The psychological health of sole mothers in Australia

Deborah Loxton, Rosemary Mooney and Anne F Young

ABSTRACT

Objective: To determine the psychological wellbeing of sole mothers in Australia.

Design: Cross-sectional analyses of survey data from The Australian Longitudinal Study on Women's Health.

Participants: 9689 younger women (aged 22–27 years) surveyed in 2000 and 12 338 mid-age women (aged 47–52 years) surveyed in 1998.

Main outcome measures: Demographic characteristics and economic status; prevalence of suicidal thoughts, self-harm, and psychoactive medication use; depression (Center for Epidemiologic Studies Depression Scale) and psychological health (the Mental Health Component Score of the Medical Outcome Short Form Health Survey [SF-36]).

Results: Among the younger women, sole mothers were more likely than other women to have experienced suicidal thoughts (odds ratio [OR], 2.18; 95% CI, 1.45–3.27) and self-harm (OR, 3.25; 95% CI, 1.97–5.38). Among the younger and mid-age women, sole mothers were the group most likely to have used medication for depression (ORs, 2.75 [95% CI, 1.76–4.30] and 2.29 [95% CI, 1.56–3.37], respectively). They were more than twice as likely to have experienced depression, and had significantly poorer psychological health ($P < 0.001$). After adjusting for economic status, only depression and psychological health remained significantly associated with sole motherhood, and the strength of these relationships was reduced.

Conclusions: Economic status partly accounts for the relatively poorer psychological health of sole mothers. Sole mothers are more likely than other women to experience debilitating psychological health problems.

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Sole motherhood has been associated with poorer psychological health and higher stress,[1-3] which have in turn been partly attributed to lower economic status associated with sole mothers.[4,5] This is of particular concern in Australia, where 27% of 18 year olds have spent some time living in a family with a sole mother.[6]

Evidence for psychological health problems among Australian sole mothers has been limited to studies of income-support recipients. For example, among recipients of the Parenting Payment (an income- and assets-tested payment to assist people caring for children irrespective of their marital status), sole parents were more likely than partnered parents to have experienced emotional problems.[7] Another study found a relationship between receiving income support, including sole parent benefits, and having poor mental health scores.[8] However, no research has been conducted with a representative, community-based sample of Australian women.

Sole mothers with lower socioeconomic status have been found to have poorer psychological health than sole mothers with higher socioeconomic status.[1,4,9,10] Furthermore, when socioeconomic status was controlled for, the association between sole motherhood and poorer health was found to decrease.[3,5] Socioeconomic status might therefore act as a partial mediator in the relationship between sole motherhood and poorer health. In Australia, sole mothers are financially worse off than other women,[11,12] but the relationship between economic status and psychological health is currently unknown.

Here, we examine the association between sole motherhood and psychological health using data collected as part of The Australian Longitudinal Study on Women's Health (ALSWH), also known as the Women's Health Australia project.

METHODS

Sample

The research was conducted as part of the ALSWH, which has been approved by the University of Newcastle and the University of Queensland Human Research Ethics Committees. In summary, women in three age groups (18–23, 45–50 and 70–75 years) in April 1996 were randomly selected from the Medicare database, which includes all permanent residents of Australia, with oversampling, by a factor of two, of women living in rural and remote areas.[13] The 40 000 respondents to Survey 1 have been shown to be broadly representative of the national population of women in the target age groups, with some over-representation of women who were married or in a de facto relationship, and under-representation of Indigenous women and women born in non-English-speaking countries.[14] Survey 1 was conducted in 1996 and the study design includes regular follow-up of the women, with one age cohort surveyed by mailed self-completed questionnaires each year.[13]

We are focusing on data from Survey 2 of the "younger cohort" conducted in 2000 when the women were aged 22–27 years ($n = 9690$) and Survey 2 of the "mid-age cohort" conducted in 1998 when the women were aged 47–52 years ($n = 12\,338$). Retention rates at Survey 2 were 63% for the younger cohort and 90% for the mid-age cohort. Attrition was related to having less education, not being born in Australia, and being a current smoker.[13]

Outcome measures

Relationship status for each woman was classified into one of four groups: sole mothers; partnered mothers; unpartnered childless women; partnered childless women. Being partnered was defined as living with a partner, living in a de facto relationship, or being married. Mothers were defined as women with children aged less than 16 years.

