

Social support among Icelandic teenage mothers vs. Icelandic teenage nonmothers: Exploring academic achievements and psychological well-being.

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Abstract - English

Previous studies have shown that social support and education can increase psychological well-being among teenage mothers. The main goal of the present study was to explore the aspects of family and peer support among teenage mothers vs. teenage non-mothers and how it is related to their psychological well-being and academic achievements. Available data was obtained from the Icelandic Centre for Social Research and Analysis. Participants in the study were all teenage girls that were enrolled in high school, 16–19 years of age. A sample of 4.772 teenage girls was analyzed. Teenage mothers were 71 and non-teenage mothers were 4.694. Results indicated that on average teenage mothers had lower grades than teenage nonmothers but they did not differ in their average score on symptoms of depressed mood. Family and peer support predicted better academic achievements and depressed mood among both groups, indicating that those who received adequate social support tended to do better in school and show less symptoms of depressed mood. Overall, the findings suggested that family and peer support seems to be a valuable source for teenage mothers. Hopefully, the research findings will advance the knowledge of teenage mothers vs. teenage non-mothers and provide a better understanding of the underlying factors that are valuable for psychological health and well-being of teenage mothers.

Keywords: teenage mothers, psychological well-being, social support, academic achievements

Útdráttur - Icelandic

Fyrri rannsóknir hafa sýnt að félagslegur stuðningur og menntun getur aukið andlega heilsu ungra mæðra. Markmið rannsóknarinnar var að skoða áhrif félagslegs stuðnings frá fjölskyldu og vinum á andlega líðan og námsárangur ungra mæðra í samanburði við stúlkur sem ekki eru ungar mæður. Fyrirliggjandi gögn fengust hjá Rannsóknum og Greiningu. Þátttakendur í rannsókninni voru táningsstúlkur sem voru í framhaldsskóla, 16 til 19 ára gamlar. Alls tóku 4.772 táningsstelpur þátt í rannsókninni, ungar mæður voru 71 og stúlkur sem ekki voru mæður voru 4.694. Niðurstöður gáfu til kynna að ungar mæður voru líklegri til að sýna verri námsárangur en stúlkur sem áttu ekki börn en ekki reyndist marktækur munur á hópunum á einkennum þunglyndis. Stuðningur frá fjölskyldu og vinum voru sterkir forspársþættir fyrir betri námsárangur og minni einkenni þunglyndis bæði meðal ungra mæðra og annarra stúlkna sem ekki áttu börn. Niðurstöður rannsóknarinnar gefa til kynna að stuðningur frá fjölskyldu og/eða vinum eru mikilvægir þættir til að efla námsárangur og vellíðan fyrir ungar mæður í framhaldsskólum á Íslandi.

Lykilorð: ungar mæður, andleg líðan, félagslegur stuðningur, námsárangur

Foreword and Acknowledgements

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Social support among Icelandic teenage mothers vs. Icelandic teenage non-mothers:

Exploring academic achievements and mental health.

Becoming a mother can be a stressful life experience, regardless of age and circumstances (Boden, Fergusson, & Horwood, 2008). Many mothers start to doubt their own ability with childcare and feel unsecure in their motherhood experiences, and thus it can affect their psychological well-being (Schmied, & Everitt, 1996). Teenagers, who decide to bring their baby to term, can face various problems that can be life altering and challenging.

Teenage childbearing can hinder teenage mothers to succeed (Boden et al., 2008). Previous studies have shown that teenage mothers suffer more from negative future outcomes and are at higher risk of developing mental illnesses (e.g. anxiety and depression) (e.g. Boden et al. 2008; Coley, & Chase-Lansdale, 1998) than teenage non-mothers. Negative outcomes can be reflected in poor academic achievements, psychological problems and poverty (e.g. Boden et al. 2008; Coley, & Chase-Lansdale, 1998; Letourneau, Stewart, & Barnfather, 2004). Other studies have shown that improved outcomes for teenage mothers can potentially be reached through good social support (e.g. Bunting, & McAuley, 2004) and education (e.g. Manlove, Mariner, & Papillo, 2000; Perper, Peterson, & Manlove, 2010).

