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# Aboriginal mothers in prison in Australia: a study of social, emotional and physical wellbeing

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Ongoing colonisation, racism and systemic disadvantage underlie the health and social and emotional wellbeing of Aboriginal women and are implicated in their over-representation in Australian prisons.<sup>1</sup> The impact of cultural and social dislocation, child removal and loss of language have contributed to intergenerational trauma, disparities in health, marginalisation from essential services and incarceration.<sup>2-6</sup> Higher visibility and over-policing of Aboriginal women has contributed to higher rates of charging and imprisonment of Aboriginal women for minor offences compared to non-Aboriginal women. As a result, Aboriginal women are more likely than non-Aboriginal women to cycle through the prison system on shorter sentences or remand (unsentenced) and experience multiple incarcerations.<sup>6,7</sup> This presents a major health risk to Aboriginal women, families and communities, as the post-release period is associated with significantly elevated risk of mortality for Aboriginal people compared to non-Aboriginal people.<sup>8</sup>

There is no routine monitoring of health outcomes of the Australian prison population, resulting in substantial gaps in evidence on the health and social and emotional wellbeing of this group.<sup>9</sup> Moreover, Australian

## Abstract

**Objective:** To describe the social, emotional and physical wellbeing of Aboriginal mothers in prison.

**Methods:** Cross-sectional survey, including a Short Form Health Survey (SF-12) and Kessler Psychological Distress Scale (5-item version) administered to Aboriginal women who self-identified as mothers.

**Results:** Seventy-seven Aboriginal mothers in New South Wales (NSW) and 84 in Western Australia (WA) participated in the study. Eighty-three per cent (n=59) of mothers in NSW were in prison for drug-related offences, 64.8% (n=46) of mothers in WA were in prison for offences committed under the influence of alcohol. Sixty-eight per cent (n=52) of mothers in NSW and 35% (n=28) of mothers in WA reported mental health problems. Physical (PCS) and Mental (MCS) component scores of SF-12 varied for mothers in NSW and WA. Mothers in NSW experienced poorer health and functioning than mothers in WA (NSW: PCS 49.5, MCS 40.6; WA: PCS 54.4, MCS 48.3) and high levels of psychological distress (NSW: 13.1; WA 10.1).

**Conclusions:** Aboriginal mothers in prison have significant health needs associated with physical and mental health, and psychological distress.

**Implications for public health:** Adoption of social and emotional wellbeing as an explanatory framework for culturally secure healthcare in prison is essential to improving health outcomes of Aboriginal mothers in prison in Australia.

**Key words:** mothers, prisoner health, social and emotional wellbeing, mental health, Aboriginal and Torres Strait Islander Peoples

prison health surveys do not apply Aboriginal concepts of health and social and emotional wellbeing (SEWB). SEWB is a holistic concept that recognises the importance to Aboriginal people of connection to land, culture, spirituality, ancestry, family and community. This view of health requires looking beyond

the physical needs of the individual and understanding health in a context of inequity, trauma, racism and discrimination, and the influences of what assists people in accessing health services.<sup>10</sup>

The number of Aboriginal women in prison is a major public health issue accounting for

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33% of the female prison population, but only 3% of the Australian female population.<sup>11-13</sup> Women are the fastest-growing group in the prison population, increasing by 48% between 2002 and 2012 compared to 29% for men<sup>14</sup> and by 55% between 2013 and 2018 compared to 38% for men.<sup>15</sup> Aboriginal women are more likely to be in prison on shorter sentences and on remand and are over-represented among those released from prison, with approximately 2.03 Aboriginal women released from prison annually for each equivalent person in prison (compared to 1.62 non-Aboriginal women, 1.27 Aboriginal men and 0.98 non-Aboriginal men).<sup>9</sup>

People who have experienced incarceration have significantly higher morbidity and mortality than the general population,<sup>16</sup> and high rates of chronic illness, communicable and non-communicable diseases, poor mental health and substance dependence.<sup>17</sup> For women, this health picture intersects with life-span trauma, including physical and sexual abuse, and multiple and complex social disadvantages.<sup>18-23</sup> For Aboriginal women, this is occurring in a context of historical and ongoing intergenerational trauma and loss sustained by entrenched racism, discrimination and socioeconomic and political inequities.<sup>20,21,23-26</sup> Aboriginal women in prison are a highly marginalised health population reporting significantly worse health and SEWB than other prison population groups.<sup>27,28</sup>

