Employment, finances, and health status of single mothers raising children with intellectual disabilities in Japan

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Abstract

Previous studies conducted in Western countries have shown that single mothers of children with disabilities face many difficulties such as lower income, lower workforce participation, and lower mental health status than married mothers of children with disabilities. However, little is known about these issues in Japan. Therefore, this study analyzed data of 210 Japanese mothers raising children with intellectual disabilities in Japan. A questionnaire survey provided data on 27 single mothers and 183 married mothers. The 8-item Short Form Health Survey measured physical and mental health of these mothers. Other variables were age, marital status, educational attainment, employment status, number of children, co-residence, income, informal childcare support, formal childcare services, and the age and sex of the focal child. Single mothers were more likely to be employed (74% vs. 46%) and have low incomes (67% vs. 7%) than were married mothers. Single and married mothers raising children with disabilities had significantly lower mental health than other Japanese women of the same age group.

Key Words: single mothers, children with intellectual disability, Japanese parents, mental health

Introduction

The rate of single parents has been increasing in Japan. According to the Ministry of Health, Labour and Welfare (MHLW, 2014), the percentage of single-parent households was 6.6% in 2014, which was 1.5 times more than that in 1999. About 82% of Japan’s single mothers were employed, but 48% of them worked at non-regular or part-time jobs, which typically involves low pay and unstable employment (MHLW, 2017). Consequently, about 54% of single-mother households in Japan were below the relative poverty line (MHLW, 2017). In addition, a study conducted with 2,159

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Japanese mothers raising children found that single mothers were less physically and mentally healthy than were married mothers, and 34% of single mothers reported high levels of depression compared to 17% of married mothers (Japan Institute for Labour Policy and Training, 2017).

Previous studies on single mothers raising children with disabilities or special healthcare needs have been concentrated in the West. Some of them found that these mothers were less likely than their married counterparts to be employed, and those who were employed were more likely than the married mothers to change or quit their jobs (Baydar, Joesch, Kiechhefer, Kim, & Greek, 2007; DeRigne & Porterfield, 2010; Gordon, Rosenman, & Cuskelly, 2007; Gould, 2004; Hauge, Kornstad, Nes, Kristensen, Irgens, Eskedal, Landolt, & Vollrath, 2013; Loprest & Davidoff, 2004; Thyen, Kuhlthau, & Perrin, 1999). A Norwegian study of mothers raising children with special needs (n = 41,255) found that 26% of previously employed single mothers and 16% of previously employed married mothers were unemployed when their children were aged three years (Hauge et al., 2013). However, several studies found that single mothers raising children with disabilities were more likely than their married counterparts to be employed due to financial necessity (Porterfield, 2002; Scott, 2010). In an analysis of 13,414 American mothers, Porterfield (2002) found that single mothers raising children with disabilities were more likely than married mothers of children with disabilities to re-enter the workforce or increase their number of work hours when their children reached school age. A study on American mothers raising children with developmental disabilities (n = 587) found that the single mothers had lower financial wellbeing than did married mothers (Parish, Rose, Swaine, Dababnah, & Mayra, 2012) and their financial status was worse than that of single mothers whose children had no developmental disabilities.

Psychological wellbeing also is relatively low among single mothers raising children with disabilities according to the results of a study on American single mothers raising children with autism spectrum disorders (n = 122); about 77% were at risk of clinical depression (Dyches, Christensen, Harper, Mandleco, & Roper, 2016). However, in Australia, single mothers (n = 43) and partnered mothers (n = 63) raising children with autism spectrum disorders were not significantly different regarding stress levels (McAuliffe, Cordier, Vaz, Thomas, & Falkmer, 2017). Not only were these studies on the employment, finances, and mental health of single mothers raising children with disabilities mostly conducted in Western countries, such as the United States (e.g., Parish, et al., 2012), countries in Europe (e.g., Hauge et al., 2013), and Australia (e.g., Gordon, et al., 2007), the results have been mixed and inconsistent.

