site 3	4	21	4	25
Age categories				
20–29 years	8	44	5	31
30–39 years	7	37	8	50
40–49 years	1	5	2	13
> 50 years	3	16	1	6
Identifies as Aboriginal and/or Torres Strait Islander origin				
Aboriginal	1	5	0	0
Torres Strait Islander	0	0	0	0
Neither Aboriginal and/or Torres Strait Islander	18	95	16	100
Years of midwifery experience				
< 5 years	10	53	5	31
6–10 years	5	26	8	50
11–15 years	2	11	2	13
> 15 years	2	11	1	6
Years working as a midwife at current organisation				
< 1 year	4	21	0	0
1–5 years	13	68	7	44
6–10 years	2	11	8	50
11–15 years	0	0	0	0
>15 years	0	0	1	6
Years working as a caseload midwife (n=18, n=16)				
< 1 year	8	44	4	25
1–5 years	9	50	6	38
6–10 years	1	5	6	38
Initial midwifery education				
Hospital program	3	16	1	6
College/university program	16	84	15	94
Tertiary qualifications (n=18, n=16) **				
Diploma	1	5	0	0
Degree	15	79	14	88
Post graduate diploma	1	5	6	38
Master's degree	2	11	1	6
Work hours				
Full time	17	89	13	81
Part time	2	11	3	19
<i>If part-time EFT 0.8</i>	2	100	2	67
<i>If part-time EFT 0.5</i>	0	0	1	33

* One midwife in the culturally responsive group did not complete a baseline survey but did complete an exit survey, and their characteristics are included in this table.

** Could choose more than one so percentage could add to > 100

ranging from 2 to 15 additional hours. All midwives reported being called out of business hours whilst on call each week (CR mean 2.8 calls; SC mean 4.6 calls) and all reported being woken once or twice each week on average to give telephone advice.

2.1.9.4. Midwives' views on caseload numbers. All midwives were asked how many women per year they thought was appropriate for a fulltime caseload according to women's 'risk'. The majority in both groups considered 40–45 women per year was appropriate in low-risk caseload (Table 3). When considering a high-risk caseload model a higher percentage of culturally responsive caseload midwives considered the caseload should be less than 30 (74% CR, 6% SC). Open-ended responses highlighted a number of issues with working in a model caring for women either medically complex or experiencing additional challenges,

and 11 midwives (CR n = 7, SC n = 4) commented, mostly about complexities within their caseloads that made their workload heavier.

Nine of the midwives in the culturally responsive model made comments about women's care complexities impacted their workload, including women's care requiring a higher level of coordination and administration (n = 2), aspects of the work being emotionally challenging (n = 2), and that providing quality care in this model requires a lower caseload (n = 5).

To give good care to women with complex needs, I believe 3 women per month should be maximum load. (Site 1, CR model, Midwife 2)

I think that optimal caseload care can only be provided when the midwife has enough time to work with each individual woman. I think if the

Table 2
Midwives' views of working in the caseload model of care at baseline.