More than 80% of Aboriginal women in prison are mothers<sup>7</sup> and Aboriginal women often have primary care responsibilities for other children.<sup>7,20,29,30</sup> Previous health surveys of Aboriginal women in prison do not acknowledge the extended kinship ties and mothering role of Aboriginal women to both biological children and children in their extended family and community. Thus, they do not indicate the specific number of children affected by the incarceration of Aboriginal women in Australia or intergenerational health and SEWB impacts of incarceration of Aboriginal mothers on Aboriginal families and communities. This study evolved from a national project comparing maternal and perinatal outcomes of pregnant women in prison with women who were imprisoned at a time other than pregnancy, and community controls. This first study found that having a history of imprisonment is a strong predictor of inferior health outcomes for both mothers

and babies,<sup>31</sup> highlighting the particular vulnerability of Aboriginal mothers in terms of their health status and the intergenerational harm that may be caused by their increasing imprisonment.

Recent studies also show the needs of Aboriginal women and mothers in prison are not being met or sustained on release from prison.<sup>32,33</sup> To address these major gaps in knowledge, we undertook a multi-state study of Aboriginal mothers in prisons in New South Wales (NSW) and Western Australia (WA), acknowledging that Aboriginal health and SEWB issues are the result of ongoing colonisation<sup>34</sup> and Aboriginal mothers in prison are an underserved group due to their relatively small numbers in the overall prison population. Nationally, NSW has the largest prison population and WA has the highest rate of Aboriginal incarceration.<sup>15</sup> This was a multi-methods study comprised of a health survey and in-depth interviews. We applied an Aboriginal view of health and SEWB using community-led methods as a way of understanding how to respond to Aboriginal mothers in prison in a health setting. The aim of this article is to report the quantitative findings of the study, describing the health of Aboriginal mothers in NSW and WA through a SEWB lens. In taking this approach, our analysis acknowledges the health and SEWB of Aboriginal mothers in prison as inextricably connected to the health and SEWB of their children, families and communities and ongoing context of colonisation and intergenerational trauma.

## Methods

### Methodology

An Indigenous-informed decolonising research methodology was used<sup>35-37</sup> encompassing two years of Aboriginal community consultation prior to the data collection phase of the project. Aboriginal communities are inherently heterogeneous. In recognition of this diversity, community consultation phases were undertaken in both NSW and WA, led by senior female Aboriginal researchers. The consultation phase culminated in the formation of project advisory groups in each state who guided the research team on the data collection, analysis and dissemination strategy. The project advisory groups consisted of members from Aboriginal

community controlled health organisations, Aboriginal community organisations, Aboriginal community experts, Corrective Services and Justice Health and have resulted in ongoing partnerships. Listening to community and being led by the expert knowledge of community members on the project advisory groups was integral to the project ethics, facilitating community control of the research and ensuring maximum benefit to the project participants and their communities. The study has ethics approval from all relevant ethics committees including the Aboriginal Health and Medical Research Council NSW; the Western Australian Aboriginal Health Ethics Committee; the Justice Health and Forensic Mental Health Network NSW; Corrective Services NSW; the West Australian Department of Corrective Service's Research and Evaluation Committee; the University of NSW; the University of Technology Sydney; and Curtin University.

### Study design

This was an observational study. A cross-sectional health survey and in-depth qualitative interviews were conducted in both states. Results from the health survey are reported here.

### Data collection

Participants were recruited from metropolitan and regional prisons housing ten or more women in NSW (n=6) and WA (n=5) between February and September 2013. A combination of minimum, medium and maximum security correctional centres were included in both states. Prisons in each state were comparable, including a mixture of purpose-built correctional centres for women in addition to correctional centres for both men and women and state reception centres. Women self-identified to the researchers as Aboriginal and as a mother (NSW n=77, WA n=84) at the time of volunteering for the research. Aboriginal women were recruited with the assistance of a nominated prison representative, who would assist the researchers to identify potential participants and call them up to meet the researchers, or through direct contact with the researchers. Aboriginal women were invited to participate via plain language material disseminated within the prisons and provided with written and verbal information about the research and consent procedures. Participation in the research was voluntary. All participants

provided written informed consent prior to participation in the study.