Single Japanese mothers raising children with disabilities might be similar to their Western counterparts and experience more financial and psychological problems than other single mothers because children with disabilities have healthcare and
educational needs that often require costly services. In Japan, approximately 1.2% children had physical or intellectual disabilities in 2011 (Cabinet Office, Japan, 2014). The vast majority of these children lived with their families (Cabinet Office, Japan, 2014), and their primary caregivers were mostly their mothers (Mizuho Information & Research Institute, 2016). Recent studies on Japanese mothers raising children with disabilities reported that the mothers had a lower employment rate (Ejiri & Matsuzawa, 2019; Haruki, 2015), lower household incomes (Ejiri & Matsuzawa, 2019; Kudo, 2012), and lower mental health status (Yamaoka, Tamiya, Moriyama, Sandoval Garrido, Sumazaki, & Noguchi, 2015) than other Japanese mothers. However, no studies that we know of have focused on single Japanese mothers raising children with disabilities and investigated their socioeconomic, physical, and mental health status compared to their married counterparts. To fill this research gap, the present study analyzed data collected from single and married Japanese mothers raising children with intellectual disabilities.

**Methods**

**Sample**

Mothers raising children with mild to severe intellectual disabilities, but no profound sensory or physical disabilities, who attended one of two Special Education Needs Schools (SNESs) for children with intellectual disabilities were targeted for participation in this study. The schools were in Hitachinaka (2013 population = 159,576) and Hitachi (2013 population = 192,564), which are near each other in Ibaraki Prefecture, northeast of Tokyo (Ibaraki Prefecture, Japan 2017a). The percentages of foreign residents in the two cities were about 0.5 to 0.6; thus, we assumed that the respondents were Japanese citizens (Ibaraki Prefecture, Japan 2017b). Of the 469 mothers who received questionnaires, 257 were returned (response rate = 55%). Then, 47 were excluded from the analysis because they lacked key or demographic data. The final sample comprised 210 mothers raising children with intellectual disabilities.

**Data Collection**

This study’s data were collected for a 2013 study on Japanese mothers who provided primary care at home to their children with intellectual disabilities aged six to 18 years. Details about the data collection are available from our recent articles (Ejiri & Matsuzawa, 2019; Matsuzawa & Ejiri, 2019). In the 2013 study, the questionnaires were distributed to eligible mothers at two SNESs between July and September in 2013.
Ethical Considerations

The content of the study and ethical considerations including protection of the participants’ confidentiality and anonymity were explained in advance to the principals of both SNESs as well as the eligible mothers. Mothers who consented to participate in the survey completed the questionnaires. The study protocols were approved by the research ethics committee of Ibaraki Christian University (Approval number 12-16).

Variables

The survey collected data on the mothers’ and their children’s characteristics. Mothers’ personal characteristics were age, marital status, educational attainment, employment status, health status, number of children, co-residence with the child’s grandparent(s), and annual household income. The ages and sexes of their children were also reported (Table 1).

Informal childcare support was indicated by the availability of grandparents or other individuals who helped the mothers with their caregiving activities. Whether the mothers used childcare services (e.g., after-school daycare programs for children with disabilities) indicated the mothers’ use of formal supports. The mothers’ physical and mental health were measured using the Japanese version of the 8-item Short Form Health Survey (SF-8) as standardized by Fukuhara and Suzukamo (2004). The SF-8 provides scores on eight domain: physical functioning, role physical, body pain, vitality, general health, social function, role emotional, and mental health. Eight questions ask about the health conditions in each domain during the past month. The response options are on a five-point Likert-type scale. On the basis of participants’ response, SF-8 provides two summary scores: the physical component and the mental component scores. These scores are calculated by weighting the response to the eight items using the norm-based scoring method recommended by the SF-8. The final physical and mental summary scores are reported to range from 11.5 to 68.3 and 17.5 to 69.1, respectively (Fukuhara & Suzukamo, 2012), which are based on data of 1,164 Japanese women aged 20 to 79 years in 2007. The higher scores meant better health, with scores higher than 50 indicating above average physical or mental health status.

Statistical Analysis

To compare single and married mothers raising children with intellectual disabilities, the sample members were grouped by marital status: single ($n=27$) and married ($n=183$). These groups were compared regarding all the mothers’ and children’s characteristics. Statistically significant group differences in the study variables were assessed using Fisher’s exact test for categorical variables and Welch’s t-tests for continuous variables. The physical and mental health in single and married
mothers’ groups were also compared with respect to their sex-, ethnicity-, and age-matched peers respectively, including single mothers in our sample versus Japanese women aged 30-39 years (n=198); married mothers versus Japanese women aged 40-49 years (n=197). All Japanese women’s data, which were collected in 2007, were provided by Fukuhara and Suzukamo (2012). All the analyses were performed using the Statistical Package for Social Sciences for Windows ver. 22.0 (SPSS Japan Inc., Tokyo, Japan).