Research Centre for Gender and Health, University of Newcastle, Callaghan, NSW.
Deborah Loxton, PhD, BPsych(Hons), Research Academic; Rosemary Mooney, BA(Hons), Research Assistant; Anne F Young, PhD, AStat, Senior Research Academic.
Reprints will not be available from the authors. Correspondence: Dr Deborah Loxton, Research Centre for Gender and Health, University of Newcastle, University Drive, Callaghan, NSW 2308.
deborah.loxton@newcastle.edu.au

1 Odds ratios (ORs) and 95% CI for odds of sole mothers reporting suicidal thoughts, self-harm, use of psychoactive medication, and depression: unadjusted; adjusted for demographic characteristics; and adjusted for demographic characteristics and economic indicators

Relationship status	Number of women	Percentage* (number) with outcome	Unadjusted (Model 1) OR (95% CI)	Adjusted for demographic variables (Model 2) OR (95% CI)	Adjusted for demographic variables and economic indicators (Model 3) OR (95% CI)
Younger cohort: suicidal thoughts					
Sole mothers	279	11% (30)	2.18 (1.45–3.27)	2.17 (1.48–3.20)	0.97 (0.61–1.52)
Partnered mothers	1162	7% (76)	1.26 (0.95–1.66)	1.31 (1.01–1.71)	0.78 (0.57–1.08)
Unpartnered childless	4555	9% (400)	1.74 (1.45–2.09)	1.76 (1.46–2.13)	1.83 (1.49–2.25)
Partnered childless	3317	5% (174)	1.00	1.00	1.00
Younger cohort: self harm					
Sole mothers	279	7% (20)	3.25 (1.97–5.38)	3.44 (2.10–5.66)	1.53 (0.86–2.71)
Partnered mothers	1162	2% (26)	0.93 (0.59–1.46)	1.01 (0.65–1.59)	0.53 (0.31–0.89)
Unpartnered childless	4558	5% (222)	2.12 (1.63–2.75)	2.00 (1.52–2.64)	2.02 (1.50–2.72)
Partnered childless	3320	2% (78)	1.00	1.00	1.00
Younger cohort: depression medication					
Sole mothers	272	9% (25)	2.75 (1.76–4.30)	2.48 (1.59–3.89)	1.45 (0.87–2.40)
Partnered mothers	1142	3% (36)	0.87 (0.56–1.27)	1.00 (0.70–1.41)	0.52 (0.34–0.80)
Unpartnered childless	4481	5% (239)	1.50 (1.20–1.88)	1.61 (1.27–2.04)	1.61 (1.25–2.08)
Partnered childless	3274	4% (118)	1.00	1.00	1.00
Mid-age cohort: depression medication					
Sole mothers	281	11% (32)	2.29 (1.56–3.37)	1.96 (1.28–2.98)	1.39 (0.85–2.26)
Partnered mothers	1961	5% (102)	0.98 (0.78–1.23)	0.91 (0.72–1.16)	0.96 (0.74–1.26)
Unpartnered childless	1448	9% (132)	1.79 (1.45–2.21)	1.87 (1.51–2.31)	1.83 (1.43–2.33)
Partnered childless	6518	5% (346)	1.00	1.00	1.00
Mid-age cohort: sleep medication					
Sole mothers	281	11% (12)	1.52 (1.04–2.21)	1.62 (1.10–2.39)	1.36 (0.88–2.10)
Partnered mothers	1965	6% (54)	0.77 (0.63–0.94)	0.77 (0.62–0.95)	0.70 (0.55–0.89)
Unpartnered childless	1452	11% (84)	1.46 (1.21–1.76)	1.36 (1.11–1.66)	1.24 (0.98–1.56)
Partnered childless	6542	8% (282)	1.00	1.00	1.00
Younger cohort: depression (CES-D10)					
Sole mothers	271	48% (131)	2.91 (2.26–3.74)	2.78 (2.18–3.54)	1.55 (1.16–2.06)
Partnered mothers	1130	31% (350)	1.39 (1.20–1.62)	1.48 (1.28–1.71)	1.07 (0.90–1.28)
Unpartnered childless	4434	33% (1454)	1.51 (1.37–1.68)	1.54 (1.38–1.71)	1.56 (1.39–1.76)
Partnered childless	3246	24% (791)	1.00	1.00	1.00
Mid-age cohort: depression (CES-D10)					
Sole mothers	286	42% (120)	2.45 (1.92–3.12)	2.22 (1.72–2.86)	1.50 (1.10–2.04)
Partnered mothers	1995	21% (412)	0.88 (0.78–1.00)	0.98 (0.86–1.10)	0.92 (0.79–1.06)
Unpartnered childless	1468	31% (462)	1.55 (1.37–1.76)	1.72 (1.52–1.96)	1.54 (1.32–1.80)
Partnered childless	6666	23% (1521)	1.00	1.00	1.00