Social support has received great deal of attention in the teenage motherhood literature. Instead of approaching teenage motherhood as a social problem, some researchers have focused more on how teenage mothers can succeed in life with social support (e.g. Bunting, & McAuley, 2004; Henley, 1997). Social support is a multidimensional concept and the source of social support can come from e.g. family member, significant other or peer (Sarafino, & Smith, 2012). Social support has been defined as the comfort, the caring, the esteem, or help a person actually receives or perceives from others (Letourneau, Stewart, & Barnfather, 2004). People that receive social support believe that they are a part of a social network. Social support can provide four basic functions of social support: emotional (e.g.

caring for a person), tangible (e.g. lending money), informational (e.g. giving advice about parenting skills) and companionship (e.g. availability of others) (Letourneau, Stewart, & Barnfather, 2004; Sarafino, & Smith, 2012). Social support has been labeled as one of the key factor for teen mothers in order to succeed (Luster, Bates, & Fitzgerald, 2000), and it can tribute to a mother's well-being across their life span (Smith, Greenberg, & Seltzer, 2011).

To understand the effects and the processes of the concept social support Stevenson, Maton, and Teti (1999) demonstrated that psychological well-being needs to be considered as types (e.g. self-esteem, depression etc.) (Stevenson et al., 1999), and each source of social support should be specified separately (e.g. peers, parents etc.) (Wendy et al., 1999), because previous findings showed that different sources of support have been related to psychological well-being (Stevenson et al., 1999).

A number of studies have explored how social support can affect psychological well-being among teenage mothers (e.g. Henly, 1997; Nath, Borkowski, Whitman, & Schellenbach, 1991; Nitz, Ketterlinus, & Brandt, 1995). Nitz et al. (1995) reported two important aspects to consider when examining the concept social support. First, who it is providing the support to the teenage mothers, and second, the amount of satisfaction that teenage mother perceives regarding given support (Nitz et al., 1995).

Nath et al. (1991) reported that family support could have a significant positive effect on teenage mothers. Nitz et al. (1995) reported that teenage mothers often seek informal support networks for help to get a greater sense of parenthood (Nitz et al., 1995). Nitz et al. (1995) evaluated the impact of social support, stress, and family environment on teenage mothers and their babies. The findings showed that the mothers of the teenage mothers were cited as the most frequent provider of support, but also the infant's father. Results indicated that social support plays an important role in teenage mother's psychological well-being. Analysis also revealed that a large social network could be beneficial for the teenage mothers

(Nitz et al., 1995).

Peer support has not received as great deal of attention like family support has for teenage mothers (Bunting, & McAuley, 2004). Nevertheless, Nitz et al. (1995) reported that teenage mothers cited peers as second commonly provider and source of support. Richardson, Barbour, and Bubenzer (1995) did a research on forty-six teenage mothers. They assessed the types and the quantity of support that was provided by peers and compared it to family support. They concluded that a perceived emotional support from peer is occasionally seen as more important to the adolescent mothers than family support (Richardson et al., 1995). It appears that peer support, integrated with family and partner support can contribute to increased life satisfaction among teenage mothers. Partner support for teenage mothers has shown increased positive outcomes in psychological well-being and a greater tolerance to their infants and a better paternal content with life (Kelly, 1995; Letourneau, 2001). Roye's and Balk's (1996) showed that teenage mothers who are involved with their biological father, boyfriend or surrogate father, can lead to more positive future outcomes for the teenage mothers and their child.

Minimal amount of research has examined the impact of social support and how it affects academic achievements among teenage mothers. Previous studies have shown that teenage mothers are less likely to finish their high school diploma (Perper et al., 2010), and are at a higher risk of dropping out of school (Hoffman and Maynard, 2008). Teenage mothers who do not attain a high school education are more likely to experience negative outcomes (e.g. Manlove, Mariener, & Papillo, 2000; Klerkman, 2004) than teenage mothers who gain educational attainment; they tend to do better in life (e.g. Furstenberg, Brooks-Gunn, & Morgan, 1987; Werner & Smith, 2001).