A self-administered survey, facilitated by Aboriginal and non-Aboriginal researchers, was conducted in NSW and an interviewer-administered survey was conducted in WA. This decision was based on the advice of the two state-based Aboriginal project advisory groups and the logistical requirements of corrective services and conducting research in prisons in each state. State differences in the exact language of the questions, also on advice from the project advisory groups, led to a mapping process that was undertaken to ensure the integrity of the data and to determine comparability with a number of questions unique to each survey. Both surveys included questions on demographics, criminographics, health risk factors, reproductive health factors and standardised questionnaires measuring mental and physical health (Short Form-12 v2 [SF-12]) and psychological distress (Kessler-5).

The SF-12v2 is a well-established scale with psychometric, clinical and predictive validity across a range of populations.<sup>38,39</sup> This self-reported scale assesses health status via two subscales: physical component score (PCS) which captures physical wellbeing and mental component score (MCS) which captures mental wellbeing.<sup>39</sup> The SF-12 is scored using population norms to transform scores to be out of a possible 100, with 50 the mean score and a standard deviation (SD) of 10. The current study used norms derived from the Australian Bureau of Statistics (ABS) 1995 Australian National Health Survey dataset.<sup>40</sup> Higher scores indicate better health. Kessler-5 is a subset of five questions from the Kessler-10 psychological distress scale. It has been validated for use in the Aboriginal population<sup>41</sup> and was used in the Australian Aboriginal and Torres Strait Islander Health Survey.<sup>42</sup> Total scores from Kessler-5 ranges from 5 to 25, with a high score indicating a high level of psychological distress (score of 12–25 indicates high and very high levels).

### Statistical analysis

Descriptive analysis in the form of counts (and percentage) for nominal data and the mean and standard deviation for scale measures were calculated. Bivariate analyses were performed to determine the extent to which demographics, history of contact with justice system, risk factors and reproductive health were associated with SEWB and health

(i.e. SF-12v2 [PCS and MCS] and Kessler-5). Initially, in regression modelling, variables with  $p$ -value  $<0.2$  in bivariate analyses were included in multivariate models (Supplementary Table 1). A series of step-wise multivariate linear regression models were fitted and assessed to identify independent variables that were significantly associated with the health of Aboriginal mothers, as measured with SF-12v2 (PCS and MCS) and Kessler-5. A final parsimonious model was found for each outcome. All Aboriginal mothers in NSW and WA were first pooled for the modelling adjusting for the state and then separated for NSW and WA Aboriginal mothers. All data analyses were performed with Statistical Package for Social Sciences for Windows version 20.0 (SPSS Inc., Chicago, Illinois). A  $p$ -value of  $<0.05$  was used to infer a statistically significant result. Results are presented for each state individually due to the heterogeneity of the data.

## Results

### *Sociodemographics characteristics and risk factors of Aboriginal mothers in prison*

#### NSW

Seventy-seven Aboriginal mothers in prison in NSW participated in the study (Table 1). The mean age was 34.3 (SD 7.5) years. Twenty-five per cent ( $n=19/77$ ) of mothers were aged less than 30 years. Three per cent (2.6%,  $n=2/76$ ) of mothers were able to speak an Aboriginal language well. More than half (58.7%,  $n=44/75$ ) of mothers were separated from their family as children. Most mothers (92.2%,  $n=71/77$ ) had completed high school at  $\leq$ year 10 (Table 1). Six per cent of mothers ( $n=4/69$ ) were engaged in work or study one month before prison.

