

Single mothers in Ontario: sociodemographic, physical and mental health characteristics

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Abstract

Objective: To examine the sociodemographic, physical and mental health characteristics of single mothers in Ontario.

Design: Cross-sectional.

Setting: Ontario.

Participants: Ontario residents aged 15 years or older who participated in the Ontario Health Supplement survey conducted between December 1990 and April 1991; of 9953 eligible participants, 1540 were mothers with at least 1 dependent child (less than 16 years of age).

Outcome measures: Prevalence rates of sociodemographic, physical and mental health characteristics.

Results: Single mothers were significantly more likely than the mothers in 2-parent families to be poor, to be 25 years of age or less, to have mental health problems (dissatisfaction with multiple aspects of life, affective disorder ever and 1 or more psychiatric disorders in the past year or ever) and to use mental health services. When compared by income level, poor single mothers had a higher prevalence of all mental health outcomes measured; the difference was significant for anxiety disorder in the past year or ever and for 1 or more psychiatric disorders in the past year or ever. In a logistic regression analysis, single-mother status was found to have the strongest independent effect on predicting mental health morbidity and utilization of mental health services; the next strongest was low income.

Conclusions: Single mothers are more likely to be poor, to have an affective disorder and to use mental health services than mothers in 2-parent families. The risk of mental health problems is especially pronounced among poor single mothers. Further studies are needed to determine which aspects of single motherhood, apart from economic status, affect mental health outcomes.

Résumé

Objectif : Examiner les caractéristiques socio-démographiques, physiques et liées à la santé mentale des mères célibataires de l'Ontario.

Conception : Étude transversale.

Contexte : Ontario.

Participants : Résidents de l'Ontario âgés de 15 ans ou plus qui ont participé à l'enquête supplémentaire sur la santé de l'Ontario réalisée entre décembre 1990 et avril 1991; sur 9953 participants admissibles, 1540 étaient des mères qui avaient au moins un enfant à charge (âgé de moins de 16 ans).

Mesures des résultats : Taux de prévalence des caractéristiques socio-démographiques, physiques et liées à la santé mentale.

Résultats : Les mères célibataires étaient beaucoup plus susceptibles que les mères de familles biparentales d'être pauvres, âgées de 25 ans ou moins, d'avoir des problèmes de santé mentale (insatisfaction à l'égard de multiples aspects de la vie, troubles affectifs dans le passé et 1 ou plusieurs troubles psychiatriques au cours de l'année écoulée ou dans le passé) et de recourir à des services de santé mentale. Lorsqu'on les compare selon l'échelon de revenu, on constate chez les mères célibataires pauvres une prévalence plus élevée de tous les résultats



Evidence

Études

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mesurés à l'égard de la santé mentale; la différence était significative en ce qui a trait aux troubles de l'anxiété au cours de l'année écoulée ou dans le passé, et à 1 ou plusieurs troubles psychiatriques au cours de l'année écoulée ou dans le passé. Dans le contexte d'une analyse de régression logistique, on a constaté que le statut de mère célibataire avait l'effet indépendant le plus important sur la prédiction de la morbidité à l'égard de la santé mentale et de l'utilisation de services de santé mentale; le revenu faible venait au deuxième rang.

Conclusions : Les mères célibataires sont plus susceptibles que les mères de familles biparentales d'être pauvres, d'avoir un trouble affectif et d'utiliser des services de santé mentale. Le risque de problèmes de santé mentale est particulièrement marqué chez les mères célibataires pauvres. D'autres études s'imposent si l'on veut déterminer les aspects de l'état de mère célibataire, outre la situation financière, qui ont une incidence sur l'état de santé mentale.

A large and growing number of Canadian families with children are headed by single mothers. According to the 1991 census data, 10.7% of Canadian families fell into this category, a rate that has been steadily increasing from 6.6% over the past 25 years.¹ Although single mothers in Canada form a heterogeneous group — women who never married, those whose marriage or common-law relationship ended and those whose partner died — these women share certain characteristics: many are poor and many have low levels of education.

