

Friendship Instability and Depressive Symptoms in Emerging Adulthood

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Abstract

Emerging adulthood is characterized by numerous changes in interpersonal relationships and a high prevalence of psychological distress. This study aimed to examine the link between friendship instability during this period and depressive symptoms. The moderating role of gender and the pursuit (or not) of postsecondary education was also tested. A sample of 268 participants (60.7% girls) was interviewed annually between the ages of 22 and 26. Friendship instability was measured by asking the participants to name their three best friends each year. Depressive symptoms were assessed using a questionnaire at ages 22 and 26. A multiple hierarchical regression analysis predicting depressive symptoms at age 26 (while controlling for symptoms at age 22) revealed the presence of a triple interaction between friendship instability, gender and the pursuit of postsecondary education. Specifically, friendship instability predicted depressive symptoms at age 26, but only among women pursuing postsecondary education. These results highlight the importance of maintaining friendships for these individuals.

The transitions that characterize emerging adulthood (EA) and the instability resulting from them have repercussions on the formation and maintenance of interpersonal relationships (Collins & van Dulman, 2006). Instability in interpersonal relationships may contribute in part to the increase in depressive symptoms observed during this period (Chow & Ruhl, 2014; Kessler et al., 2005). These issues have been examined and discussed with regard to romantic relationships (Shulman & Connolly, 2013) but rarely with respect to friendships. This study aims to examine the extent to which individuals retain or replace friends during EA and whether these fluctuations are associated with depressive symptoms. Moreover, the potentially moderating effects of pursuing (or not pursuing) postsecondary education and gender on this association will also be examined.

An individual's social network (i.e. family, romantic partners, friends) is often subject to numerous changes during EA. For example, many young people leave the family nest and begin to spend less time with their parents (Arnett, 2000). Some engage in long-term romantic relationships, cohabit with their partners and even become parents. For many, romantic relationships become the main source of psychological support (McNamara Barry et al., 2009). However, friends continue to play a significant role in the social life of emerging adults (Steinberg, 2008; Tanner, 2011), continuing to act as confidants, counselors and activity companions (Wrzus, Zimmerman, Mund & Neyer, 2015), while contributing to identity development (Galliher & Kerpelman, 2012). Emerging adults often lean on their friends for instrumental support, such as helping with a move (Fehr, 1996). Finally, the quality of friendships during EA has been positively associated with psychological adjustment (Buote et al., 2007; Swenson, Nordstrom & Hiester, 2008).

The numerous transitions and life events that characterize EA are likely to have an impact on the maintenance of friendships. Indeed, pursuing postsecondary education (Asendorpf & Wilpers, 1998) or starting a new job (Wrzus et al., 2015) often leads to the formation of new friendships. These new friendships are sometimes formed at the expense of previously established ones. It is therefore plausible that some instability in the maintenance of friendships might be observed during EA given the many transitions taking place. Several studies have focused on friendship stability during childhood and adolescence (Poulin & Chan, 2010). On average, youths have been found to maintain approximately 50% of their friendships from one year to the next, a rate of retention that tends to increase with age, although support for this latter finding has been mixed (Meter & Card, 2016). To our knowledge, the maintenance of friendships during EA has never before been examined. Yet, keeping the same friends during this period of transition could be beneficial for psychological adjustment.

An increase in depressive symptoms has been observed during EA (Ferrari et al., 2013). Rates are significantly higher during this period than in adolescence (Newman et al., 1996) or later in adulthood (Kessler et al., 2005). Some features of EA, including instability and exploration, might contribute to this increase in depressive symptoms (Lanctôt & Poulin, 2017). These factors are likely to generate "social stress" among individuals during this period (Chow & Ruhl, 2014). Social stress refers to the anxiety felt as a result of changes experienced in an individual's social life (Meyer, 2003). Interpersonal theories of depression argue that social stress could lead to the development of depressive symptoms (Weissman & Klerman, 1994). Links have been found between social stress and depressive symptoms during EA (Sheets & Craigheads, 2014) and these links might be particularly salient when this stress concerns friendships (Chow & Ruhl, 2014).

