The Role of Shift Work on Psychological Well-being on Swedish Single Mothers

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Abstract

The purpose of the present work was to study the psychological well-being of shift working single mothers in comparison with shift working cohabiting mothers, single mothers working regular hours and cohabiting mothers working regular hours. This was done using the four scales: Perceived stress, perceived social support, general health and satisfaction with life. The convenience sample consisted of Swedish care workers and nurses, who answered a questionnaire. The responses were tested through a 2 x 2 MANOVA. The results showed that there was a significant difference in psychological well-being between single and cohabiting mothers, but no difference among shift working and regular working mothers, and no interaction effects of the four scales on the four groups of mothers. While single mothers’ psychological well-being was worse than cohabiting mothers’, there was no significant difference among shift workers and regular day workers. The psychological well-being of shift working single mothers did not significantly differ from shift working cohabiting mothers, single mothers working regular hours and cohabiting mothers working regular hours. The results are discussed with respect to previous research and we concluded that among Swedish mothers, being a single mother can have more impact on well-being than working shifts.

Keywords: perceived stress, perceived social support, general health, satisfaction with life, psychological well-being, single mothers, nursing home, hospital, shift work, care worker, nurse
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We have all felt unwell at one point in life. Life is full of everyday potentially stressful situations, such as picking your kids up from daycare or making it home in time for dinner. The question is if these everyday situations affect single mothers’ and shift workers’ psychological well-being more than cohabiting mothers’¹ and regular day working mothers’. Both single mothers and shift workers face challenges, such as difficulties with taking care of everyday chores, resulting in feeling worse psychologically (Almeida, & Davis, 2011; Cairney, Boyle, Offord, & Racine, 2003; Collings, Jenkin, Carter, & Signal, 2014; Rachidi, 2016). Thus, it is likely that being a shift working single mother results in worse well-being.

But despite the amount of studies on both shift work and single mothers, there’s a notable lack of research on how shift work affects single mothers’ well-being. Most research has only studied single mothers and shift work separately (Almeida, & Davis, 2011; Cairney et. al., 2003; Collings et. al., 2014; Hsueh, & Yoshikawa, 2007; Han, 2004). Therefore, it is important finding out how working shifts might affect single mothers’ psychological well-being - namely, their satisfaction with life, feelings of stress, general health and social support.

Being a shift worker and a single mother is not unusual. Approximately 20 percent of all mothers in Sweden are single mothers raising one or more children by themselves (Ringmar, 2010) and 25 percent of Swedish employees work shifts or have other types of hour specific employments (Swedish Statistical Bureau, 2012). There is also an overlap between these two groups; single mothers are one of the most likely family types to be employed in shift work (Lleras, 2008). This is another reason why research on single mothers working shifts is important.

Regarding shift work, it can be organised in several different ways. Shift work is defined as working hours which differ from regular working hours (Stressforskningsinstitutet, 2008).

¹ In this study, cohabiting mothers will refer to both married and cohabiting mothers.
2016). One example of this is having a schedule with fluctuating work hours. The time length of the shifts can also differ, such as working 8-hour, 9-hour and 12-hour shifts. This is what shift work is and it affects employees in several ways.

The flexibility of shift work matters when it comes to shift workers’ psychological well-being. Working shifts with low flexibility is more stressful than working shifts with high flexibility. Shift workers with low flexibility has an increased risk of not getting enough sleep, taking more sick days and feeling like they have a lack of control over work (Albrecht, Kecklund, Tucker, & Leineweber, 2016; Rachidi, 2016). Control over work include, for example, being able to choose which hours to work and choosing when to take time off (Albrecht et. al., 2016). Furthermore, due to the amount of shift workers in the public health sector, workers in this sector experience more lack of control over their work than workers in other types of employment (Albrecht et. al., 2016). Thus, being a shift working care worker or nurse with low work flexibility results in a worse psychological well-being compared to workers in other types of employment.

One reason for the decline in well-being of shift workers is that shift work is in general more stressful than working regular hours (Almeida, & Davis, 2011). Working rotating shifts, especially night shifts, makes it difficult for shift workers to find time to spend with their family or planning family events (Bohle, & Tilley, 1998; Hsueh, & Yoshikawa, 2007). This situation creates conflicts within the family (Bohle, & Tilley, 1998; Hsueh, & Yoshikawa, 2007). Thus, shift work can make employees’ everyday lives more stressful.

Shift working mothers are notably affected by everyday stressful situations, especially when it comes to making use of daycare centers. In Sweden, the standard of daycare centers is high. Swedish daycare centers are free up to a certain age and thereafter subventioned (Whitehead, Burström, & Diderichsen, 2000). Furthermore, Swedish mothers rely on the daycare system to a higher degree than mothers in other countries, such as
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Germany and Finland (Krapf, 2014). This use of daycare centers is not affected by the mother’s relationship status (Krapf, 2014). However, although making use of daycare centers is important for working mothers, it is difficult to find a fitting one when the mother is working shifts (Rachidi, 2016). Due to this difficulty, mothers working regular work hours make more use of daycare centers than shift working mothers (Rachidi, 2016). As a result, shift working mothers feel worse psychologically than other working mothers (Ross, & Mirowsky, 1988).