Surprisingly few community-based studies have examined in detail the characteristics of single mothers. Five studies, performed in Canada and elsewhere, were in agreement regarding similar sociodemographic characteristics among single mothers but varied regarding physical and mental health characteristics.²⁻⁶

We performed this study to determine the sociodemographic, physical and mental health characteristics of single mothers in Ontario. We used data collected as part of the Ontario Health Supplement (OHSUPP) — a community-based study done in 1991 that examined the prevalence and distribution of mental health problems among Ontarians aged 15 years or more. Our specific objectives were (a) to compare the risks for sociodemographic disadvantage, and physical and mental health morbidity overall between single mothers and mothers in 2-parent families, (b) to compare the risk for mental health morbidity between the 2 groups by income level and (c) to examine the independent contribution of sociodemographic and family variables in predicting the prevalence of mental health morbidity among mothers in Ontario using multivariate analyses.

Methods

Study sample

The respondents to the OHSUPP were a subset of participants in the Ontario Health Survey (OHS) — a

province-wide survey of about 49 000 people completed in 1990.⁷ The design of the OHS included stratification, clustering and probability sampling, as explained previously.⁷ The only people excluded from the OHS were foreign-service personnel, homeless people, people in institutions, native people living on reserves and residents in remote locations.

Eligible respondents for the OHSUPP were OHS participants in the third and fourth quarters of data collection aged 15 years or more.⁸ Only 1 respondent was selected from each household. In households with eligible respondents aged 15 to 24 years, their chance of being selected was 3 times greater than that of eligible respondents 25 years or older in the same household. In households with no eligible respondents 15 to 24 years, all eligible subjects had the same chance of being selected. Oversampling of people 15 to 24 years old was done to increase statistical reliability of estimates in this important age group. As a result of this strategy, 19.0% of the OHSUPP respondents were 15 to 24 years old, as compared with 17.7% in the 1991 Ontario population. Respondents aged 65 years or more were eligible if they had fewer than 11 errors on the Standardized Mini-Mental State Examination.⁹

The OHSUPP was conducted between December 1990 and April 1991. A total of 9953 people participated (76.5% of those eligible from the OHS). Reasons for not responding were refusal to participate (5.8%); sickness, death or language difficulties (3.3%) and other (8.6%); failure to contact the household during the survey period accounted for 5.7% of the nonresponses.

For our study we extracted data from the OHSUPP pertaining to mothers 15 years and older with at least 1 dependent child (less than 16 years of age).

Outcome measures

The concepts covered in the OHSUPP included psychiatric disorders, utilization of mental health services, and correlates and risk factors for psychiatric disorders. Psychi-



atric disorders were measured with the use of a modified version of the Composite International Diagnostic Interview.^{10,11} All data used in this paper were collected by means of an interviewer-administered questionnaire. Variables used in this study are defined in Appendix 1.

Analysis

We calculated the prevalence rates of selected socio-demographic, physical and mental health characteristics for single mothers and mothers in 2-parent families. We also calculated ratios of the prevalence rates (prevalence ratios) and 95% confidence intervals (CIs) to estimate the strength of the relation between single-mother status and the measured characteristic. The prevalence rates were calculated and ratios compared for the 2 groups overall and by income level (low income v. not low income). Because of rounding, some CIs with 1.0 as the lower limit were significant.

Multiple logistic regression analysis was used to determine the independent contribution of selected independent variables in predicting a given outcome. This was done by (a) forcing all selected independent variables into the model and (b) testing for 2-way interactions between single-mother status and other independent variables, or between low-income status and other independent variables. The interactions specified in (b) were entered into the model if they were significant ($p < 0.05$). The independent variables included in the model were the dichotomous variables low income, single mother, youngest child less than 5 years old and low level of education, and the continuous variable maternal age.

To obtain unbiased point estimates, individual responses were weighted according to their probability of selection in the sample. The weighting incorporated adjustments for nonresponses to the OHS and to the OHSUPP and brought the age and sex distribution of the sample into agreement with the distribution of the Ontario population in 1990.