Culturally responsive caseload midwives* n=18 Standard caseload midwives n=16		Strongly disagree		Disagree		Not sure		Agree		Strongly agree	
		n	%	n	%	n	%	n	%	n	%
Developing close relationships with women through continuity of care is important to me	Culturally specific	0	0	0	0	0	0	1	6	17	94
	Standard	0	0	0	0	0	0	3	19	13	81
Getting to know the woman's family during pregnancy is important to me	Culturally specific	0	0	0	0	0	0	6	43	12	56
	Standard	0	0	0	0	0	0	9	56	7	44
Knowing the women, you are looking after in labour is satisfying	Culturally specific	0	0	0	0	0	0	1	6	17	94
	Standard	0	0	0	0	0	0	2	13	14	88
Continuity of care is important to women	Culturally specific	0	0	0	0	0	0	1	6	17	94
	Standard	0	0	0	0	0	0	1	6	15	94
Working closely with a small number of other midwives is attractive to me	Culturally specific	0	0	0	0	0	0	1	6	17	94
	Standard	0	0	0	0	0	0	2	12	14	88
Working autonomously appeals to me	Culturally specific	0	0	0	0	0	0	6	43	12	56
	Standard	0	0	0	0	0	0	3	19	13	81
On-call work appeals to me	Culturally specific	0	0	1	6	3	17	14	78	0	0
	Standard	0	0	2	13	2	13	11	69	1	6
I prefer flexible work hours to shift work	Culturally specific	0	0	0	0	1	6	9	50	8	44
	Standard	1	6	0	0	0	0	7	44	8	50
Shift work is a better way of working than on-call work	Culturally specific	1	6	11	61	6	33	0	0	0	0
	Standard	2	13	8	50	4	25	2	13	0	0
Knowing my roster in advance is important to me	Culturally specific	0	0	1	6	0	0	8	44	9	50
	Standard	0	0	0	0	2	13	8	50	6	38
The long hours that can occur with on-call work are a deterrent to working in caseload	Culturally specific	0	0	9	50	1	6	7	39	1	6
	Standard	1	6	7	44	1	6	6	38	1	6
Support from family and friends is necessary for caseload work	Culturally specific	0	0	0	0	1	6	6	33	11	61
	Standard	0	0	0	0	0	0	4	25	12	75
Maintaining a work-life balance is difficult as a caseload midwife	Culturally specific	0	0	6	38	1	6	8	50	1	6
	Standard n=15	1	7	7	47	0	0	4	27	3	20
Protected days off are always important regardless of model of care	Culturally specific	0	0	0	0	0	0	0	0	18	100
	Standard	0	0	0	0	0	0	1	6	15	94
I have enough opportunities to make decisions about care	Culturally specific	0	0	1	5.6	1	5.6	13	72.2	3	17
	Standard	0	0	1	6	0	0	11	69	4	25
There is not enough time to do my job properly	Culturally specific	3	17	5	28	6	33	4	22	0	0
	Standard	1	6	10	63	2	13	2	13	1	6
I have limited opportunities to provide continuity of care	Culturally specific	7	39	11	61	0	0	0	0	0	0
	Standard	6	38	10	63	0	0	0	0	0	0
I need greater scope to provide women with information about their care	Culturally specific	2	11	10	56	2	11	4	22	0	0
	Standard n=15	1	7	10	67	3	20	1	7	0	0

* Data from baseline questionnaire.

caseload is too big there is not enough time to build effective and supportive relationships. (Site 2, CR model, Midwife 6)

Midwives from both models identified aspects of care, not associated with the level of obstetric or social needs of women, which impact on

workload. These included additional organisational requirements placed on caseload midwives (auditing and patient surveys) (n = 1), lack of coverage for leave (n = 2), differences in philosophy of care (n = 1) and that caseload work fluctuates according to acuity (n = 2).

Table 3

Midwives' views of an appropriate caseload* according to level of obstetric/medical 'risk' in model.

	Culturally responsive caseload midwives n=19		Standard caseload midwives n=16	
	n	%	n	%
Low-risk model				
<40	0	0	0	0
40	8	42	5	31
45	7	37	10	63
> 45	4	21	1	6
Mixed-risk model (n=18, n=16)				
30	1	6	0	0
35	13	72	5	31
40	4	22	9	56
45	0	0	1	6
Not sure	0	0	1	6
High-risk model				
Less than 30	14	74	1	6
30	5	26	5	31
35	0	0	5	31
40	0	0	2	13
Not sure	0	0	3	19

* Number of women per year per one EFT.

2.2. Midwifery Process Questionnaire

Outcomes for the MPQ are presented in Table 4, with MPQ reported by domain, with sites combined, and by individual site. Domain mean and median scores were also calculated and are provided in the Supplementary table. All the midwives (including at both timepoints for the culturally responsive group) had positive attitudes across the MPQ domains of 'professional satisfaction' and 'professional support', and the majority were positive for the 'client interaction' and 'professional development' domains. Combined group means were positive, for both caseload groups, for all domains (Supplementary table). Overall, there was a trend of higher mean scores for the culturally responsive group.

Table 4

Midwifery Process Questionnaire outcomes by domain, caseload group and site.