The aim of the study was to examine the circumstances under which social support may be beneficial for teenage mothers vs. teenage non-mothers. It appears that no prior

studies have examined the relationship between; psychological well-being among teenage mothers vs. teenage non-mothers, and if social support is a stronger predictor for teenage mothers. However, other studies have explored the buffering effects of social support on psychological well-being, and social support has been found as an important variable that affects the impact of life events on psychological well-being (e.g. Cohen, & Wills, 1985; Thoits, 1982). As a result of previous findings, that different sources of support has been related to psychological well-being, the main goal of this present study was to use a twodimensional view of social support (family support and peer support) to examine the relationship between social support and depressed mood (psychological well-being) and academic achievement among teenage mothers and teenage non-mothers. The main hypotheses for the present study were that: (1) Teenage mother are more likely than teenage non-mother to have poor academic achievement and, (2) symptoms of depressed mood; (3) high levels of social support of family and peer independently predicts better academic achievement and, (4) less depressed symptoms. Finally based on the literature on possible buffering effects of social support (e.g. Cohen, & Wills, 1985; Thoits, 1982) it was hypothesized that (5) social support of family and peer would more strongly predicts depressive symptoms and academic achievement for teenage mothers than not teenage mothers.

Method

All data in this research was obtained from a large study performed in the year 2007 by the Iceland Centre for Social Research and Analysis (ICSRA). All data was collected from a survey entitled *Young people 2007 – Survey among Icelandic high school students*.

Participants in the study were Icelandic high school students from the age of 14 – 24. The data included 10.229 valid responses. Total of 5.690 were girls and the boys were 5.405, but 134 participants did not specify their gender. Response rate for the population, of those who

should have been in school of the survey, was overall 72.2% (Kristjánsson, Guðmundsdóttir, Pálsdóttir, Sigfúsdóttir, & Sigfússon, 2008). Only variables related to the present study and suitable subjects were selected and analyzed.

Participants

The research sample in this present study included every teenage mother and teenage non-mother that attended high school and answered the survey, in the present day that the survey was conducted. In total, 4.772 girls from the age of 16 - 19 (M = 4.27; SD = 1.09) participated in the study. Teenage mothers were 71 (1.5%) and non-teenage mothers were 4.694 (98.5%). All participants took the survey at the same day at the same time. Teachers submitted the survey to students in the classroom. Students received strict instructions to never write their name or social security number on the study. In addition, students were asked to respond faithfully.

Measures

The questionnaire were designed by highly skilled professionals and developed by the ICSRA. The questionnaire consisted of a total of 127 questions and all of the questions provided useful insight in to the life of adolescents. Only 25 questions were used for the present study.

Total of four variables were used in this study. There were two dependent variables: depressed mood and academic achievement. The independent variables were family support and peer support and being a teenage mother or not. All variables were coded and analyzed as described below:

Family support.

Family support was measured with five questions. The questions were: "How easy or difficult would it be for you to get on terms with your parents?" regarding five different

issues: "caring and warmth", "discussing personal matters", "advice regarding studies", "advice regarding other tasks (challenges)" and "assistance with various tasks". The possible answers for all of these sections were: 1 = "very difficult", 2 = "rather difficult", 3 = "rather easy" and 4 = "very easy". The questions were all combined into one scale with values ranging from 0-15. Cronbach's alpha of internal consistency was good $\alpha=0.87$ for the family support scale.

Peer support.

Peer support was also measured with five questions. The questions were: "How easy or difficult would it be for you to get on terms with your peers?" regarding the same five different issues as in family support. The answers possibilities were 1 = "very difficult", 2 = "rather difficult", 3 = "rather easy" and 4 = "very easy". The five questions were all combined into one scale with values ranging from 0–15. Cronbach's alpha was good α =0.86 for the peer support scale.

Academic achievements.

Academic achievements were measured with four questions. Respondents were asked about their grades in SAT's on the following subjects: Icelandic, English, Danish and Math. The answer possibilities were 1 = "I didn't take the test" which was defined as missing value, 2 = "4 or under", 3 = "about 4", 4 = "about 5", 5 = "about 6", 6 = "about 7", 7 = "about 8", 8 = "about 9", and 9 = "about 10". The questions were combined into one scale. In this sample the scale ranged from 0-28 and Cronbach's alpha was good $\alpha=0.84$.

Depressed mood.

Depressed mood was measured with eight questions. Participants were asked "How often they noticed indisposition or discomfort during the last 30 days" for the following: "you were sad or had little interest in doing things", "you thought you were lonely", "you cried

easily or wanted to cry", "you had trouble falling to sleep or keep you asleep", "you were depressed or sad", "you were not excited to do anything" and "you thought you were slow or had a little strength". The answers for all of the following questions were 1 = "almost never", 2 = "seldom", 3 = "sometime" and 4 = "often". All questions were combined into one scale with values ranging from 0–24. Cronbach's alpha was good α =0.89.

Statistical analysis.