Single mothers do not have the same advantages as cohabiting mothers when it comes to childcare. Single mothers tend to have primary physical custody of their children (Swedish Statistical Bureau, 2016) and if they cannot make use of daycare centers, they need someone else to take care of their children while they are at work. While cohabiting mothers can rely on their partner for this task, single mothers cannot. Instead, they rely on relatives, friends and acquaintances who are not always able to help them out (Cairney et al., 2003; Collings et. al., 2014; Han, 2004; Presser, 1986). This can result in depression and feelings of stress for single mothers (Cairney et al., 2003; Collings et. al., 2014). However, it is worth noting that it is easier to find childcare in Sweden than in other non-Nordic countries, but it is not known if this also applies to single mothers working shifts (Roos, Burström, Saastamoinen, & Lahelma, 2005). In other words, it is reasonable to assume that shift working single mothers have worse well-being than other mothers in regard to childcare.

Although previous research reveal that shift work is stressful (Almeida, & Davis, 2011; Bohle, & Tilley, 1998; Hsueh, & Yoshikawa, 2007; Rachidi, 2015), shift work can be regarded as something positive for mothers’ life at home. Regarding younger children between ages 3 and 5, mothers appreciate being able to spend time during the day with their child before leaving for work in the evening. One reason for this can be that children in these ages are not enrolled in school, which gives mothers the opportunity to spend time with them
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during the day (Lleras, 2008). Contrarily, shift working mothers raising children between ages 13 and 16 are dissatisfied with their life at home (Sizane, & van Rensburg, 2011). The upbringing and relationship of adolescent and mother suffer when the mother is working shifts. This results in worse well-being for shift working mothers than mothers working regular hours (Sizane, & van Rensburg, 2011). Thus, shift working mothers’ well-being vary depending on the age of the child.

Single mothers are at a disadvantage when it comes to social relationships. Compared to cohabiting mothers, single mothers do not have the same degree of support and help from family and friends (Cairney et al., 2003; Collings et. al., 2014; Kingston, 2013). That is, single mothers do not have as many people as cohabiting mothers to turn to in times of need. Single mothers are also less social and therefore feel lonelier than cohabiting mothers (Cairney et al., 2003). This lack of social support makes single mothers feel depressed and stressed (Cairney et al., 2003; Collings et. al., 2014; Kingston, 2013; Rousou, Kouta, Middleton, & Karanikola, 2013). In other words, the social lives of single mothers are not equal to the social lives of cohabiting mothers.

Another inequality between single mothers and cohabiting mothers is their economic situations (Roos et. al., 2005). Although studies from other countries have concluded that single mothers with low wages feel more stressed than single mothers with average to high wages (Lleras, 2008; Presser, 1986), this does not appear to be the case for single mothers in Sweden (Roos et. al., 2005). However, there are results contradicting this previous finding, claiming that financial stress is higher among single than cohabiting mothers in Sweden. As a result, single mothers have worse psychological well-being, despite the various financial benefits provided for them in Sweden (Bull, & Mittelmark, 2009). One reason for this inconsistency between single mothers’ economic situations and well-being is that while single mothers do not feel poor, they do recognize that their economic status is not
equal to cohabiting mothers’ (Bull, & Mittelmark, 2009). Therefore, the research regarding the economic situations of Swedish mothers differ in terms of their psychological well-being.

When it comes to Swedish single mothers’ general living situations, they are better in comparison to the general living situations of mothers in other countries (Krapf, 2014; Whitehead et. al., 2000). For example, comparing Swedish single mothers to British single mothers, the Swedish single mothers are at a lower risk to be poor or unemployed (Whitehead et. al., 2000). The reason for this lower risk is because Swedish mothers have multiple benefits; they make use of state policies regarding child care and child benefits. Furthermore, the Swedish state has a system in place were the state pays the missing partner’s child support to the mother if the missing partner can not be found. This is rather different from, for example, the United Kingdom, where it is up to the single mother’s former partner to pay the child support (Whitehead et. al., 2000). That is, the state will not pay child support if the mother’s partner is not present. This means that being a single mother in Sweden is more beneficial than being a single mother in other countries.

Despite the advantages of single mothers in Sweden, they do not affect single mothers’ well-being. The contrast between, for example, the Swedish and British systems for assisting single mothers has less of an effect on Swedish single mothers’ well-being. One reason for this inconsistency can be traced back to the early female independency in Sweden (Whitehead et. al., 2000). Sweden has a long history of women in the workforce and single mothers are no exception. There is also less stigma about being a single mother in Sweden and as a result it is expected of single mothers to work (Whitehead et. al., 2000). However, this can be a difficult process for single mothers, as they have less time for work, have more special child rearing needs and weekly spend three and a half hours more on unpaid work than cohabiting mothers. These restrictions limit what single mothers can offer their employers (Whitehead et. al., 2000). It can be said that the freedom of being a single mother in Sweden
has come with many benefits, but it has also come with expectations, which have had a negative effect on single mothers’ psychological well-being.

The acknowledgement of being a single mother can also be a factor affecting their psychological well-being. Single mothers are aware that they are single mothers, which makes them dissatisfied. While single mothers report many positive experiences in their day to day life, they might view their situation as less satisfying than cohabiting mothers’ (Bull, & Mittelmark, 2009). Thus, single mothers might feel content with their everyday lives, but their well-being is still worse than cohabiting mothers’ due to this specific way of thinking about themselves.

Working single mothers are more stressed than working cohabiting mothers. Working a job with high demands and low flexibility is stressful (Hibel, Mercado, & Trumbell, 2012). However, when mothers find parenting a stressful challenge, working in a demanding job puts mothers at risk of feeling even more stressed (Hibel et. al., 2012). Furthermore, single mothers are noticeably more vulnerable when it comes to feeling stressed due to parenting and working (Lleras, 2008). The role of being a caregiver and the role of being a worker can collide and make single mothers feel distressed, since they cannot balance the time between their child and work (Lleras, 2008). While it has been studied that single mothers have difficulties combining work and life at home, the effects of irregular work hours haven’t been studied yet.