Almost all mothers in NSW (98.7%,  $n=75/76$ ) had ever smoked tobacco (Table 1). Twenty-one per cent ( $n=11/51$ ) of mothers drank  $\geq 6$  drinks containing alcohol daily or almost daily. Alcohol was reported as a problem in the past for 54.7% ( $n=41/75$ ) of mothers. Thirty-six per cent ( $n=26/73$ ) of mothers had been in prison for offences committed while under the influence of alcohol. Eighty-three per cent ( $n=59/71$ ) of mothers reported their offences had been drug related. Seventy per cent ( $n=49/70$ ) of mothers who were in prison due to alcohol- or drug-related problems had been diagnosed with one or more mental health issues.

Of mothers in NSW, 71% ( $n=49/69$ ) had been previously incarcerated as an adult and 24.3% ( $n=17/70$ ) had been in juvenile detention. Twenty-seven per cent ( $n=21/77$ ) of mothers had been pregnant during a period of incarceration and, of those, 38.1% ( $n=8$ ) gave birth in prison. Seventy-six mothers had given birth to a total of 285 children (average: four children per woman; range 1–10). Almost half (48.0%,  $n=36/75$ ) of mothers were caring for children aged  $<5$  years immediately before their incarceration.

#### WA

Eighty-four Aboriginal mothers in prison in WA were included in the study (Table 1). The mean age of mothers was 31.8 (SD 7.4). Forty-two per cent ( $n=46/84$ ) of mothers were aged less than 30 years. One-fifth (21.5%,  $n=17/79$ ) of mothers spoke an Aboriginal language well. One in five mothers (22.0%,  $n=18/82$ ) had been separated from their family as children by government or welfare organisations or had been taken away to a mission. More than three-quarters of mothers (77.1%,  $n=64/83$ ) had completed high school  $\leq$ year 10 and 20.2% ( $n=17$ ) of mothers were involved in full-time or part-time work or study one month before prison.

Most (92.6%,  $n=75/81$ ) Aboriginal mothers in WA prisons smoked tobacco. One-third of mothers (30.9%,  $n=17/55$ ) reported drinking  $\geq 6$  drinks containing alcohol daily or almost daily. Alcohol was reported as a problem in the past by 64.4% ( $n=47/73$ ) of mothers. Sixty-five per cent ( $n=46/71$ ) of mothers had been in prison for offences committed while under the influence of alcohol; 41.9% ( $n=26/62$ ) of mothers had been in prison due to drug-related offences. Forty per cent ( $n=24/60$ ) of mothers who were in prison due to alcohol- or drug-related problems had been diagnosed with mental health problems.

Fifty-seven per cent ( $n=48/84$ ) of mothers had been previously incarcerated and 45.2% ( $n=38/84$ ) had been in juvenile detention. One-third of mothers (29.9%,  $n=23/77$ ) had been pregnant during a period of incarceration, with four mothers (20.0%) having given birth in prison. Eighty-one mothers had given birth to a total of 267 children (average: three birth children per women; range: 1–7).

Forty-six per cent of mothers ( $n=38/82$ ) were caring for children aged  $<5$  years immediately before their incarceration.

**Table 1: Sociodemographic characteristics and risk factors of Aboriginal mothers in prison, NSW and WA.**

	NSW (n=77)	WA (n=84)
<b>Speaking Aboriginal language</b>		
Yes <sup>a</sup>	18/76 (23.7)	32/79 (40.5)
<b>Year finishing school</b>		
Year 11 and 12	6/77 (7.8)	19/83 (22.9)
Year 10	27/77 (35.1)	28/83 (33.7)
Year 9 or below <sup>b</sup>	44/77 (57.1)	36/83 (43.4)
<b>Employment status one month prior to prison</b>		
Work/study <sup>c</sup>	4/69 (5.8)	17/84 (20.2)
Unemployed and looking for work	30/69 (43.5)	15/84 (17.9)
Unemployed and not looking for work	19/69 (27.5)	46/84 (54.8)
Unable to work due to disability, age or health condition	16/69 (23.2)	6/84 (7.1)
<b>Current smoker</b>		
Yes	71/75 (94.7)	69/75 (92)
No	4/75 (5.3)	6/75 (8.0)
<b>Alcohol one year before prison</b>		
Never	23/76 (30.3)	14/76 (18.4)
4 times/month or less	36/76 (47.4)	16/76 (21.1)
2+ times/week	17/76 (22.4)	46/76 (60.5)
<b>Ever use Illicit Drugs</b>		
Yes	72/75 (96)	63/81 (77.8)
<b>Ever injected drugs<sup>d</sup></b>		
Yes	60/71 (84.5)	45/62 (72.6)
<b>Ever on Methadone Program<sup>d</sup></b>		
Yes	43/72 (59.7)	4/60 (6.7)
<b>Partner currently in prison<sup>e</sup></b>		
Yes	11/33 (33.3)	16/45 (35.6)
<b>Juvenile detention</b>		
Yes	17/70 (24.3)	38/84 (45.2)
<b>Number of times in adult prison</b>		
First time	20/69 (29.0)	36/84 (42.9)
Multiple times	49/69 (71.0)	48/84 (57.1)
<b>Number of biological children</b>		
1 to 4	50/76 (65.8)	63/81 (77.8)
5 or more	26/76 (34.2)	18/81 (22.2)
<b>Care for children aged less than five years before prison</b>		
Yes	36/75 (48.0)	38/82 (46.3)
<b>Pregnant in prison</b>		
Yes	21/77 (27.3)	23/77 (29.9)
<b>Gave birth in prison</b>		
Yes	8/21 (38.1)	4/20 (20.0)