Linear regression was used to test the main and interaction effects between family and peer support, being a teenage mothers versus not and academic achievement and depressed mood. All variables were screened for violation for assumptions prior to linear regression analysis. Assumptions for the regression analysis were met (Field, 2009). All predictor variables were either quantitative or categorical and outcome variable were all quantitative. All the data was explored by looking at internal consistency using Cronbach's alpha (α). All the scales had high Cronbach's alpha (α). All consistency. Furthermore, a one-way ANOVA was conducted in order to see difference between teenage mothers and teenage non-mothers on the academic achievement and depressed mood.

Results

Descriptive analysis

Descriptive statistics for all main scales used in the current study are presented in Table 1 prior to describing analysis related to testing the hypotheses. In Table 1 the sample size, range, means and standard deviations are shown. The dependent variables, *Depressed mood*, had the mean 7.11 (SD = 5.81) where the answers ranged from 0 to 24 and *Academic achievement* had the mean 16.82 (SD = 5.31) where the answers ranged from 0 to 28.

Table 1.

Descriptive Statistics for Academic achievement, Depressed mood, Family support, and Peer support

	N	Range	Mean	SD
Depressed mood	4654	0-24	7.11	5.81
Academic achievement	4166	0-28	16.82	5.31
Family support	4734	0-15	12.80	2.85
Peer support	4733	0-15	12.45	2.70

When testing possible differences in mean levels of academic achievement and depressed mood among teenage mothers vs. teenage non-mothers ANOVA was conducted. The results indicated that there was a statistically significant difference between teenage mothers and teenage non-mothers for academic achievement (F (1, 4727) = 17.80, p<0.001). However, non-significant difference was found between teenage mothers vs. teenage non-mothers on depressed mood (F (1, 4648) = 0.023, p>0.05). Figure 1 shows the means statistics and standard deviations between teen mothers and teen non-mothers. The teenage mothers mean scores was: 13.77 for academic achievement (SD = 5.55), 7.22 (SD = 6.12) for depressed mood, 11.98 (SD = 2.85) for peer support, and 11.76 (SD = 3.89) for family support. The mean statistics for teenage non-mothers was; 16.86 (SD = 5.29) on academic achievements, for depressed mood the mean was 7.11 (SD = 5.80), for peer support the mean was 12.46 (SD = 2.69), and for family support the mean was 12.80 (SD = 2.83).

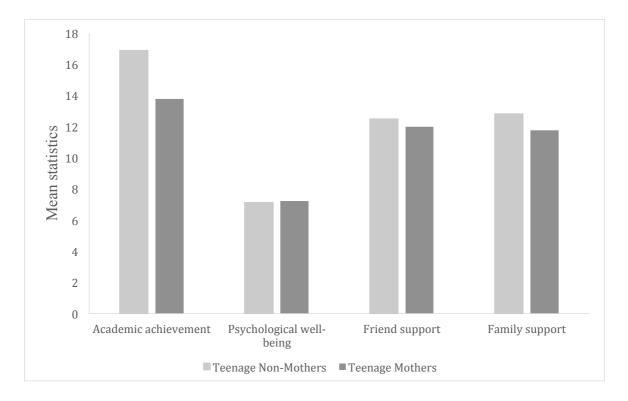


Figure 1. Mean statistics on academic achievement, depressed mood, family support and peer support between teenage mothers and teenage non-mothers.

Table 2 shows 2 different models. Model A1: Being teenage mother vs. teenage non-mother as a predictor of academic achievement. Model B1: Being teenage mother vs. teenage non-mother as predictor of depressed mood. Results from Model A1, as seen in Table 2, showed that teenage mothers vs. teenage non-mothers significantly predicted academic achievement (beta = -.065). Also being a teenage mother explained a significant proportion of variance in academic achievement ($R^2 = .04$, F(1, 4160) = 17.79, p < .01). Results from Model B1, demonstrated that teenage mothers vs. teenage non-mothers did not significantly predicted depressed mood (beta = .00, t(4649) = .15, p > .05). The dependent variable (teenage mother vs. teenage non-mothers) did not explain a significant proportion of variance in depressed mood ($R^2 = .00$, R(1, 4649) = .023, R(1, 4649) = .023). Both models met the linear regression assumptions (Field, 2009). The linearity between the independent and the dependent variable, for both models, indicated that linearity was reasonable. Also, no perfect multicollinearity was between the independent variables (Field, 2009).