	Culturally responsive caseload midwives n=18				Standard caseload midwives n=16			
	Negative attitude (MPQ score <0)		Positive attitude (MPQ score 0-2)		Negative attitude (MPQ score <0)		Positive attitude (MPQ score 0-2)	
	n	%	n	%	n	%	n	%
Professional satisfaction								
All sites combined	0	0	18	100	0	0	16	100
Site 1 (n=7, n=7)	0	0	7	100	0	0	7	100
Site 2 (n=7, n=5)	0	0	7	100	0	0	5	100
Site 3 (n=4, n=4)	0	0	4	100	0	0	4	100
Professional support								
All sites combined	0	0	18	100	0	0	16	100
Site 1	0	0	7	100	0	0	7	100
Site 2	0	0	7	100	0	0	5	100
Site 3	0	0	4	100	0	0	4	100
Client interaction								
All sites combined	1	6	17	94	0	0	16	100
Site 1 (n=6, n=7)	0	0	6	100	0	0	7	100
Site 2 (n=6, n=4)	1	17	5	83	0	0	4	100
Site 3	0	0	4	100	0	0	4	100
Professional development								
All sites combined	0	0	18	100	1	6	16	94
Site 1	0	0	7	100	1	14	6	86
Site 2	0	0	7	100	0	0	5	100
Site 3	0	0	4	100	0	0	4	100

2.3. Copenhagen Burnout Inventory

Copenhagen Burnout Inventory scores by site and with sites combined are provided in Table 5 and the Supplementary table. Overall, mean CBI scores for both groups of midwives showed no burnout (CR group: personal-mean 47 (sd 19.3), work-mean 43.8 (sd 21.2) client-mean 20.6 (sd 15.6); SC group: personal-mean 42.5 (sd 9.9), work-mean 35.7 (sd 9.8) client-mean 28.1 (sd 11.8)), although there were some individual midwives with burnout in both groups.

Individual midwives over time (culturally responsive caseload midwives only): CBI and MPQ.

Five midwives working in the culturally responsive model completed both baseline and follow-up surveys which were scored individually to enable comparison (Fig. 3 and Fig. 4). These results indicate any change in midwives' role satisfaction and burnout levels - from earlier in their

Table 5
Copenhagen Burnout Inventory: percentage of midwives experiencing ‘none’, ‘moderate’, ‘high or severe’ personal-, work-, or client-related burnout.

Burnout domain	Culturally responsive caseload midwives n=18								Standard caseload midwives n=16							
	No burnout (<50)		Moderate (50-74)		High (75-99)		Severe (100)		No burnout (<50)		Moderate (50-74)		High (75-99)		Severe (100)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Personal																
Total	10	55	6	33	2	11	0	0	12	75	4	25	0	0	0	0
Site 1 (n=7, n=7)	2	29	4	57	1	14	0	0	6	86	1	14	0	0	0	0
Site 2 (n=7, n=5)	5	72	2	28	0	0	0	0	2	40	3	60	0	0	0	0
Site 3 (n=4, n=4)	3	75	0	0	1	25	0	0	4	100	0	0	0	0	0	0
Work-related																
Total	11	61	6	33	1	6	0	0	16	89	0	0	0	0	0	0
Site 1 (n=7, n=7)	2	29	5	71	0	0	0	0	7	100	0	0	0	0	0	0
Site 2 (n=7, n=5)	6	86	1	14	0	0	0	0	5	100	0	0	0	0	0	0
Site 3 (n=4, n=4)	3	75	0	0	1	25	0	0	4	100	0	0	0	0	0	0
Client-related																
Total	17	94	1	6	0	0	0	0	15	94	1	6	0	0	0	0
Site 1 (n=7, n=7)	6	88	1	14	0	0	0	0	7	100	0	0	0	0	0	0
Site 2 (n=7, n=5)	7	100	0	0	0	0	0	0	4	80	1	20	0	0	0	0
Site 3 (n=4, n=4)	4	100	0	0	0	0	0	0	4	80	0	0	0	0	0	0