Notes:

a: Includes (yes well and yes some)

b: Includes one mother with no schooling for WA

c: Includes full time/part time study and full time/part time work

d: For women who used Illicit Drugs only

e: For mothers who were defacto, had regular partner or legally married only

**Table 2: Resilience, stress, physical and mental health.**

	NSW			WA		
	N	Mean (SD)	SE	N	Mean (SD)	SE
Physical Component Score of SF-12 v2	74	49.47 (9.36)	1.09	68	54.38 (9.20)	1.12
Mental Component Score of SF-12 v2	74	40.61 (11.31)	1.31	68	48.30 (9.43)	1.14
The sum of all 5 Kessler scores	70	13.07 (4.67)	0.56	75	10.11 (4.75)	0.55

Notes:

SD: standard deviation, SE: Standard Error

Summary Scores are represented as t-scores with a mean of 50 and a standard deviation of 10.

## Psychological distress and mental health

Table 2 presents the mean (SD) SF-12 scores (PCS and MCS) and the Kessler-5 psychological distress scale for Aboriginal mothers in prison in NSW and WA. These measures provide a snapshot of health based on mental and physical functioning and psychological distress. There were differences between Aboriginal mothers in prison in NSW and WA on the PCS and MCS and the proportion of self-reported conditions.

### NSW

Sixty-eight per cent (n=52/76) of mothers in NSW self-reported having a diagnosis of a mental health issue. Aboriginal mothers in NSW prisons had lower group MCS than average (M=40.6, SD=11.31), while the group PCS was in the average range (M=49.5, SD=9.36), see Table 2. The higher PCS than MCS indicates better physical health than mental health. The mean of the Kessler-5 scale of 13.07 (SD=4.7) was above average, reflecting a high level of distress.

### WA

Thirty-five per cent (n=28/80) of mothers in WA had a mental health condition. Aboriginal mothers in WA prisons had a group MCS that was lower than average (M=48.3, SD=9.43), while the group PCS was above the average range (M=54.4, SD=9.20). Similar to Aboriginal mothers in NSW, results of PCS and MCS indicate better physical health than mental health. The mean of the Kessler-5 scale was 10.1 (SD=4.7).

## Modelling of SF-12v2 (PCS and MCS) and Kessler-5

The result of the modelling, including 95% CI for non-standardised regression coefficients are shown in Table 4. In the pooled model, after controlling for the state (NSW, WA) smoking tobacco (b=-7.03, 95%CI=[-11.97, -2.09]) was significantly associated with poorer PCS while feeling discriminated against (b=-4.13, 95%CI=[-7.80, -0.46]) and diagnosed with mental health condition (b=-3.86, 95%CI=[-7.45, -0.27]) were significantly associated with poorer MCS and poorer Kessler-5 score (b=-1.77, 95%CI=[0.01, 3.45]; b=1.63, 95%CI=[0.002, 3.26]), see Table 3.