This leads us to the purpose of this study, which is to examine if shift working single mothers report worse psychological well-being than shift working cohabiting mothers, single mothers working regular hours and cohabiting mothers working regular hours. In accordance with the previous research we have the following questions for our study:

1. Does being a single mother result in worse psychological well-being than being a cohabiting mother?
2. Does working shifts result in worse psychological well-being than working regular hours?

3. Does being a shift working single mother result in worse psychological well-being than being a single mother working regular hours, a cohabiting mother working regular hours or a shift working cohabiting mother?

**Method**

**Participants.** The sample consists of 36 (23.7%) single mothers and 79 (52%) cohabiting mothers working rotating shifts, as well as 10 (6.6%) single mothers and 27 (17.8%) cohabiting mothers working regular hours. 46 (29.7%) mothers were working as nurses and 109 (70.3%) mothers were working as care workers. The age of the mothers is 18 to 67 (18-25: 1.9%, 26-35: 35.5%, 35-45: 43.9%, 45+: 18.6%) and the age range of the children is 3 months to 17 years of age. The single mothers and the cohabiting mothers in our sample were care workers in Sweden or nurses at Örebro University Hospital.

**Mother and Shift Work.** The operational definition of mothers in this study is a mother of one or more children below the age of 18. Single mothers have no live-in partner, while cohabiting mothers have a live-in partner. Cohabiting mothers consist of both cohabiting and married mothers. Shift work is defined by working irregular hours on a fluctuating schedule.

**Care Worker.** The term care worker is directly translated as “undersköterska” in Swedish and is, according to the Swedish Encyclopedia (2016), defined as an “occupational group in health care with the task of providing a good and safe care to those who are sick or in need of care because of disability or age”. This is what the term care worker will refer to in our study.

**Nurse.** The term nurse is translated as “sjuksköterska” in Swedish and is, according to the Swedish Encyclopedia (2016), defined as an “occupational group with the primary
responsibility of planning and leading, implementing and evaluating the clinical care work, working with preventive and health affirming actions, conveys knowledge and teaches patients, relatives, co-workers and students”. This is what the term nurse will refer to in our study.

Measures. The questionnaire we used in this study contained a number of background questions, such as age, marital status and number of children, as well as four scales, which were used to measure the psychological well-being of the participants: The 14-item Perceived Stress Scale, the 12-item Multidimensional Scale of Perceived Social Support, the 5-item Satisfaction With Life Scale and the 12-item General Health Questionnaire (Arbetslivsinstitutet, 1998; Cohen, Kamarck, & Mermelstein, 1983; del Pilar Sánchez-López, & Dresch, 2008; Diener, Emmons, Larsen, & Griffin, 1985; Institutet för Stressmedicin, 2012; Zimet, Dahlem, Zimet, & Farley, 1988).

The questionnaire contained an informational letter where the participants were informed about our research and its purpose, see Appendix I. They were also informed that participation was voluntary; they were able drop out of the survey whenever they wanted and were free to skip any questions they did not want to answer. Furthermore, they were informed about their anonymity in this study and that the data which we collected from them would only be used for this study. Finally, they were given an e-mail address which they could use to contact us on if they had any thoughts or questions about the questionnaire or the study. The choice of e-mailing us gave the respondents an opportunity to ask us any questions before answering the questionnaire and the opportunity for a debriefing after the questionnaire was finished.

Perceived Stress. The 14-item Perceived Stress Scale (Cohen et. al., 1983) was used to measure the level of perceived stress of the respondent. We used a Swedish translated version of this scale (Institutet för Stressmedicin, 2012). The items are shaped as questions,
asking the participants how often they have experienced an emotional state in the past month, for example “In the last month, how often have you been upset because of something that happened unexpectedly?” (Hur ofta har du under den senaste månaden blivit arg på saker som har hänt och som du inte kunnat kontrollera?), “In the last month, how often have you felt that you were unable to control the important things in your life?” (Hur ofta har du under den senaste månaden känt att du inte kunnat kontrollera viktiga saker i ditt liv?) and “In the last month, how often have you dealt successfully with day to day problems and annoyances?” (Hur ofta har du under den senaste månaden kunnat kontrollera irritationsmoment i ditt liv?). The answers are on a likert scale of five; the values are as follows: 1 = “Never” (Aldrig), 2 = “Rarely” (Nästan aldrig), 3 = “Sometimes” (Ibland), 4 = “Frequently” (Ganska ofta), 5 = “Always” (Väldigt ofta).

The 14-item Perceived Stress scale has a high internal consistency. Cronbach’s alpha for the scale was .78. In each of the three samples used in Cohen, Kamarck and Mermelstein’s work (1983), the alpha reliability coefficients were .84, .85 and .86. The test-retest reliability was measured with a two-day interval between the first and second taking of the test. The first sample used, consisting of college students, had a test-retest correlation of .85 and the second sample, consisting of members of a smoking-cessation program, had a test-retest correlation of .55 (Cohen et. al., 1983).

The concurrent validity and predictive validity of the 14-item Perceived Stress Scale are also high. There was a correlation between the 14-item Perceived Stress Scale and self-rated stressful life event scores. Furthermore, the 14-item Perceived Stress Scale was a better predictor than self-rated stressful life event scores in several different areas, such as depression and social anxiety (Cohen et. al., 1983).