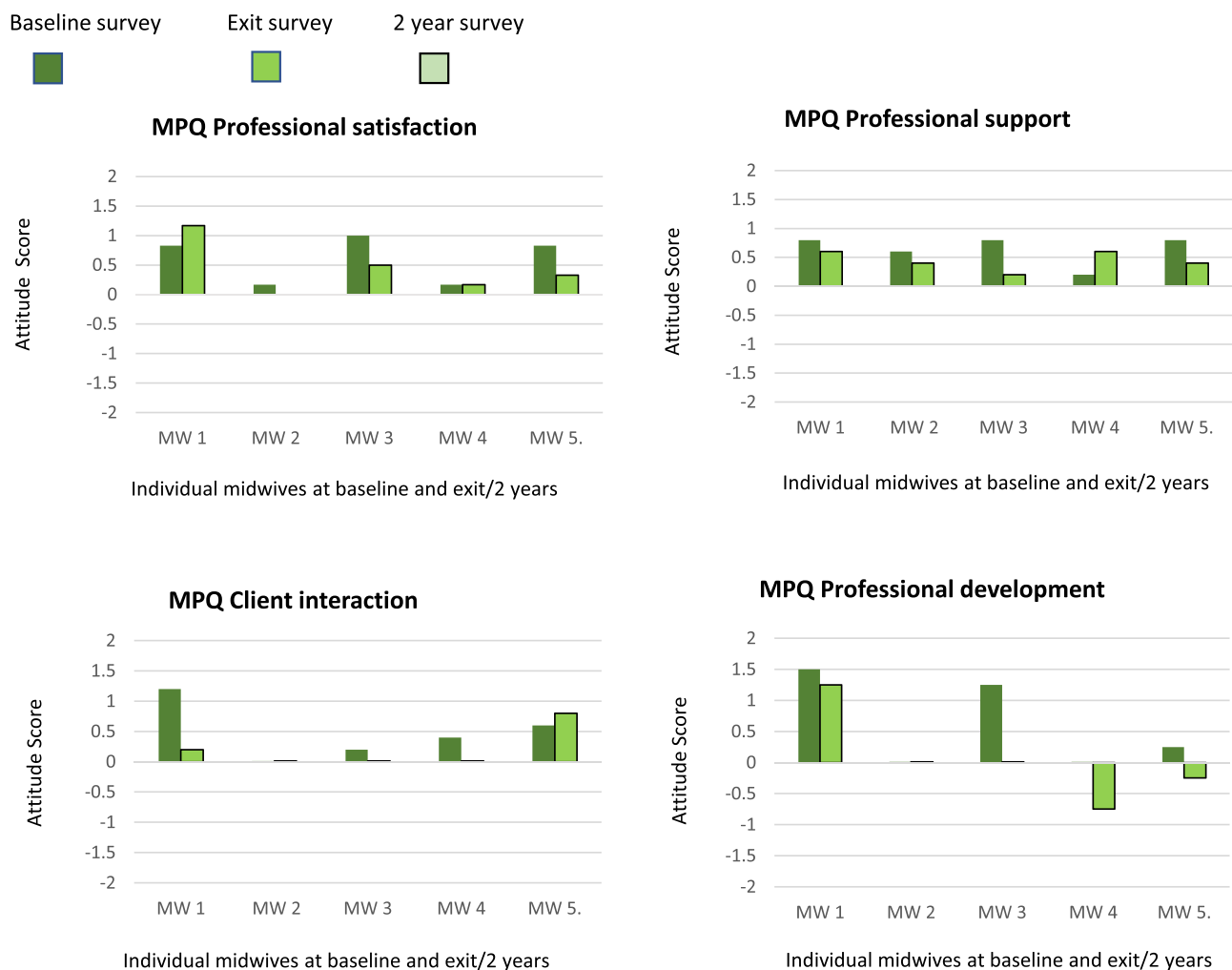


Fig. 3. Culturally responsive caseload midwives’ Midwifery Process Questionnaire* scores over time *Scores 0–2 indicates positive attitudes, less than 0 indicates negative attitudes.

work in the model compared to their work in the model later (and perhaps impacting their decision to leave). Two midwives completed baseline and exit surveys, Midwife 1 (Site 1) Midwife 2 (Site 3). Three midwives completed a baseline and 2-year survey, Midwife 3 (Site 1), and Midwives 4 (Site 2) and 5 (Site 3).

All five midwives had positive scores in each domain of the MPQ at both baseline and at the later timepoint (2 year or exit) except in the professional development domain. Midwives 4 and 5 scored negatively

for professional development at the 2 year survey.

Regarding the CBI, no midwife scored higher than 50 on client related burnout, although there were slight increases in mean scores over time for all midwives. For personal related burnout, three of the midwives’ scores indicated burnt out at baseline (two at Site 1 and one at Site 2). Their scores reduced over time, however remained above 50. A similar pattern was identified for work related burnout (Fig. 3).