## Discussion

While there were differences in each state, the findings show Aboriginal mothers in



prison experience significant physical health and SEWB morbidity in a context of systemic social disadvantage and multiple stressors. Mothers reported multiple risk factors for incarceration and social determinants of health including: low educational attainment; unemployment; cultural dislocation; removal from family; discrimination; cyclical contact with the justice system; and alcohol and substance use. These issues are interrelated and associated with poor SEWB, chronic disease and serious psychological distress.<sup>43</sup>

The majority of mothers in the study had been previously incarcerated and were imprisoned for drug- or alcohol-related offences. We found considerable variation by state in the pattern of substance use and history of incarceration. A higher proportion of mothers in NSW were imprisoned for drug-related offences while the rate of imprisonment due to alcohol-related offences was higher among mothers in WA. This likely relates to both differences in prevalence of substance use and in the patterns of arrest and rates of incarceration between NSW and WA for offences related to alcohol and illicit drug use.<sup>44</sup>

These differences are also a characterisation of the diversity of the two contexts and the risk and protective factors that impact SEWB.<sup>43</sup> Aboriginal mothers in NSW prisons were more likely to have experienced separation from their family as children and mothers in WA were more likely to speak

an Aboriginal language. Connection to land, culture, spirituality, ancestry family and community can moderate the impact of stressful circumstances on SEWB at an individual, family and community level.<sup>10,45</sup> The number of women in WA who spoke an Aboriginal language may be reflective of the number of women from remote communities in prison, as other studies have shown higher levels of discrimination and policing in these communities.<sup>44</sup>

Almost 60% of Aboriginal mothers in NSW were separated from their family as children. Previous studies show that, compared to other prison population groups, incarcerated Aboriginal women report higher rates of being placed in formal care as a child; their parents being placed in care as children and experiences of parental incarceration.<sup>27,28</sup> Incarcerated Aboriginal people removed from their families as children of the stolen generation are significantly more likely to have been subjected to childhood sexual assault, to have attempted suicide and be imprisoned on more than five previous occasions.<sup>46</sup> The seminal 'Speak Out, Speak Strong' study of Aboriginal women's experiences of incarceration in NSW found a clear link between child sexual assault, the women's strategies to manage this trauma through substance use, and the criminalisation of corresponding substance dependence as offending behaviour. More than 50% of the Aboriginal women

participants reported coming from a stolen generations' family.<sup>20</sup>

Our results reinforce these previous findings. The intersection and cumulative impacts of intergenerational trauma and ongoing colonisation on Aboriginal mothers' health and SEWB underlie and are exacerbated by incarceration and perpetuate further intergenerational trauma. Incarceration has a profound impact on children and family SEWB.<sup>20,47</sup> There were more than 500 children directly impacted by their mothers' incarceration, with almost half of all mothers caring for young children aged less than five years immediately prior to their incarceration. Children who experience maternal incarceration are significantly more likely to be placed in care and experience poor health outcomes compared to children of mothers with no history of incarceration.<sup>48</sup>

Moreover, serious psychological distress is a risk factor for incarceration and also an outcome of imprisonment.<sup>43</sup> Aboriginal mothers in NSW were characterised by significantly high levels of self-reported distress, and poor mental health status and high levels of mental health diagnoses as indicated by the SF12 MCS. These characteristics were associated with experiences of discrimination. The link between racism and poor SEWB outcomes of Aboriginal people in the community is well-documented, particularly in relation to

**Table 3. Results of multiple regression analysis for social and emotional wellbeing (Physical Component Score, Mental Component Score and Kessler-5) of Aboriginal mothers in NSW and WA, and separately by state of imprisonment.**