To account for the impact of the survey design (clustering) on variance estimates, the sampling weights were adjusted in 2 steps. First, each sample weight was divided by the mean sampling weight so that the sum of the weights equalled the actual sample size of 9953. Second, each sampling weight was divided by the overall design effect (2.2). The variance estimates generated by this method are very close to those produced with Survey Design Analysis Software (SUDAAN; Research Triangle Institute, Research Triangle Park, NC, 1993), which have been developed specifically to adjust for the impact of clustering on variance estimates.

SPSS PC (version 5.02; SPSS Inc., Chicago, 1992) was used for all analyses.

Results

Single mothers accounted for 18.7% (288/1540) of the mothers in the OHSUPP sample. Most (65.0%) classified themselves as separated or divorced, 24.2% as having never been married and 10.8% as widows. Ages ranged from 16 to 66 (mean 35.8) years for the single mothers and 18 to 66 (mean 36.4) years for the mothers in 2-parent families. In both groups women aged 30–39 accounted for the greatest proportion (40.6% and 53.2% respectively). The 2 groups did not differ significantly in mean age or age distribution by decade.

The single mothers had up to 4 dependent children, as compared with the other mothers, who had up to 9 dependent children. The mean numbers of dependent children were 1.3 (standard deviation [SD] 0.83) and 1.6 (SD 0.99) respectively ($p < 0.005$).

The characteristics of the women are provided in Table 1. For the sociodemographic characteristics, the single mothers were significantly more likely to have a low income and low maternal age (25 years or less) than the mothers in 2-parent families. The 2 groups did not differ significantly in physical health characteristics. As for mental health characteristics, the single mothers were significantly more likely than the other mothers to be dissatisfied with multiple areas of their lives and to use mental health services. They also had a higher prevalence of all psychiatric disorders measured; the difference was significant for affective disorder ever and for 1 or more psychiatric disorders in the past year or ever.

We compared the prevalence of mental health characteristics and utilization of mental health services among the low-income and not-low-income single mothers and the low-income mothers in 2-parent families with the prevalence among the not-low-income mothers in 2-parent families. The comparisons are described in terms of prevalence ratios (Table 2). Low-income single mothers had the highest prevalence ratios for dissatisfaction with multiple aspects of life, anxiety disorder in the past year or ever and 1 or more psychiatric disorders in the past year or ever. Both groups of single mothers were significantly more likely than the other mothers to have an affective disorder ever and tended to use more mental health services. For other outcomes, such as low social support, the prevalence ratios were close to 1.0 in the 3 groups, which indicated a similar rate for the problem in these groups compared with the not-low-income mothers in 2-parent families.

The results of the logistic regression analysis are presented in Table 3. Single-mother status was a significant independent factor in predicting a number of mental health disorders (dissatisfaction and 1 or more psychiatric disorders) and utilization of mental health services. Low

income was a significant independent factor only in predicting dissatisfaction. None of the interactions between single-mother status and the other 4 variables was significant. Similarly, none of the interactions between low income and the other 4 variables was significant.

The results of all analyses did not change significantly when unweighted data were used.

Discussion

Single mothers with dependent children accounted for almost one-fifth of the mothers in the OHSUPP sample. In terms of sociodemographic characteristics, the most striking difference between the single mothers and the mothers in 2-parent families was that the former were significantly more likely to be poor. They were also more likely to be 25 years of age or less, a finding that corresponds to information in a report from Statistics Canada indicating an increasing proportion of young single moth-

ers.¹² Other studies in Canada and the United States have found that single mothers are significantly more likely than other mothers to be poor, welfare recipients, young and poorly educated.²⁻⁴

We found no significant differences in the physical characteristics measured between the 2 groups. In addition, the mothers did not differ significantly in their responses to 2 questions concerning health problems and visits to general practitioners (data not shown). Our findings contrast with those of Wolfe and Hill,⁶ who, using US data, observed a higher incidence of self-reported disability and health problems limiting the ability to work among single mothers than among other mothers, and among poor single mothers than among other single mothers. This contrast may be due to the limited number of questions about physical health characteristics used in the OHSUPP, or to the availability of universal health care in Canada.