Perceived Social Support. The 12-item Multidimensional Scale of Perceived Social Support (Zimet et. al., 1988) was used to measure the level of perceived support the
respondent receives from three factors: their family, significant other and friends. In this scale, significant other means having a special someone; it does not only imply having a romantic partner. We made a Swedish translation of this scale. The items are shaped as statements, such as “I have a special person who is a real source of comfort to me” (Jag har en speciell person som är en stor källa till stöd för mig), “My family really tries to help me” (Min familj försöker verkligligen att hjälpa mig) and “I can count on my friends when things go wrong” (Jag kan räkna med mina vänner när saker går fel). The answers are on a likert scale from one to seven; the values are as follows: 1 = “Strongly disagree” (Håller inte med alls), 2 = “Disagree” (Håller inte med), 3 = “Slightly disagree” (Håller inte riktigt med), 4 = “Neither agree nor disagree” (Varken eller), 5 = “Slightly agree” (Håller med lite grann), 6 = “Agree” (Håller med), 7 = “Strongly agree” (Håller absolut med).

The Cronbach’s alpha for the 12-item Multidimensional Scale of Perceived Social Support in was .88 with significant other, family and friends subscales being at .91, .87 and .85. The subscales are positively related to each other and was therefore analysed as one single scale in our study. The test-retest coefficient was .85; the respondents retook the test after a two-three months interval (Zimet et. al., 1988). The test also has discriminant validity, as all the subscales of the tests were inversely related to both depression and anxiety subscales. Perceived support from family was inversely related on a statistically significant level to both depression and anxiety, while both perceived support from friends and others were inversely related on a statistically significant level to depression. When the entire scale was compared to the depression scale, there was a moderate significant negative correlation, in total making the construct validity moderate (Zimet et. al., 1988).

**Satisfaction With Life.** The 5-item Satisfaction With Life Scale (Diener et. al., 1985) was used to measure the level of satisfaction the respondent had with her life. We made a Swedish translation of this scale. The items are shaped as statements, for example “I am
satisfied with my life” (Jag är nöjd med mitt liv), “In most ways my life is close to ideal” (Mitt liv är på de flesta sätt nära mitt ideal) and “So far I have gotten the important things I want in life” (Än så länge så har alla viktiga saker i mitt liv blivit gjorda). The answers are on a likert scale of seven; the values are as follows: 1 = “Strongly disagree” (Håller inte med alls), 2 = “Disagree” (Håller inte med), 3 = “Slightly disagree” (Håller inte riktigt med), 4 = “Neither agree nor disagree” (Varken eller), 5 = “Slightly agree” (Håller med lite grann), 6 = “Agree” (Håller med), 7 = “Strongly agree” (Håller absolut med).

The 5-item Satisfaction With Life Scale has a high internal consistency. Cronbach’s alpha was .89. The test-retest reliability was measured with a two-month interval between the first and second taking of the test. The test-retest correlation was .82 (Diener et. al, 1985). There is also a high construct validity. The 5-item Satisfaction With Life Scale was positively correlated with scales such as the Positive Affect Scale and negatively correlated with scales such as the Negative Affect Scale. This indicates that respondents with a high score on the 5-item Satisfaction With Life Scale are mentally healthy and free from psychological imbalances (Diener et. al., 1985).

**General Health.** The 12-item General Health Questionnaire (del Pilar Sánchez-López, & Dresch, 2008) was used to measure the level of mental health of the respondent. We used a Swedish translation of this scale (Arbetslivsinstitutet, 1998). The questionnaire is asking the respondent to only report based on their experiences during the past weeks. The items are shaped as statements, such as “I can concentrate on what I am doing” (Jag kan koncentrera mig på vad jag gör), “I have been losing confidence in myself” (Jag har känt att mitt självförtroende har minskat) and “I have been able to enjoy my normal day to day activities” (Jag kan uppskatta det positiva i tillvaron). The answers are on a likert scale of four; the values are as follows: 1 = “Better than usual” (Stämmer helt), 2 = “Same as usual”
(Stämmer bra), 3 = “Worse than usual” (Stämmer delvis), 4 = “Much worse than usual” (Stämmer inte alls).

The Cronbach’s alpha of the 12-item General Health Questionnaire on nurses in the Swedish population was .80. As for validity, the discriminant validity is high. That is, the 12-item General Health Questionnaire showed differences in scores between different sample groups. The test is suggested to be sensitive for gender and employment status, but as we used the test exclusively on working women, this was not a concern for our study (Sconfienza, 1998).

**Procedure.** We made use of both a physical and an online questionnaire. For the online questionnaire, we used the website Survey Monkey for online distribution. All the online questionnaires were only given out to mothers working as care workers, while the physical copies were only given out to mothers working as nurses.

When handing out the online questionnaire, we contacted the unit managers of the nursing homes in Örebro by e-mail. We found the contact information for the different departments via Örebro County’s official website. Thereafter we added all email addresses to the Survey Monkey system and sent them out to all unit managers of the different departments. We sent out a reminder to all unit managers after one week.

We also contacted several factions in Sweden, such as the Swedish Church, the union “Kommunal” and the owner of the website “Makalösa föräldrar”. These factions were sent an email containing the link to the online questionnaire as well as a short introduction of us and the purpose of our study. We asked them to send the online questionnaire to all eligible mothers in their communities.