Attribute	NSW and WA				NSW				WA			
	Regression Coefficient	95% CIs	P value	Adj R2	Regression Coefficient	95% CIs	P value	Adj R2	Regression Coefficient	95% CIs	P value	Adj R2
<b>Physical Component Score</b>												
State: NSW/WA*	-4.43	-7.42, -1.44										
Current Smoker: Yes/ No*	-7.03	-11.97, -2.09	0.006	0.11	-11.18	-18.68, -3.69	0.004	0.23				
Age of women					-0.51	-0.76, -0.26	<0.001					
Speaks Aboriginal Language: Yes/No*									-6.98	-11.61, -2.34	0.004	
Has a partner: Yes/No*									-5.79	-10.31, -1.28	0.013	0.15
<b>Mental Component Score</b>												
State: NSW/WA*	-5.05	-8.84, -1.27										
Discrimination: Yes/No*	-4.13	-7.80, -0.46	0.03									
Mental health issue: Yes/No*	-3.86	-7.45, -0.27	0.03	0.17					-5.22	-9.86, -0.58	0.028	0.06
Ever injected with drug: Yes/No*					9.86	2.92, 16.80	0.006	0.09				
<b>Kessler-5</b>												
State: NSW/WA*	1.87	0.16, 3.58										
Discrimination: Yes/ No*	1.77	0.01, 3.45	0.04						2.45	-0.18, 5.08	0.067	
Mental health issue: Yes/No*	1.63	0.002, 3.26	0.05	0.14								
Speaks Aboriginal language: Yes/No*									2.44	0.12, 4.75	0.039	0.07
Education: < Year 10* / ≥ Year 10					1.97	-0.24, 4.19	0.08	0.03				

Note:

\* Reference Group

psychological distress,<sup>45,49</sup> anxiety, depression and poor overall mental health.<sup>50,51</sup> Our findings provide additional context for understanding the causes and implications of serious psychological distress and poor SEWB of incarcerated Aboriginal mothers, showing the women's histories of being forcibly removed from their families as children under discriminatory child protection policies and the ongoing intergenerational trauma of separation from their own children due to incarceration.

## Limitations

There were a number of limitations in our study with our findings representing a self-selected sample of Aboriginal mothers in prisons in NSW and WA, notwithstanding this is the largest and most diverse sample to date, and one that provides substantial health and SEWB information. The data collection methods differed by jurisdiction with a self-administered survey in NSW and researcher-administered survey in WA reflecting the guidance of the Aboriginal Project Advisory Groups, as such the analyses were stratified according to state and these differences were highlighted but not compared statistically. As the data are cross-sectional, causality of risk and protective factors cannot be ascertained. Due to reliance upon self-report, our data is subject to recall bias and individual interpretation, especially with regard to health and SEWB. However, these are complex concepts and there is no clear consensus across or within cultures as to how these constructs should be defined. As such, self-report may be a valid and adequate method. The questionnaires were developed in consultation with key advisory stakeholders in each state including Aboriginal women who have experienced incarceration.

## Implications

It is becoming increasingly acknowledged that Aboriginal SEWB issues are the result of colonisation.<sup>34</sup> Taking this perspective on the physical health and SEWB of Aboriginal mothers in prison highlights the vital importance of acknowledging the heterogeneity of Aboriginal communities and the intersection of Aboriginal SEWB risk factors with intergenerational trauma and the over-representation of Aboriginal women (and men) in prison. Addressing SEWB, discrimination and psychological

distress through culturally safe models of care is critical to breaking the cycle of incarceration and improving the health and SEWB of Aboriginal mothers in prison and their families and communities. This needs to be informed by the women themselves and collaboration with Aboriginal community controlled organisations. More than 500 children were directly impacted by their mother's incarceration with almost half of all mothers caring for young children aged less than five years immediately prior to their incarceration.

Based on our findings, a jurisdictional-specific approach to programs supporting positive SEWB and protective factors such as education and employment is required and could reduce the psychological distress of Aboriginal mothers in prison.<sup>45</sup> The variation in the pattern of substance use across the two states also indicates the importance of culturally safe harm reduction strategies and other health interventions addressing alcohol and substance use, such as trauma informed care, as a method for diverting Aboriginal women away from prison.

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## Supporting Information

Additional supporting information may be found in the online version of this article:

**Supplementary Table 1a:** Bivariate analysis of social and emotional wellbeing of Aboriginal mothers in prison.

**Supplementary Table 1b:** Bivariate analysis of social and emotional wellbeing of Aboriginal mothers in prison (NSW).

**Supplementary Table 1c:** Bivariate analysis of social and emotional wellbeing of Aboriginal mothers in prison (WA).