CES-D 10 = Centre for Epidemiologic Studies Depression Scale. *The percentage of women per relationship-status category who had experienced the relevant health variable (eg, 42% of the 286 mid-age women who were sole mothers had depression). Demographic characteristics included: age, area of residence, and Aboriginal or Torres Strait Islander status. Economic indicators included: education, employment, and stress related to money. ◆

Demographic characteristics included participant age, area of residence,[15] country of birth, and Aboriginal or Torres Strait Islander (ATSI) status. Economic status indicators included education (Year 10 or less, or more than Year 10), paid employment participation (in paid employment or not in paid employment), and stress related to money.

The younger cohort were asked: *"In the past week, have you been feeling that life isn't worth living?"*; and, *"In the past 6 months have you ever deliberately hurt yourself or done anything that you knew might have harmed or even killed you?"*, with the aim of ascertaining the presence of suicidal thoughts and self-harm, respectively.[16] Current psychoactive medication use was assessed for both the younger and mid-age cohorts: women were asked if they had taken medication for depression, "nerves", or to help with sleep in the previous 4 weeks.

The Center for Epidemiologic Studies Depression Scale (CES-D 10)[17] was used in both groups to measure current depression. Higher scores on the 10-item four-point scale equate to more depressive symptomatology (range, 0–30), where scores $\geqslant 10$ indicate the presence of clinical depression.[17] Psychological health was assessed by the Mental Health Component Score (MCS) of the Medical Outcome Short Form Health Survey (SF-36).[18] Scores ranged from 0 to

2 Results of multiple regression analysis for psychological health (SF-36 Mental Health Component Score) in sole mothers, with predictors: relationship status (Model 1); relationship status and demographic characteristics (Model 2); and relationship status, demographic characteristics and economic indicators (Model 3)

	Model 1					Model 2					Model 3				
Predictor	No. of women	β	SE	*t*	*P*	No. of women	β	SE	*t*	*P*	No. of women	β	SE	*t*	*P*
Younger cohort	9 180					8 776					7 985				
Sole mother		–3.26	0.60	–5.45	0.000		–3.47	0.57	–6.10	0.000		–1.37	0.59	–2.33	0.020
Age							0.04	0.70	0.62	0.535		0.01	0.70	0.18	0.860
Non-urban							1.61	0.21	7.59	0.000		1.52	0.21	7.11	0.000
Education ⩽ Year 10												0.03	0.34	0.08	0.936
Not in paid work												0.05	0.27	0.17	0.862
Stress related to money												–6.69	0.24	–28.16	0.000
Mid-age cohort	10 423					10 463					8 335				
Sole mother		–5.02	0.60	–8.35	0.000		–3.89	0.62	–6.25	0.000		–1.81	0.65	–2.78	0.005
Age							0.29	0.64	4.55	0.000		0.29	0.69	4.15	0.000
Non-urban							0.54	0.20	2.68	0.007		0.56	0.22	2.59	0.010
Education ⩽ Year 10												0.06	0.21	0.31	0.759
Not in paid work												–0.28	0.24	–1.16	0.246
Stress related to money												–8.83	0.32	–27.27	0.000

Demographic variables included: age, area of residence, and Aboriginal or Torres Strait Islander status (not reported due to low numbers). Economic indictors included: education, employment, and stress related to money. β = coefficient. SE = standard error of the coefficient. ◆

100, with higher scores reflecting better psychological health.

Statistical analysis

Data were analysed using SPSS (Statistical Package for the Social Sciences) (version 11, SPSS Inc, Chicago, Ill, USA). Data were weighted to account for the deliberate oversampling of women from rural and remote locations in all analyses where area of residence was not included in the model. ATSI status was adjusted for in multivariate models, but was not reported separately due to small numbers.

Dichotomous outcome measures (ie, suicidal thoughts, self-harm, medication use, depression [CES-D10]) were each examined using logistic regression analysis, with the presence of the mental health problem entered as the outcome variable. In the first model of each logistic regression, relationship status was entered alone; demographic variables were adjusted in the second model; and the third model adjusted for demographic variables and economic status indicators: education, paid employment participation, and stress related to money.