For the mental health characteristics measured, we

Table 1: Sociodemographic, physical and mental health characteristics and utilization of mental health services of single mothers and of mothers from 2-parent families in Ontario*

Characteristic	Group; % (and SE†) of women		Prevalence ratio (and 95% CI‡)
	Single mother n = 288	Mother in 2-parent family n = 1252	
Sociodemographic			
Low income	46.1 (4.7)	8.7 (1.3)	5.3 (3.7–15.0)
Low education level	31.5 (4.8)	23.8 (1.9)	1.3 (0.9–1.9)
Immigrant	21.3 (4.2)	27.7 (2.3)	0.8 (0.5–1.2)
Having young child	29.0 (4.0)	41.1 (2.4)	0.7 (0.5–1.0)
Low maternal age	11.8 (2.5)	4.4 (0.7)	2.7 (1.4–5.4)
Physical health			
Chronic problem	73.4 (4.2)	64.2 (2.5)	1.1 (1.0–1.3)
Physical disability	7.2 (2.5)	5.2 (1.0)	1.4 (0.6–3.2)
Mental health			
Dissatisfaction	45.4 (4.8)	24.7 (1.9)	1.8 (1.4–2.4)
Low social support	56.9 (5.0)	49.8 (2.6)	1.1 (0.9–1.4)
Anxiety disorder			
Past year	21.8 (3.8)	13.9 (1.5)	1.6 (1.0–2.5)
Ever	34.0 (4.5)	24.8 (1.9)	1.4 (1.0–1.9)
Affective disorder			
Past year	9.7 (2.3)	4.9 (0.9)	2.0 (0.9–4.2)
Ever	20.8 (3.8)	9.4 (1.2)	2.2 (1.4–3.6)
Substance use			
Past year	3.2 (1.0)	1.5 (0.6)	2.1 (0.6–8.3)
Ever	8.6 (1.6)	6.1 (0.9)	1.4 (0.6–3.0)
≥ 1 psychiatric disorder			
Past year	25.7 (3.9)	16.3 (1.7)	1.6 (1.0–2.4)
Ever	43.3 (4.7)	29.7 (2.1)	1.5 (1.1–1.9)
Utilization			
Outpatient utilization	36.6 (4.3)	22.4 (2.2)	1.6 (1.2–2.3)
Total utilization	37.5 (4.3)	23.9 (2.2)	1.6 (1.1–2.2)

*See Appendix 1 for definitions of characteristics.

†SE = standard error for percentage.

‡CI = confidence interval.



found generally increased prevalence rates for all adverse outcomes among the single mothers. However, few of the increases for specific psychiatric disorders were statistically significant. This finding is similar to that of other studies. Weissman and associates⁴ found that only 1 psychiatric disorder was significantly more likely to occur in single mothers: single mothers had a significantly higher 6-month prevalence rate of dysthymia, but not of major depression, than mothers in 2-parent families ($p < 0.05$). When we subdivided the OHSUPP data for affective disorder into major depression and dysthymia, we found that the single mothers were significantly more likely to have had major depression in the past year or ever (data not shown). However, their rate of dysthymia in the

past year or ever was not significantly higher (data not shown). The rates of dysthymia from the OHSUPP data were about half those reported by Weissman and associates, whereas the rates of major depression were similar. This may be due in part to the fact that the diagnosis of dysthymia in the revised version of the Diagnostic and Statistical Manual of Mental Disorders, 3rd edition (DSM-III-R),¹³ which was used to collect the OHSUPP data, is more stringent than the diagnosis in the DSM-III,¹⁴ on which the data Weissman and associates used had been based.¹⁵

The prevalence rates of depression and dysthymia from the OHSUPP data were similar to those of Avison and Thorpe.² However, Avison and Thorpe also found

Table 2: Prevalence ratios of mental health characteristics and of utilization of mental health services