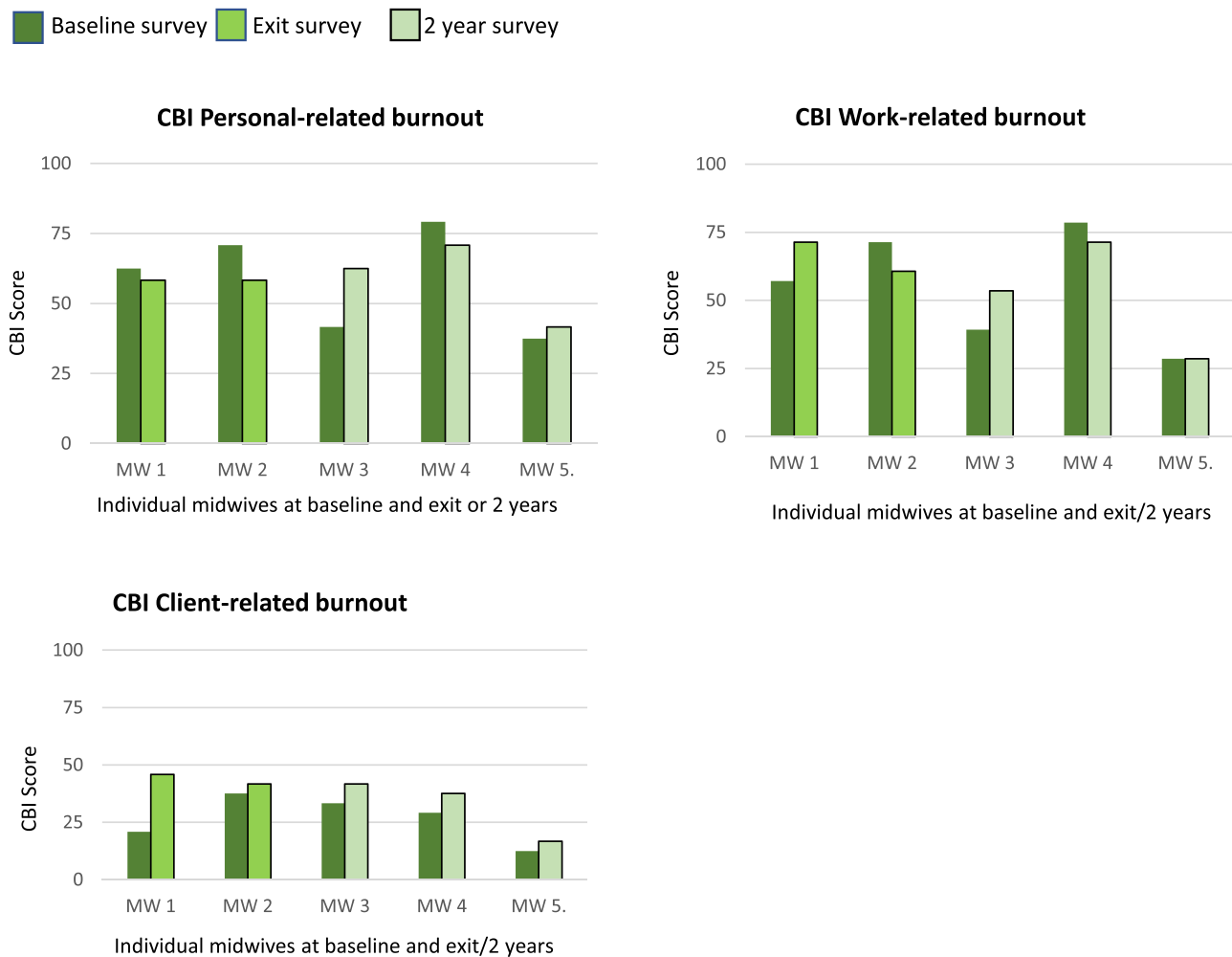


Fig. 4. Culturally responsive caseload midwives' Copenhagen Burnout Inventory*over time * Scores of ≥ 50 indicates burnout.

3. Discussion

This study explored the views and experiences of midwives working in a culturally responsive all-risk caseload model of care for Australian First Nations families and compared these with those of standard caseload midwives at the same sites. Overall, midwives in both groups reported positive views towards their professional role, valued working with a small group of midwives and developing close relationships with women through continuity of care. Midwives working in the First Nations model reported great satisfaction working with the women and their families but acknowledged the challenges of working in this model. Key factors influencing midwives' satisfaction with the role included adjustments to caseload numbers per EFT to account for medical and psychosocial complexities and organisational support around the model. The importance of these factors has been reported elsewhere, as has the need to allow flexibility around time for case management of women with complexities [16,33,40] to prevent overburdening midwives [33] whilst ensuring the woman's individual needs are met. [40] A systematic review and meta-analysis of burnout in midwives using the CBI found a 50% prevalence of personal burnout, 40% prevalence of work-related burnout and a 10% client-related burnout among midwives working in different models of care in Australia, Denmark, Canada, New Zealand, Norway, Sweden and United Kingdom. [47] This review reported lack of staff and resources amongst factors contributing to work-related burnout. A number of other studies have reported that for midwives (regardless of model of care), high workload, low support from colleagues, challenging clinical situations and low clinical