Results

As shown in Table 1, the single mothers were significantly more likely than the married mothers to be employed (74% vs. 46%) (p < .01), and significantly more likely to have low income; 67% single mothers and 8% married mothers reported the lowest income (p < .01). Regarding childcare support, about two-thirds of the mothers in both groups paid for some childcare support services, such as after-school care, and the vast majority (82% of single and 91% of married) reported informal caregiving support in the home. The single mothers were significantly more likely to receive help from their

Table 1 Characteristics of Mothers Raising Children with Intellectual Disabilities by Marital Status

<table>
<thead>
<tr>
<th>Children</th>
<th>Single mothers (n = 27)</th>
<th>Married mothers (n = 183)</th>
<th>Group difference&lt;sup&gt;4&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years; mean (SD)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12.97 ( 3.45 )</td>
<td>11.69 ( 3.68 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>n (% )</td>
<td>n (% )</td>
<td>n (% )</td>
<td></td>
</tr>
<tr>
<td>Sex (% Male)</td>
<td>19 ( 70.4 )</td>
<td>132 ( 72.1 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Age in years; mean (SD)</td>
<td>39.85 ( 6.59 )</td>
<td>43.59 ( 5.36 )</td>
<td>0.008</td>
</tr>
<tr>
<td>n (% )</td>
<td>n (% )</td>
<td>n (% )</td>
<td></td>
</tr>
<tr>
<td>Education (% college degree)</td>
<td>11 ( 40.7 )</td>
<td>92 ( 50.3 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Employment status (% employed)</td>
<td>20 ( 74.1 )</td>
<td>84 ( 45.9 )</td>
<td>0.007</td>
</tr>
<tr>
<td>Part-time employment&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9 ( 33.3 )</td>
<td>61 ( 33.3 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Full-time employment&lt;sup&gt;c&lt;/sup&gt;</td>
<td>11 ( 40.7 )</td>
<td>18 ( 9.8 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Health status (% good)</td>
<td>17 ( 63.0 )</td>
<td>138 ( 75.4 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Raising two or more children (% yes)</td>
<td>9 ( 33.3 )</td>
<td>150 ( 82.0 )</td>
<td>0.001</td>
</tr>
<tr>
<td>Live-in grandmother (% yes)</td>
<td>13 ( 48.1 )</td>
<td>31 ( 16.9 )</td>
<td>0.000</td>
</tr>
<tr>
<td>Live-in grandfather (% yes)</td>
<td>7 ( 25.9 )</td>
<td>20 ( 10.9 )</td>
<td>0.056</td>
</tr>
<tr>
<td>Annual household income (JPY)&lt;sup&gt;d&lt;/sup&gt;</td>
<td>18 ( 66.7 )</td>
<td>13 ( 7.5 )</td>
<td>0.000</td>
</tr>
<tr>
<td>&lt; 2,000,000 (low) (%)</td>
<td>2,000,000-5,000,000 (low-moderate) (%)</td>
<td>5,000,000 (upper-middle/high) (%)</td>
<td>0.046</td>
</tr>
<tr>
<td>Grandparents’ support for childcare (% yes)</td>
<td>18 ( 66.7 )</td>
<td>91 ( 49.7 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Person available to help with childcare (% yes)</td>
<td>22 ( 81.5 )</td>
<td>167 ( 91.3 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Paid child-care services (% yes)</td>
<td>18 ( 66.7 )</td>
<td>128 ( 69.9 )</td>
<td>n.s.</td>
</tr>
<tr>
<td>Physical health summary score of SF-8; mean (SD)</td>
<td>46.93 ( 8.57 )</td>
<td>49.62 ( 7.66 )</td>
<td>0.094</td>
</tr>
<tr>
<td>Mental health summary score of SF-8; mean (SD)</td>
<td>41.20 ( 7.13 )</td>
<td>44.52 ( 8.51 )</td>
<td>0.055</td>
</tr>
</tbody>
</table>

Note:
<sup>a</sup>SD: Standard Deviation  n.s.: non-significant
<sup>b</sup>Missing Case: 5, Married mothers’ employment status (full or part time).
<sup>c</sup>Missing Case: 9, Married mothers’ income.
<sup>d</sup>1 U.S. dollar = 99.0 Japanese yen (9/2013)
<sup>e</sup>Welsh’s t-tests was conducted for comparing continuous data (mothers’ and children’s age, mental and physical health score) and Fisher’s exact test was conducted for categorical data.

n.s.: non-significant
child’s grandparents regarding caregiving (67% vs. 50%) \((p < .05)\). The mean mental health scores (SF-8) in single mothers were considerably lower than those in married mothers, though the difference was not statistically significant \((p = .055)\).