These findings suggest that instability in friendships during EA may be associated with higher levels of depressive symptoms. Indeed, friendships are an important source of social support during EA and may help individuals manage the stress associated with the changes experienced during this period (Miething et al., 2016), in addition to promoting better self-esteem and reducing depressive symptoms (Tanner, 2006). Moreover, the loss of friendships is a source of distress and anxiety during EA (Paul & Brier, 2001). A significant link has been found between friendship instability and depressive symptoms in early adolescence (Chan & Poulin, 2009) but no study to date has investigated such a link in EA.

Examining two moderators

The potential link between friendship instability and depressive symptoms in EA could be stronger in some situations and for some groups of individuals. Taking into account two moderators could help us better understand the nature of this link: the pursuit (or not) of postsecondary education and gender.

Approximately 60% of emerging adults pursue postsecondary education, while most others join the labor market (Arnett, 2000). Differences can be observed between these two pathways when it comes to maintaining friendships and the prevalence of depressive symptoms. On the one hand, studies report that a significant proportion of friendships are replaced following the transition to postsecondary education (Arnett, 2000; Oswald & Clark, 2003; Swenseon, Nordstrom & Hiester, 2008). On the other hand, nearly a quarter of college and university students report experiencing difficulties in their academic functioning because of depressive symptoms (American College Health Association, 2010). In general, emerging adults pursuing postsecondary education present a series of unique risk factors that can lead to the development

of depressive symptoms (Marcotte, 2013). Some of these factors are linked to stress resulting from changes in social relationships, particularly peer relationships (Arria et al., 2009). These emerging adults thus appear to be particularly at risk of being affected by changes in their friendships during this period. These changes may lead to a considerable loss of social support, found to be a very significant stressor related to postsecondary education (Norona, Preddy & Welsh, 2015).

Gender differences in depressive symptoms have been reported during EA, with women presenting higher levels of these symptoms than men (Galambos, Barker & Krahn, 2006; Miething et al., 2016). Gender differences with regard to friendships have also been observed during this period. Women report having more intimate and committed friendships than men (Miething et al., 2016). However, this commitment appears to result in more frequent friendship break-ups, with women reacting more strongly to conflict situations (Miething et al., 2016). In general, women tend to lean more on the support provided by their friendships, whereas men mostly see their friends as activity partners (Johnson et al., 2007). Moreover, women's friendships bring them greater benefits in terms of psychological health than do those of men (Demir & Hortel., 2009; Johnson et al., 2007). Women also appear more likely to present separation anxiety than men (de Lijster et al., 2017). Friendship instability could therefore affect women more than men.

The present study

The first goal of this study was to examine the link between friendship instability between the ages of 22 and 26 and the presence of depressive symptoms at age 26, taking into account the initial level of depressive symptoms (at age 22). This age period was chosen because it is the time when most education-related changes take place (Statistics Canada, 2006). The second goal was

to test the moderating effect of the pursuit (or not) of postsecondary education and gender on this link. The link between friendship instability and depressive symptoms was expected to be stronger for individuals pursuing postsecondary education and for women.

Method

Participants

This study was part of a longitudinal research project initially involving 390 Grade 6 students (58% girls) at eight schools in a major French-Canadian city. Most were Caucasian (90%), had French as their mother tongue and came from families with an average annual income of over \$50,000 (68%), according to information obtained at the beginning of the project. The data used for this study were collected each year when participants were between the ages of 22 and 26. Participants who took part in these five waves of data collection constituted the selected sample ($n = 268$; 60.7% girls). They were more likely to be girls ($X^2 = 10.66, p < 0.01$).