autonomy have been found to correlate with poor emotional wellbeing, [10] leading to high attrition. [11] In this study, midwives in both groups suggested that factors that would limit their time working in caseload related to being on-call, poor work-life balance and factors relating to how the model was organised and supported. General wellbeing and satisfaction among midwives are important considerations in relation to the estimated decline in the numbers of midwives in Australia. [5] It has been reported, however, that burnout is lower in models such as caseload midwifery, in which the capacity to build relationships with women, and professional autonomy is high. [7,45].

In this study, adjusting the number of women per EFT was considered important by midwives. With some population groups requiring more care, [16,26,38] it is recommended that a safe and achievable caseload per midwife EFT be allocated. [38] One UK study for 'socially disadvantaged' women reported a suitable case load per EFT midwife as 35 women per year [39] whilst a model for First Nations women in Queensland, Australia reported a caseload of 30–32 women per year for one EFT. [27] Kildea's 2017 Birthing in our Community study described the need to incrementally reduce midwives' caseload (from 35 to 25 women per EFT) due to added case management time required to meet women's social and emotional needs as well as interagency communication and coordination. [26].

In this study the sites where the culturally responsive caseload midwives had the highest mean and median scores for personal and work-related burnout also experienced the greatest increase in women eligible for the model and were providing care to a higher proportion of women with additional complexities. This is consistent with other

studies of midwives who reported burnout working in models with a high workload and lack of collegial support. [41] Caseload size has been identified as a significant consideration for sustainability, [17,41] and should be factored in to planning, with the load equally distributed across groups. [41] Realistic and manageable caseload sizes, with provision of adequate cover for recreational and other forms of leave are also critical. [41] Timely access to low or no cost counselling is another key factor to address any stress that may result from working with women who are experiencing social complexity. [46].

The findings of this study echo previous studies exploring midwives' job satisfaction and burnout [36,46] with midwives placing high importance on an enhanced ability to build close relationships with women with continuity, contributing to lower levels of burnout and increased job satisfaction. Providing culturally appropriate care for First Nations women is important to midwives so that the women and their families feel physically, emotionally, spiritually and socially safe, [31] and seen as essential in assessing, and understanding, families' cultural needs and finding ways to connect. [30].

There is very limited research to date exploring the views of midwives providing all-risk caseload midwifery care, and particularly so among midwives caring for First Nations populations. This study evaluated working in a model for First Nations families of which approximately 58% of women were considered obstetrically/medically 'low-risk'. Care should therefore be taken when extrapolating our findings to other target populations.

A limitation of this study is that we surveyed midwives' six months after working in the culturally responsive model and not prior to commencing. We therefore do not have 'before' satisfaction and burnout data and are unable to determine if the small number of midwives experiencing burnout at baseline were burnt out before they entered the model. Of the 25 midwives who commenced in the CR model, only four completed the 2 year survey, therefore conclusions about the impact of working within the model over a medium time period are limited. We also measured the standard caseload midwives' views at only one point (not two) and did not follow up the midwives who exited this model during the study period. Further, we did not explore the role of Aboriginal health workers and the impact of this collaboration on women's care, nor how this may affect midwife satisfaction and burnout. We recommend this be included in future research.

Increasing women's access to midwifery continuity of care models forms part of the Department of Health's strategic directions for Australian maternity services. [2] Only 31% of hospitals across Australia reported offering caseload midwifery in 2022, amounting to approximately 15% of women having access. [3] Given the critical nature of the role of the midwife in sustaining caseload midwifery models, further evaluation and monitoring of the impact of working in all-risk continuity of care models on midwives, including the context of the model supports, is recommended.

4. Conclusion

Midwives report high levels of satisfaction working in caseload models of care. For models providing care for women with high medical or psychosocial complexity it is imperative that the caseload be reduced, and organisational supports implemented to prevent burnout and ensure sustainability of the model.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.wombi.2023.05.006.

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