Characteristic	Group; prevalence ratio (and 95% CI)			Not-low-income mothers in 2-parent families (reference group), % <i>n</i> = 1123
	Low-income single mothers <i>n</i> = 166	Not-low-income single mothers <i>n</i> = 122	Low-income mothers in 2-parent families <i>n</i> = 929	
Mental health				
Dissatisfaction	2.2 (1.6–3.1)	1.7 (1.2–2.6)	1.7 (1.2–2.5)	23.3
Low social support	1.3 (1.0–1.7)	1.0 (0.7–1.5)	1.3 (1.0–1.7)	48.8
Anxiety disorder				
Past year	2.3 (1.3–3.9)	1.1 (0.5–2.4)	1.4 (0.7–2.6)	13.5
Ever	1.8 (1.2–2.6)	1.0 (0.6–1.8)	1.0 (0.6–1.6)	24.9
Affective disorder				
Past year	2.5 (1.0–6.5)	1.6 (0.5–5.0)	1.1 (0.3–3.9)	4.9
Ever	2.3 (1.2–4.6)	2.2 (1.1–4.4)	1.3 (0.6–2.9)	9.2
Substance use				
Past year	3.2 (0.6–17.4)	1.8 (0.2–14.7)	2.6 (0.5–13.5)	1.3
Ever	1.8 (0.6–4.9)	1.4 (0.4–4.2)	2.1 (0.9–4.8)	5.6
≥ 1 psychiatric disorder				
Past year	2.2 (1.4–3.6)	1.1 (0.6–2.2)	1.3 (0.7–2.4)	16.8
Ever	1.7 (1.2–2.4)	1.2 (0.8–1.9)	1.0 (0.6–1.6)	29.7
Utilization				
Outpatient utilization	1.6 (1.0–2.5)	1.6 (1.0–2.4)	0.5 (0.3–1.2)	23.3
Total utilization	1.5 (1.0–2.4)	1.5 (1.0–2.3)	0.6 (0.3–1.2)	24.8

Table 3: Results of multiple logistic regression analysis of the effect of selected sociodemographic and family characteristics on the prevalence of mental health problems and utilization of mental health services

Variable	Outcome; odds ratio (and 95% CI)				
	Dissatisfaction	Affective or anxiety disorder ever	≥ 1 psychiatric disorder ever	Outpatient utilization	Total utilization
Low income	2.0(1.1–3.5)*	1.4(0.8–2.4)	1.3 (0.8–2.4)	0.8 (0.4–14.7)	0.8 (0.4–1.4)
Single status	2.5(1.4–4.5)†	1.8(1.0–3.2)	1.9 (1.1–3.4)*	2.9 (1.6–5.3)‡	2.6 (1.5–4.7)†
Having young child	1.9(1.2–3.1)†	0.7(0.5–1.1)	0.7 (0.5–1.2)	0.7 (0.4–1.2)	0.8 (0.5–1.3)
Low education level	1.0(0.6–1.6)	0.7(0.5–1.1)	0.7 (0.5–1.1)	0.5 (0.3–0.9)*	0.7 (0.5–1.2)
Low maternal age	1.0(1.0–1.0)	1.0(0.9–1.0)	1.0§ (0.9–1.0)*	1.0 (1.0–1.0)	1.0 (1.0–1.0)

* $p < 0.05$.

† $p < 0.005$.

‡ $p < 0.001$.

§Odds ratio was 0.97 before rounding.



significantly increased rates of anxiety and of drug and alcohol problems among single mothers.

In analysing which factors would affect the prevalence of mental health morbidity among single mothers, we found that low-income single mothers were at highest risk. The prevalence ratios for all of the mental health outcomes measured were almost uniformly highest among these women, especially those for dissatisfaction with multiple aspects of life, anxiety disorder and 1 or more psychiatric disorders.

We also found that the single mothers, regardless of their income level, tended to use more mental health services and had a significantly higher prevalence of affective disorder ever than the other mothers. This may reflect their feeling of increased stress related to parenting on their own, dissolution of a partnership, financial strain or other factors. Weissman and associates⁴ did not find increased use of outpatient mental health services among single mothers. This again may reflect differences in access to health care resources between Canada and the United States. The Canadian study by Avison and Thorpe² did not report on service utilization.

The logistic regression analysis revealed that being a single mother was most consistently a strong and significant factor in predicting mental health morbidity and utilization of mental health services. In contrast, low income significantly predicted only dissatisfaction with multiple aspects of life. No significant interaction was found between single-mother status and low income, although poor single mothers were at highest risk of mental health morbidity. These results suggest that single-mother status is a stronger influence than low income level on mental health morbidity, although both factors are important.