Table 2 and Table 3 show mean physical and mental health summary scores (SF-8) of single and married mothers in our sample and details of their sex, ethnic background, and age-matched peers, i.e., single mothers in our sample versus Japanese women in their 30s and married mothers in our sample versus the Japanese women in their 40s. The single mothers had significantly lower mental health scores on average than did the Japanese women aged 30-39 years \((p < .001)\). Married mothers also showed significantly lower mental health scores than the Japanese women aged 40-49 years \((p < .001)\). However, no significant group differences were found in physical health score between the mothers in our sample and their age-matched peers: single mothers in our sample versus the Japanese women aged 30-39

### Table 2: Physical and Mental Health Summary Scores of the 8-Item Short Form Health Survey in Single Mothers of Children with Intellectual Disabilities (n=27) and Japanese Women Aged 30-39 Years (n=198)

<table>
<thead>
<tr>
<th></th>
<th>Single mothers of children with intellectual disabilities ((n = 27))</th>
<th>Japanese women aged 30-39 years ((n=198))</th>
<th>Welch's (t)-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SD)</td>
<td>(M)</td>
</tr>
<tr>
<td>Physical health summary score</td>
<td>46.93</td>
<td>8.57</td>
<td>49.13</td>
</tr>
<tr>
<td>Mental health summary score</td>
<td>41.20</td>
<td>7.13</td>
<td>48.07</td>
</tr>
</tbody>
</table>

**Note:**
- \(M\): Mean, \(SD\): Standard Deviation
- Scores of Japanese women aged 30-39 years \((n=198)\) were provided by Fukuhara and Suzukamo (2012).

### Table 3: Physical and Mental Health Summary Scores of the 8-Item Short Form Health Survey of Married Mothers of Children with Intellectual Disabilities (n=183) and Japanese Women Aged 40–49 Years (n=197)

<table>
<thead>
<tr>
<th></th>
<th>Married mothers of children with intellectual disabilities ((n = 183))</th>
<th>Japanese women aged 40-49 years ((n=197))</th>
<th>Welch's (t)-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SD)</td>
<td>(M)</td>
</tr>
<tr>
<td>Physical health summary score</td>
<td>49.62</td>
<td>7.66</td>
<td>48.20</td>
</tr>
<tr>
<td>Mental health summary score</td>
<td>44.52</td>
<td>8.51</td>
<td>48.71</td>
</tr>
</tbody>
</table>

**Note:**
- \(M\): Mean, \(SD\): Standard Deviation
- Scores of Japanese women aged 40-49 years \((n=197)\) were provided by Fukuhara and Suzukamo (2012).
years ($p = .21$) and married mothers versus the Japanese women aged 40-49 years ($p = .06$).

**Discussion**

Studies in various countries conducted over the past two decades have found that single mothers raising children with disabilities are disadvantaged because of relatively low incomes (e.g., Parish et al., 2012), low employment (e.g., Hauge et al., 2013), and poor mental health (e.g., Dyches et al., 2016). However, the previous studies’ findings are mixed concerning employment (Hauge et al., 2013; Porterfield, 2002; Scott, 2010) and mental health (Dyches et al., 2016; McAuliffe et al., 2017) differences between single and married mothers raising children with intellectual disabilities. Since most studies were conducted in the West, it is not clear if their findings apply to Japan. The current study analyzed data previously collected from Japanese mothers raising children with intellectual disabilities. The objective was to describe differences between the mothers by marital status.

First, single mothers were almost 30% more likely than married mothers to be employed, which reflects the employment gap reported in the MHLW’s population data, indicating that 81% of single mothers and 63% of married mothers were employed in 2011 (MHLW, 2013). The employment difference also was consistent with findings of previous studies conducted in the United States that found single mothers to be more likely than married mothers to re-enter the workforce when their children reached school age (Porterfield, 2002).