Table 2.

Regression analysis of teenage mothers vs. teenage non-mothers on academic achievements (Model A1) and depressed mood (Model B1)

Model	Variables	В	S.E.	beta	t	R^2
Model A1	Constant	19.95	.74		26.73	.004
	Mom vs. non-					
	mom**	-3.01	.73	065	-4.21	
Model B1	Constant	7.00	.72		9.65	.000
	Mom vs. non-					
	mom***	.11	.71	.00	.15	
	mom***		./1	.00	.13	

^{*}sign. p <.05 **p <.01 ***p >.001

Table 3 shows the linear regression analysis, which was used to see if family support, social support and being a teenage mother vs. teenage non-mother significantly predicted academic achievements and depressed mood. As seen in Model A2, the results indicated that the three predictors explained 1.7% of the variance in academic achievements (R^2 =.17, F (3, 4128) = 24.01, p <.001). It was found that being a teenage mother vs. teenage non-mother predicted academic achievements (beta = -.06). Furthermore, family support and independently and significantly predicted academic achievement (beta = .06, t (4128) = 4.14, p <.001) as did peer support (beta = .07). Results from Model B2, as seen in Table 3, show that the three predictors explained 12% of the variance in depressed mood (R^2 =.12, F (3, 4608) = 212.147). Being a teenage mother vs. teenage non-mother did not significantly predict depressed mood (beta = -.01, t (4608) = -.68, p >.05). However, family support (beta = -.47) and peer support (beta = -.43, p <.001) significantly predicted depressed mood.

Indicating that family and peer support has independent effects on depressed mood.

Table 3.

Linear regression analysis of teenage mothers vs. teenage non-mothers, family support and peer support on academic achievements (A2) and depressed mood (B2)

					=		
Model	Variables	В	S.E.	beta	p.	t	\mathbb{R}^2
Model							
A2	Constant	16.30	.90		<.001	10 17	017
	Mom vs. non-mom	-2.92	.72	06	<.001	18.17	.017
	Family support	.13	.03	.06	<.001	-4.02	
	Peer support	.15	.03	.07	<.001	4.14	
	r cor support	.10	.05	.07	.001	4.58	
Model							
B2	Constant	18.93	.84		<.001	22.51	.012
	Mom vs. non-mom	46	.67	01	.497		.012
	Family support	47	.03	23	<.001	68	
	Peer support	43	.03	20	<.001	-16.00	
	orr		,			-13.79	

Finally interaction effects between being a teenage mother vs. teenage non-mother and support of family and peers were included in the models predicting academic achievement and depressed mood. The results showed no significant interactions, indicating that the effects of family and support and peer support were similar for teenage mothers vs. teenage non-mothers when predicting academic achievement and depressed mood.

Discussion

The present study adds a new dimension to the current knowledge of teenage literature by examining teenage mothers vs. teenage non-mothers and how their circumstances of social support may be beneficial. The main goal of the present study was to explore the aspects of family and peer support among Icelandic teenage mothers vs. Icelandic teenage non-mothers and how it is related to their psychological well-being and academic achievements.

The first hypothesis, that being a teenage mother vs. teenage non-mother effects their academic achievement was confirmed. The results indicated that on average teenage mothers had lower grades than teenage non-mothers. It is difficult to compare these findings to prior studies, because it appeared that this has not been explored before among teenage mothers vs. teenage non-mothers. Nevertheless, studies have shown that teenage mothers tend to drop out of school, soon after giving birth to their child (e.g. Hoffman & Maynard, 2008; Perper et al., 2010).

The second hypothesis, that being a teenage mother vs. teenage non-mother effects their depressed mood symptoms was not confirmed. Like mentioned before, previous studies have indicated that being a teenage mother increases their risk of dropping out of school (e.g. Hoffman & Maynard, 2008; Perper et al., 2010). The results from the present study showed that teenage mothers and teenage non-mother did not differ in their depressed mood on the measures used in this study. These findings are not consistent with previous studies and literature since they suggest that teenage mothers are more likely to suffer more from negative future outcomes and are at higher risk of developing mental illnesses (e.g. anxiety and depression) than teenage girls who do not have a child (e.g. Boden et al. 2008; Coley, & Chase-Lansdale, 1998). The reason for these different results could be explained by the cultural differences (Halldorsson, 2003). However, Sachry (2005) found out that having a child at early age pushed the girls to take responsibility and to reevaluate their view of

education and their future. These findings are interesting, because this could partially explain why Icelandic teenage mothers tend to stay in school and also why they are not depressed. Which is persistent to previous findings, those improved outcomes for teenage mothers can potentially be reached through good social support (e.g. Bunting, & McAuley, 2004) and education (e.g. Manlove, Mariner, & Papillo, 2000; Perper, Peterson, & Manlove, 2010).