How single-mother status, independent of economic status, affects the risk of mental health morbidity is not well understood. As suggested by Pearlin,¹⁶ it may reflect the social status and social roles experienced by single mothers, in addition to how they cope. Other related factors may not be clearly differentiated from the broad measure of single-mother status used in our study. Some women may have had 1 or more mental health problems before they became single mothers (which may have contributed to their single status), or the change from a 2-parent family to a single-parent family may have had adverse mental health effects. We cannot know the order of events or causal chain using cross-sectional data such as those from the OHSUPP. Further investigation with longitudinal data is required to determine which aspects of single-mother status are the most influential on maternal well-being.

There are a number of strengths of the OHSUPP data. First, the study design and sampling methods were

well planned. Second, the sample was large and thus provided adequate power to give reliable estimates for the variables of interest.

There are a number of limitations to the OHSUPP data. First, because the study was cross-sectional, we were unable to determine causal chains for the outcomes measured. Second, the sampling strategy used in the study focused on household dwellings and excluded specific populations. Two of these populations, homeless people and native people living on reserves, are poor and likely include a number of single mothers. However, these excluded populations represent a small proportion of the total population of Ontario (e.g., native people on reserves account for less than 0.5% of the provincial population¹⁷), so it is likely that the number of single mothers excluded was small.

It is simplistic to describe only the general differences between single mothers and mothers in 2-parent families, at least in Ontario. Single mothers are not a homogeneous group. It is low-income single mothers who are at highest risk for difficulties. Therefore, special consideration should be given to this group when planning policies and allocating resources.

Finally, our results from both the bivariate and the multivariate analyses suggest that single-mother status and low income contributed independently to the prevalence of maternal mental health problems. Strategies to assist single mothers could focus on income support, but this would be insufficient. Our results also showed that mental health services may be useful to single mothers. Interventions to increase economic support would be more straightforward and easier to plan than specific mental health interventions aimed at single mothers (e.g., education and support groups). However, the dimensions of single motherhood that affect maternal well-being require further exploration. As single motherhood becomes increasingly common, the importance of attending to the health needs of single mothers takes on greater urgency.

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Appendix 1: Definition of variables

Sociodemographic characteristics

Low income

Low household income defined by thresholds based on poverty lines and low-income cutoffs developed by the National Council on Welfare¹⁸ and Statistics Canada¹⁹

Low education

Has not completed secondary school education

Immigrant

Birthplace outside of Canada

Having young child

Last child born is less than 5 years old

Low maternal age

Mother is 25 years of age or less

Physical health characteristics

Chronic health problem

One or more of the following: skin or other allergy; skin disease; serious trouble with back pain; arthritis or rheumatism; other serious bone or joint problem; paralysis or speech problem due to stroke; asthma; emphysema, chronic bronchitis or persistent cough; epilepsy; hypertension; vascular disease; heart disease; diabetes; urinary problem or kidney disease; stomach ulcer; other digestive problem; thyroid problem; eye problem; cancer

Physical disability

Any limitation or restriction in performing activities at work or school due to physical health problem

Mental health characteristics

Dissatisfaction

Dissatisfaction with 4 or more of the following aspects of life: main activity, family, friends, leisure activities, current housing, income, life in general

Low social support

Low participation in social support system judged by number of friends and relatives respondent feels close to, amount of leisure time spent alone compared with time spent with others, satisfaction with social life and availability of confidant or helper¹⁸

Anxiety disorder

Any of social phobia, simple phobia, panic disorder with or without agoraphobia, agoraphobia without panic disorder, or generalized anxiety disorder in the past year or ever

Affective disorder

Any of dysthymia or depression in the past year or ever

Substance use

Any abuse of alcohol, cannabis, opioids, sedatives, cocaine, amphetamines, hallucinogens or inhalants in the past year or ever

≥ 1 psychiatric disorder

One or more of anxiety disorder, affective disorder or substance use in the past year or ever

Utilization

Outpatient utilization

Any use of outpatient services for mental health reasons in the past year

Total utilization

Any seeking of help for mental health reasons (outpatient, inpatient, hotline, self-help, vocational program) in the past year