Second, almost 67% single mothers compared to 7.5% married mothers reported incomes in the lowest income group (less than JPY two million per year). This finding is consistent with Japan Institute for Labour Policy and Training’s (2017) national data on Japanese mothers raising children, which reported that about 47% single Japanese mothers lived in poverty, whereas 6% married mothers had poverty-level incomes. These differences also are consistent with similar studies conducted in the United States (Dyches et al., 2016; Parish et al., 2012).

The higher employment rate combined with lower income of the single mothers in our sample reflects Japanese national-level data (MHLW, 2013; 2017), which indicated that more than 80% of single mothers were employed, but about one-half of Japan’s single mothers lived in poverty. Single mothers raising children with disabilities might be particularly vulnerable to financial problems because their children are likely to need special healthcare and childcare services.

Japanese parents of children with disabilities can receive the Special Child Rearing Allowance government subsidy. The size of the subsidy is based on annual household income and the severity of the child’s disability (National Institute of Population and Social Security Research, 2014). In addition, single parents can receive
the Child Rearing Allowance for Single Parents government subsidy that also is based on annual household income (National Institute of Population and Social Security Research, 2014). However, the current study’s data and the national data strongly suggest that single mothers raising children with disabilities likely need additional financial and other supports to help them to live above the poverty line.

Although most mothers in this study reported having formal and/or informal childcare support, both groups of mothers had significantly lower mental health scores on average than their sex-, ethnicity-, and age-matched peer groups, that is, Japanese women in 30’s and 40’s. Thus, additional and consistent mental health services should be provided by the formal healthcare system to support these mothers and their children. No significant differences were found in physical and mental health between single and married mothers in our sample. However, considering that our sample was very small, future research should examine the marital status differences in the physical and mental health of mothers raising children with intellectual disabilities.

**Limitations**

This study had several limitations to consider when interpreting and applying its findings. First, just 27 single mothers were compared with 183 married mothers. Thus, the interpretations of the analyses were limited. Second, the data were collected in one region of Japan, and the children in the study had mild to severe intellectual disabilities, but no profound sensory or physical disabilities. Therefore, the findings are not generalizable beyond our sample's specific population. Third, the response rate for the primary survey was 55%, which was within the 50% to 59% response rate range of a national survey conducted in Japan in 2013 through 2015 (Science Council of Japan, 2018), but we could not assess sampling error and selection bias. Further investigations should employ samples drawn from various regions of Japan. Finally, we did not identify factors related to differences in socioeconomic status between the two groups of mothers. Multiple regression analysis on a larger sample might help us learn about the underlying mechanisms of the financial, social, and psychological wellbeing variations among mothers raising children with intellectual disabilities.

**Conclusion**

To the best of our knowledge, this is the first study to examine multiple differences between single and married mothers raising children with intellectual disabilities in Japan. The single mothers were more likely to be employed but had significantly lower incomes than the married mothers. All the mothers had significantly lower mental health than their sex-, ethnicity-, and age-matched peer groups. These findings should encourage researchers, policymakers, practitioners, and healthcare professionals to focus on single mothers raising children with intellectual disabilities regarding their
financial and healthcare needs.

References


障害児を育てるシングルマザーにおける就労・経済状況と健康状態

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要旨
これまでの欧米の研究により、障害のある子どもを育てる親の中でも、ひとり親の母親は両親世帯の母親に比べて、就労率が低いことや、収入が低いこと、精神的健康度が低いことが報告されてきた。しかし、我が国でもこうした傾向がみられるかどうかは調べられていなかった。そこで本研究では、知的障害のある児童生徒（6～18歳）を育てる日本人母親210名（配偶者のいる母親183名、配偶者のいない母親27名）から得た質問紙の回答を分析し、上記の問題を検討した。質問項目としては、母親に関する基本的な属性（年齢、就労の有無、教育歴、サービスの利用など）の項目のほか、健康関連QOL尺度が含まれた。分析の結果、ひとり親で障害児を育てる母親は、両親世帯で育てる母親に比べて、就労している割合が高いこと、一方で、収入は低いことが明らかとなった。また、健康状態としては、配偶者の有無にかかわらず、障害児を育てる母親は、同じ年齢の日本人女性に比べて、精神的健康度が低いことが明らかとなった。以上のことから、今後、ひとり親で障害児を育てる母親へのより一層の経済的支援や健康のケアが必要であることが示唆された。