To examine the relationship between sole motherhood and overall psychological health (SF-36 MCS), a series of multiple regressions was conducted. Three models were run for each of the two cohorts. For each model tested, the SF-36 MCS was entered as the outcome variable. The relationship status variable was dichotomised so that sole mothers were distinguished from all other women. In Model 1, sole motherhood was the only predictor entered. In a regression analysis such as this, the coefficient (β) represents the difference between the mean of the target group (sole mothers) and the mean of the comparison group (other women). In Model 2, demographics were added as predictor variables. In Model 3, economic status indicators were added as predictor variables. Collinearity diagnostics were conducted and revealed no problems with collinearity.

RESULTS

The least frequent relationship status category was sole motherhood, across both cohorts. Sole mothers comprised 3% of the younger cohort ($n = 285$) and 2% of the mid-age cohort ($n = 291$). Among the younger cohort, sole mothers tended to be younger than partnered mothers, and older than unpartnered childless women. Among the mid-age women, partnered and unpartnered mothers were younger than childless women. Sole and partnered mothers in the younger cohort were more likely than other women to be living in a non-urban region, while mid-age women with children were less likely to be living in a non-urban region.

In the unadjusted model, sole mothers were between two and four times more likely to report suicidal thoughts, self-harm and depression (Box 1). Results for psychoactive medication use varied, although both younger and mid-age sole mothers were more likely than other women to have taken medication for depression.

Adjusting for demographic variables resulted in very little difference in odds ratios (Box 1). However, once economic indicators were added to the model, sole motherhood was no longer significantly associated with suicidal thoughts, self-harm or the use of depression medication among the younger cohort. Furthermore, among the mid-age cohort, sole motherhood was no longer associated with medication use. The associations between sole motherhood and depression were substantially reduced after the addition of economic status indicators to the models.

Sole mothers had worse overall psychological health than other women (Box 2). A difference of two points or more in SF-36 MCS scores is considered clinically important. The coefficient values for sole mothers, of –3.26 for younger sole mothers and –5.02

for mid-age sole mothers indicate that sole mothers had poorer psychological health than other women at the univariate level. The inclusion of measures of economic status in the models reduced the size of the coefficient, although the relationships remained statistically significant. These results indicate that part of the association between sole motherhood and psychological health could be accounted for by economic status among women of both age groups.

DISCUSSION

The psychological health of sole mothers in our sample was poorer than that of other women, confirming results from other countries,[1-3,5,10] and adding to recent Australian findings.[8] The analyses presented here build considerably on the study by Butterworth et al,[8] which found psychological health problems among a national Australian sample of income support recipients and used only one measure of psychological health (SF-36 MCS).

Our results also indicated that the difference in psychological health between sole mothers and other women was greater for sole mothers in their late 40s to early 50s than for sole mothers in their 20s. This suggests that the association between sole motherhood and poorer psychological health may vary with age or with duration of sole motherhood.

One of the most disturbing results of our investigation concerns suicidal ideation and self-harm. Sole motherhood among 22–27 year olds was associated with increased odds of both suicidal thoughts and actual self-harm. One Swedish study has also indicated that the suicide rate among sole mothers is substantially higher than that for partnered mothers.[19]

The association between the relatively poorer health of sole mothers and economic status is also in agreement with previous research in other countries.[3,5] Our own previous research with ALSWH data indicated that, relative to other women, younger sole mothers were twice as likely, and mid-age sole mothers were over four times as likely, to experience stress related to money, after controlling for education and paid employment participation.[11] Sole mothers appear to be at risk of both economic and psychological distress, and our research has shown that these factors are themselves associated. However, causality cannot be inferred from our cross-sectional analyses, and no direction in the relationships between sole motherhood, economic status and health can be determined.

One potential limitation of our research is that mid-age sole mothers who had children older than 16 years were included in the "unpartnered childless" category. This may account for the similar results found for sole mothers and unpartnered childless women among mid-age women. It is possible that the poorer psychological health of sole mothers continues over time, or that sole mothers with children over 16 years experience similar psychological health problems to those of sole mothers with younger children. Future research should explore these issues.

Our study underscores the need for further research into the nature of stressors experienced by sole mothers and for the development of support and intervention strategies to mitigate the health impact of stressors, including economic stressors.

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COMPETING INTERESTS

None identified.

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