We also made use of Facebook to hand out our online questionnaire. We contacted the admin of the page called “Vi Undersköterskor”. We introduced ourselves and explained to the admin what the purpose of our study was. The online questionnaire was thereafter
distributed on their page by the admin. Furthermore, we contacted the admins of several closed Facebook groups for either single parents, single mothers or care workers. Here, we also introduced ourselves and explained to the admins what the purpose of our study was. Thereafter, we asked if we could gain entry to their closed groups. If the admins responded yes, we gained entry to the closed groups and posted a message retaining the same information we gave the admins. We also told the members they may contact us if they have any questions regarding the study or the questionnaire. A link to the survey was included in the post.

We also visited Örebro University Hospital to hand out the physical copies of the questionnaire. We arrived on site and went to the different departments. We had not scheduled any meetings with the department heads, so when contacting them on site we explained who we were and the aim of the study. We then asked the various department heads to give out the physical questionnaires to their nurses. We informed them that the questionnaires would be picked up in one week.

**Analyses.** To analyse the data we conducted a 2 x 2 MANOVA analysis. This analysis provides us the opportunity to test the overall hypothesis regarding psychological well-being and to test for specific differences across the groups. The dataset contained some missing values. The maximum amount of missing values was 8.4%, and the average rate of missing values was 5.5%. To test if the missingness in the data was at random, we made use of the Little’s MCAR test. The test results indicated that the data were missing at random, $\chi^2(155) = 1.310, p > 1$. Thus, we used the Expectation Maximization (EM) algorithm to estimate missing values. The EM method provides unbiased estimates of missing information, especially if the missing data are at random (Little, & Rubin, 1987).

**Results**
The purpose of this study was to examine the psychological well-being of shift working single mothers. We wanted to see if the well-being of single mothers differed from cohabiting mothers and if mothers working shifts differed from mothers working regular hours. We also wanted to see if the well-being of shift working single mothers differed from shift working cohabiting mothers, single mothers working regular hours and cohabiting mothers working regular hours. Descriptives tables for each scale used in our questionnaire can be seen below, Table 1.

Table 1

Mean and standard deviations of the scale means by relationship status and type of work

<table>
<thead>
<tr>
<th></th>
<th>Perceived Stress</th>
<th>Perceived Social Support</th>
<th>Satisfaction With Life</th>
<th>General Health</th>
</tr>
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<td></td>
<td>( M )</td>
<td>( SD )</td>
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<tr>
<td>Single mothers</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Shift</td>
<td>36</td>
<td>44.59</td>
<td>5.08</td>
<td>56.29</td>
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<td>Regular hours</td>
<td>10</td>
<td>45.75</td>
<td>4.8</td>
<td>57.5</td>
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<tr>
<td>Cohabiting mothers</td>
<td></td>
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<tr>
<td>Shift</td>
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<td>43.62</td>
<td>7.34</td>
<td>71.31</td>
</tr>
<tr>
<td>Regular hours</td>
<td>27</td>
<td>42.04</td>
<td>7.84</td>
<td>71.72</td>
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</tbody>
</table>

To examine if the psychological well-being of shift working single mothers is worse than the well-being of shift working cohabiting mothers, single mothers working regular hours and cohabiting mothers working regular hours, a 2 x 2 MANOVA was conducted on the four dependent variables: Perceived stress, perceived social support, general health and satisfaction with life. The independent variables were relationship status and type of work.

The 2 x 2 MANOVA revealed that psychological well-being was significantly affected by the relationship status of the mother, \( F(4, 148) = 7.69, p < .01 \), but not type of work, \( F(4, 148) = .22, p > .05 \). There was no significant interaction effect between relationship status and type of work, \( F(4, 148) = .4, p > .05 \). Single mothers’ psychological well-being was worse than cohabiting mothers’. However, there was no significant difference
between mothers who are working shifts or regular hours. Finally, the psychological well-being of shift working single mothers was not worse than the psychological well-being of the other groups of working mothers.

The 2 x 2 MANOVA also showed the main effects of the dependent variables of psychological well-being on relationship status and type of work. When it comes to perceived stress, since the assumption of homogeneity of variance was not met, we made a robust F-test. The Welch robust F-test revealed that perceived stress was not significantly affected by the relationship of the mother, $F(1, 155) = 1.24, p > .05$, or type of work, $F(1, 152) = 1.04, p > .05$. There was also no significant interaction effect, $F(1, 152) = .44, p > .05$. Thus, being a single mother did not make mothers more stressed than cohabiting mothers and being a shift worker did not make mothers more stressed in comparison to working regular hours. Furthermore, being a shift working single mother did not affect how stressed mothers felt in comparison to other groups of working mothers.

In regard to perceived social support, since the assumption of homogeneity of variance was not met, we conducted a robust F-test. The Welch robust F-test showed that perceived social support was significantly affected by the relationship of the mother, $F(1, 155) = 32.9, p < .001$, but not by type of work, $F(1, 152) = .01, p > .05$. There was also no significant interaction effect, $F(1, 152) = .01, p > .05$. Single mothers felt they had less support from family, friends and significant others than cohabiting mothers. However, whether they worked shifts or regular hours did not affect how much support mothers felt they were receiving. Finally, being a shift working single mother did not affect how much support mothers received in comparison to the other groups of working mothers.

When it came to satisfaction with life, the 2 x 2 MANOVA revealed a significant main effect on relationship status of the mother, $F(1, 155) = 11.83, p < .001$, but not on type of work, $F(1, 152) = .61, p > .05$. There was also no significant interaction effect, $F(1, 152)$
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= .35, \( p > .05 \). Single mothers were less satisfied with life in comparison to cohabiting mothers, but shift working mothers were not less satisfied with their lives than mothers working regular hours. Furthermore, being a shift working single mother did not affect how satisfied they were with their lives in comparison to the other groups of working mothers.