The third hypothesis, that social support would increase the likelihood of good academic achievement, was confirmed. Both family support and peer support predicted better academic achievements. This indicated that those who received adequate social support tend to do better in school. Due to minimal studies about this topic it is difficult to compare these findings. However, these findings reflect that teenage mothers are at a higher risk of dropping out of school if they don't have a adequate support (Hoffman and Maynard, 2008).

The fourth hypothesis, that social support would increase depressed mood symptoms among teenage mothers vs. teenage non-mothers, was also confirmed. However, family- and peer support predicted psychological well-being in the form of depressed mood. These results are consistent with previous studies that have explored family and peer support among teenage mothers (e.g. Letourneau, 2001; Nath et al. (1991).

Finally, no interaction effect was found between family and peer support and being a teenage mother vs. a teen non-mother, when predicting academic achievement and depressed mood. These results do not support buffering effects of social support for young mothers but however it indicates that social support is as important for teenage mothers as teenage non-mothers when predicting their academic achievement and depressed mood (e.g. Henly, 1997; Nitz, Ketterlinus, & Brandt, 1995).

This study had some limitations that should be kept in mind when interpreting these findings. First, like stated before, each source of social support should be specified separately e.g. peers, parent and etc. (Wendy et al., 1999), but the social support concept was only

explored from family and peer support in this study. Previous studies have shown that partner support can increase psychological well-being among teenage mothers and for their babies (e.g. Kelly, 1995; Letourneau, 2001). Secondly, psychological well-being was only measured with one depression scale but like stated before Stevenson et al. (1999) reported that psychological well-being should be measured as types (e.g. self-esteem, depression etc.), because previous findings showed that different sources of social support have been related to difference types of psychological well-being (Stevenson et al., 1999). Furthermore, the sample size for teenage mothers was quite too small and only reflecting teenage mothers in school but did not reflect teenage mothers who dropped out of school. This could partially explain why there was a small difference between teenage mothers and teenage non-mothers on depressed mood and academic achievement. Finally this study was a cross sectional design which does not conclude about causal relationships.

Although, this present study has its limitations it has its strength. The present study is comparing teenage mothers and teenage non-mothers by exploring their academic achievement and depressed mood. Overall the results indicated that family and peer support plays an important role in teenage mother's psychological well-being and academic achievements. These findings are consistent to previous studies that have explored the relationship between social support and psychological well-being among teenage mothers (e.g. Nath et al., 1991; Nitz et al., 1995). It came as a surprise that teenage mothers showed little difference on academic achievement when compared to teenage non-mothers. In addition, it was also surprising that no difference was between teenage mothers and teenage non-mothers on depressed mood. However it is important to keep in mind the cultural differences across nations in attitudes toward teenage mothers. A study has showed that teen pregnancy rates during the period 1976–1999 in Iceland has been more common than in neighboring countries (Bender, Geirsson, & Seltzer, 2011) and Halldorsson (2003) suggested

that teenage mothers are more socially acceptable in Iceland than in other countries.

The strength from the present study is that it offers a better understanding of the underlying factors that are valuable for teenage mothers. Also it demonstrated that social support tends to add positive future outcomes for teenage mother as well as other teenagers. Furthermore, by recognizing and providing the social support needed, it can highly reduce the probability of the social problems teenage mothers are likely to struggle with. Family and peer support seems to be a valuable source for many teenage mothers and could reduce interference from social services and societies. For those reasons, further studies need to be continued on teenage mothers in order to provide conclusive evidence about the role social support in their academic achievement and psychological well-being. Hopefully, the research findings will advance the knowledge of teenage mothers vs. teenage non-mothers and provide a better understanding of the underlying factors that are valuable for teenage mothers.

Results indicated that on average teenage mothers had lower grades than teenage non-mothers but they did not differ in their average score on symptoms of depressed mood.

Family and peer support predicted better academic achievements and depressed mood among both groups, indicating that those who received adequate social support tended to do better in school and show less symptoms of depressed mood.

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