Concerning general health, the assumption of homogeneity of variance was not met, so we made use of a robust F-test. The Welch F-test showed that general health is affected by the relationship status of the mother, \( F(1, 155) = 5.8, p < .05 \), but not type of work, \( F(1, 152) = .72, p > .05 \). There was also no significant interaction effect, \( F(1, 152) = .55, p > .05 \). Single mothers’ general health was worse than cohabiting mothers’ general health. However, the general health of shift working mothers was not worse than the general health of mothers working regular hours. Finally, being a shift working single mother did not make mothers have worse general health than the other groups of working mothers.

Discussion

The purpose of this study was to see if shift working single mothers’ psychological well-being was significantly worse than the well-being of shift working cohabiting mothers, single mothers working regular hours or cohabiting mothers working regular hours. Single mothers’ well-being differed in comparison to cohabiting mothers. However, this difference was not found among shift working mothers and mothers working regular hours. Furthermore, shift working single mothers’ psychological well-being differed little in comparison to the well-being of shift working cohabiting mothers, cohabiting mothers working regular hours and single mothers working regular hours. Thus, the results have been somewhat surprising.

Single mothers differed from cohabiting mothers when it came to social support. Specifically, single mothers felt like they were getting less social support than cohabiting mothers. This can be due to the limited amount of time single mothers can spend on socializing. That is, their living situations tend to make them less social than cohabiting
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Thus, single mothers have less leisure time due to child rearing, which in turn gives them less time to spend with friends or relatives. This finding is in accordance with previous research (Cairney et. al., 2003; Collings et. al., 2014; Rousou et. al, 2013; Kingston, 2013).

Our finding in regard to satisfaction with life showed that single mothers were less satisfied with their lives than cohabiting mothers. A possible explanation for this is that single mothers’ general living situations are lacking. Even though the stigma of being a single mother in Sweden is low (Whitehead et. al., 2000), the nuclear family is still the norm (Wennesjö, & Raneke, 2012). This norm might contribute to single mothers thinking less of themselves than cohabiting mothers, simply due to the fact that they are single (Bull, & Mittelmark, 2009). Adding to this, while single mothers in Sweden do not see themselves as poor, they are aware that their economic situations are not equal to cohabiting mothers’ (Bull, & Mittelmark, 2009). These are all factors that can potentially affect single mothers’ satisfaction with life.

The general health of single and cohabiting mothers differed, with single mothers feeling worse. This can be attributed to single mothers’ general position in society. Despite the numerous benefits that single mothers have from the Swedish welfare system, such as free healthcare for their children and subventioned daycare, they feel pressure to perform well in terms of both child rearing and work (Whitehead et. al., 2000). Due to single mothers having more child rearing needs, more time spent on unpaid work and less time to spend on work than cohabiting mothers, single mothers can feel like they do not have as much to offer an employer as cohabiting mothers (Whitehead et. al., 2000). Thus, despite all the benefits available for Swedish single mothers, the strain of society still has an effect on their general health.
Single mothers did not differ from cohabiting mothers in terms of stress. This finding gives us an insight on the positive and negative emotions of psychological well-being. The stress single mothers feel does not necessarily affect their general well-being. Hence, they still feel worse psychologically compared to cohabiting mothers. It can be said that the absence of stress in Swedish single mothers’ lives do not necessarily affect their general psychological well-being in terms of their positive emotions, as they do not think their positive emotions balance out their negative ones. This can be due to the way western countries wish to maximize all positive emotions to gain psychological well-being, instead of balancing negative and positive emotions (see, e.g., Kormi-Nouri, Farahani, & Trost, 2013). With support from previous research, we can reasonably assume that feeling less stressed do not affect the other areas of single mothers’ psychological well-being. It is possible that Swedish single mothers need positive experiences in all different areas of life to feel well psychologically.

In regard to shift work, mothers who worked shifts did not differ from mothers working regular hours in terms of stress and general health. According to previous research, working shifts can cause stress due to shift workers finding it difficult to plan family events (Bohle, & Tilley, 1998; Hsueh, & Yoshikawa, 2007). However, when contacting the employers at Örebro University Hospital and various nursing homes throughout Sweden, we found that shift workers employed there tend to have highly flexible work schedules. Nurses are, for example, able to request specific shifts on a monthly basis. This might give shift working mothers an opportunity to more effectively plan their time off work and therefore, as a result, they experience less stress. When it comes to general health, the high work flexibility might give the shift working mothers better control of their sleeping patterns and less pressure from working specific times. Hence, this feeling of having control over work can explain why shift workers’ general health as well as stress was not worse than regular day workers’.
Shift working mothers did not feel like they had less social support than mothers working regular hours. This finding was not in line with previous studies, which concluded that shift workers do not have as much social support as mothers working regular hours (Bohle, & Tilley, 1998; Hsueh, & Yoshikawa, 2007). The reason for this can be due to the shift working mothers’ way of using social media. Since part of the group of shift working mothers who answered our online questionnaire were part of closed Facebook groups and websites planning offline meetings, these places might have been where shift working mothers found support from others. Furthermore, it has been said that working shifts creates family conflicts (Bohle, & Tilley, 1998; Hsueh, & Yoshikawa, 2007). One possible reason for these conflicts can be the difficulty of finding suitable daycare. Due to the high number and quality of daycare centers in Sweden (Krapf, 2014; Roos et. al., 2005; Whitehead et. al., 2000), this issue might be easier to solve for shift working mothers and, as a result, does not put as much strain on the family. Thus, due to shift working mothers’ potential way of finding support from others and making use of daycare centers, their social support system was not as lacking as we thought.

Mothers working shifts and mothers working regular hours did not differ when it came to their satisfaction with life. This can be connected to mothers of small children preferring shift work, as the children often are at home. Working shifts can allow the mothers to spend time with their children before starting work later in the day (Lleras, 2008). Contrarily, according to previous research, shift working mothers with adolescent children are less satisfied with their life at home (Sizane, & van Rensburg, 2011). However, while 28.6% of the mothers in our study had children between the ages 0-5, only 10% had children between the ages 13-17. This difference in percentage between the two groups might explain why the shift working mothers in our study did not differ from mothers working regular hours in terms of their satisfaction with life.
When it comes to shift working single mothers, they were not different from the other groups of mothers in regard to their satisfaction with life and general health. The reason for this can partly be the availability of a solid support system of childcare and child benefits for single mothers in Sweden (Whitehead et. al., 2000). Another reason can be shift working mothers’ way of handling the roles of being a mother and a worker. The roles of being a mother and a worker can collide for single mothers, causing them to feel distressed (Lleras, 2008). However, the preference for shift working mothers to stay at home with their small children can explain why these two roles do not collide for them (Lleras, 2008). That is, they can prioritize their time to suit both their children and their work. This can lighten the negative effects of being a shift working single mother. As a result, there is no difference in general health and satisfaction with life between the groups. The finding that shift working single mothers did not have any less satisfaction with life or worse general health than the other groups opens up for the question if shift work is more preferable for both cohabiting and single mothers alike. This might be an important area of future research.

In terms of social support and stress among the groups of working mothers, the high work flexibility and the availability of different forms of childcare can explain the lack of differences between the groups. Since shift working mothers have more control over their work schedules in comparison to mothers working regular hours, they might more effectively make plans with friends and relatives. This can especially be applied to shift working single mothers, since they can plan how to make time for both their child and their social lives, perhaps to a larger extent than mothers working regular hours. Furthermore, it is easier for mothers in Sweden to find childcare than for mothers in other countries (Roos et. al., 2005). Although it has not been studied if the ease of finding childcare in Sweden also applies to shift workers, it can be said that this might have contributed to the indifference of social support as well as stress between the groups. The high work flexibility and the availability of
childcare might therefore have contributed to shift working single mothers’ high social support and low stress.

Just like all other studies, ours also have limitations. Due to this study’s time frame and limited resources, we had to limit our research to care workers and nurses which were available to us. Hence, we were not able to find a sample which we knew were a good representation of what the rest of the population of mothers working as nurses and care workers were like. Also, due to the limited number of single fathers in Sweden (Swedish Statistical Bureau, 2016), we only included mothers in our study. Furthermore, we gave out our questionnaire to both nurses and care workers. These two groups have different incomes, education and job assignments. However, to get a large enough sample to make proper analyses, we decided to include both nurses and care workers in our study. We also did not account for the high work flexibility for the shift workers in our sample, which might have affected our results.

Our study also has strengths. By making use of an online questionnaire, we were able to reach out to care workers all over Sweden. This gives us a better picture of what it is like to be a shift working single mother in Sweden, while confining our sample only to Örebro would have been more limiting. Furthermore, this study is unique, since to our knowledge of our previous review, no other study about the effect of shift work on single mothers can be found in Sweden. It also contributes to previous research by adding two well researched groups together into one. Considering the number of single mothers working as care workers or nurses in Sweden, the results of this study are important for getting to know what their well-being is like.

The psychological well-being of shift working single mothers was not as different as we thought in comparison to the other groups of working mothers. However, although our study shows the possibility of a country where being a shift worker does not equal having
worse well-being than a regular day worker, this is not the case for single mothers. With the exception of stress, single mothers have significantly worse psychological well-being than cohabiting mothers. However, more research is needed to see if the difference between type of motherhood and employment is in accordance with what our study has concluded. It could also be interesting for future research to expand the sample further. That is, to not only include nurses and care workers, but also study the well-being of single mothers employed in other types of shift work. Furthermore, expanding this type of study to also include single fathers could be beneficial. To our knowledge, because of uniqueness of this study, the effect of shift work on single fathers has not been studied yet. In conclusion, this study shows what the psychological well-being of Swedish shift working single mothers might be like, as well as being a stepping stone for new ideas and possibilities in uncovering the life of single parenthood together with shift work.
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Hej!

Vi är två studenter från Örebro Universitet som studerar sista terminen i psykologi och håller nu på att skriva vår C-uppsats. Vi är intresserade av att se hur stress påverkar mammor som arbetar inom vården. Vårt syfte med studien är att se om singelmammor som jobbar skiftarbete är mer stressade än andra mammor inom vården.

En studie som denna har inte tidigare gjorts i Sverige, vilket vi tycker är synd. Därför vill vi belysa hur det är att jobba inom vården samtidigt som man är mamma. Vi är hemskt tacksamma om du vill svara på denna enkät och bidra till att skapa förståelse för er situation.


Om du har frågor eller tankar kring enkäten tveka inte att kontakta oss på vår e-mailadress: linda_to@hotmail.com

Tack på förhand,
Simon Snöfjord och Linda Tapper-Östlund

**Del 1 av 5**

1. Hur många barn har du?
   1 2 3 4 5+

2. Vad är din nuvarande relationsstatus?
   Singel Sambo Gift Ånka

3. Vad är din ålder?
   18-25 26-35 35-45 45+

4. Hur gamla är dina barn?

5. Jobbar du skift eller dagtid?
   Skift Dagtid

6. Om du jobbar skift, vilket typ av skift jobbar du? (treskift, femskift, dagskift osv.)

7. Vilken avdelning jobbar du på?

8. Vad är din årsinkomst?
   - Under 100 000
   - 100 000-200 000
   - 200 001-300 000
   - 300 001-400 000
   - Över 400 000

9. Hur nöjd är du med ditt arbete?
   - Mycket nöjd
   - Nöjd
   - Ganska nöjd
   - Varken eller
   - Inte så nöjd
   - Inte nöjd
1. Hur ofta har du under den senaste månaden känt dig upprörd på grund av att något oväntat har inträffat?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

2. Hur ofta har du under den senaste månaden känt att du inte kunnat kontrollera viktiga saker i ditt liv?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

3. Hur ofta har du under den senaste månaden känt dig nervös och stressad?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

4. Hur ofta har du under den senaste månaden framgångsrikt hanterat vardagsproblem och irritationsmoment?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

5. Hur ofta har du under den senaste månaden känt att du effektivt kunnat hantera viktiga förändringar som inträffat i ditt liv?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

6. Hur ofta har du under den senaste månaden känt tilltro till din egen förmåga att hantera personliga problem?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

7. Hur ofta har du under den senaste månaden känt att saker och ting gått din väg?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

8. Hur ofta har du under den senaste månaden tyckt att du inte kunnat klara av allt du skulle ha gjort?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

9. Hur ofta har du under den senaste månaden kunnat kontrollera irritationsmoment i ditt liv?

   Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta

10. Hur ofta har du under den senaste månaden känt att du har haft kontroll på saker och ting?

     Aldrig  Nästan aldrig  Ibland  Ganska ofta  Väldigt ofta
11. Hur ofta har du under den senaste månaden blivit arg på saker som har hänt och som du inte kunnat kontrollera?

Aldrig    Nästan aldrig    Ibland    Ganska ofta    Väldigt ofta

12. Hur ofta har du under den senaste månaden kommit på dig själv med att tänka på saker som du måste göra?

Aldrig    Nästan aldrig    Ibland    Ganska ofta    Väldigt ofta

13. Hur ofta har du känt under den senaste månaden att du haft kontroll över hur du använder din tid?

Aldrig    Nästan aldrig    Ibland    Ganska ofta    Väldigt ofta

14. Hur ofta har du under den senaste månaden tyckt att svårigheter har tornat upp sig så mycket att du inte kunnat hantera dem?

Aldrig    Nästan aldrig    Ibland    Ganska ofta    Väldigt ofta

**Del 3 av 5.**

Håller inte med alls = 1
Håller inte med = 2
Håller inte riktigt med = 3
Varken eller = 4
Håller med lite grann = 5
Håller med = 6
Håller absolut med = 7

1. Mitt liv är på de flesta sätt nära mitt ideal.
   1 2 3 4 5 6 7

2. Mina livsförhållanden är utmärkta.
   1 2 3 4 5 6 7

   1 2 3 4 5 6 7

4. Än så länge så har alla viktiga saker i mitt liv blivit gjorda.
   1 2 3 4 5 6 7

5. Om jag kunde leva om mitt liv skulle jag nästan inte ändra på någonting.
   1 2 3 4 5 6 7
Del 4 av 5.

Vi vill veta hur Du har känt Dig under de senaste veckorna.

1. Jag kan koncentrera mig på vad jag gör.
   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

2. Jag har svårt att sova p.g.a. problem och svårigheter.
   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

4. Jag känner mig kapabel att fatta beslut.
   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

5. Jag känner mig väldigt pressad.
   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

7. Jag kan uppskatta det positiva i tillvaron.
   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

   Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

    Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

    Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls

12. Jag har känt mig ganska lycklig på det hela taget.
    Stämmer helt  Stämmer bra  Stämmer delvis  Stämmer inte alls
Del 5 av 5

Håller inte med alls = 1
Håller inte med = 2
Håller inte riktigt med = 3
Varken eller = 4
Håller med lite grann = 5
Håller med = 6
Håller absolut med = 7

1. Det finns en speciell person som finns där när jag behöver henne.
   1 2 3 4 5 6 7

2. Det finns en speciell person som jag kan dela min glädje och min sorg med.
   1 2 3 4 5 6 7

3. Min familj försöker verkligen att hjälpa mig.
   1 2 3 4 5 6 7

4. Jag får det emotionella stödet jag behöver från min familj.
   1 2 3 4 5 6 7

5. Jag har en speciell person som är en stor källa till stöd för mig.
   1 2 3 4 5 6 7

6. Mina vänner försöker verkligen att hjälpa mig.
   1 2 3 4 5 6 7

7. Jag kan räkna med mina vänner när saker går fel.
   1 2 3 4 5 6 7

8. Jag kan prata om mina problem med min familj.
   1 2 3 4 5 6 7

9. Jag har vänner som jag kan dela min glädje och min sorg med.
   1 2 3 4 5 6 7

10. Det finns en speciell person i mitt liv som bryr sig om mina känslor.
    1 2 3 4 5 6 7

11. Min familj är villig att hjälpa mig med mina beslut.
    1 2 3 4 5 6 7

    1 2 3 4 5 6 7