Procedure

At ages 22 and 25, the data were collected using paper and pencil questionnaires, and at ages 23, 24 and 26, through structured telephone interviews. The questionnaires were administered at home. A trained research assistant went to the participants' homes and provided the questionnaires to complete. The telephone interviews were conducted by trained and supervised research assistants. Participants provided written consent each year. They received financial compensation for their participation in each wave of data collection. Ethical approval was granted by the Research Ethics Committee of the authors' university.

Measures

Friendship instability between the ages of 22 and 26. Each year between the ages of 22 and 26 (five times), the participants were asked to identify their three best friends (first and last names). Based on the procedure developed by Chan and Poulin (2007), the total number of different friends named during this period was calculated. This score could theoretically range from 3 to 15, with a value of 3 indicating that the participant had named the same 3 friends at each annual assessment and a value of 15 indicating that the participant had consistently named different friends at each assessment. A higher value for this variable therefore reflects greater instability.

Depressive symptoms at ages 22 and 26. Depressive symptoms were measured at two time points using the shortened version of the *Center for Epidemiologic Studies Depression Scale* (Radloff, 1977). This short version was developed by Anderson et al. (1994) and includes 10 of the 20 items from the original instrument. It has shown very good psychometric properties (Anderson et al., 1994; Boey et al., 1999). For each item, the participants were asked to specify how often they had presented certain behaviors, thoughts or emotions during the previous week. Examples of items are: “I was bothered by things that usually don’t bother me,” “I had trouble keeping my mind on what I was doing,” and “I felt hopeful about the future.” Participants answered using a four-point Likert scale, ranging from 0 (rarely or none of the time), to 1 (some of the time), 2 (much of the time), or 3 (most or all the time). An average score was calculated for each of the items (Cronbach’s alpha = .81 at age 22 and .76 at age 26). A higher score indicates a higher level of depressive symptoms.

Postsecondary education. Participants were asked to indicate the highest level of education they had attained. Five options were available: (1) secondary education not completed (15% of the sample), (2) secondary education completed and no further education pursued (31%),

(3) attending junior college, but not yet graduated (20%), (4) junior college education completed (8%), (5) attending university (26%). These response options were then grouped into two categories for the analyses: (1) Non-pursuit of postsecondary education (options 1 and 2; 47%) and (2) Pursuit of postsecondary education (options 3, 4 and 5; 53%).

Results

Preliminary and descriptive analyses

Over the five-year period, on average, the participants named 6.20 different friends ($SD = 1.79$; ranging between 3 and 12). Women reported a higher number of different friends ($M = 6.40$; $SD = 1.85$) than men ($M = 5.89$; $SD = 1.68$; $t(319) = 2.45$, $p < 0.05$). Participants who were pursuing postsecondary studies reported a higher number of different friends ($M = 6.46$; $SD = 1.82$) than those who were not ($M = 5.91$; $SD = 1.72$; $t(319) = -2.78$, $p < 0.01$).

With regard to depressive symptoms, women and men reported similar levels of such symptoms at age 22 ($M = 10.60$; $SD = 3.08$ versus $M = 10.05$; $SD = 2.77$; $t(287) = -1.53$, $p = 0.13$). However, women reported higher levels than men at age 26 ($M = 10.12$; $SD = 4.82$ versus $M = 8.74$; $SD = 4.15$; $t(294) = 2.51$, $p < 0.05$). Finally, participants who were pursuing postsecondary education reported similar levels of depressive symptoms to those who were not, both at age 22 ($M = 10.49$; $SD = 2.85$ versus $M = 10.25$; $SD = 3.11$; $t(287) = -0.68$, $p = 0.50$) and at age 26 ($M = 9.62$; $SD = 4.24$ versus $M = 9.53$; $SD = 5.05$; $t(294) = -0.16$, $p = 0.87$).

Bivariate correlations were calculated between friendship instability and depressive symptoms at ages 22 and 26. The results show that friendship instability was not significantly associated with depressive symptoms at age 22 ($r = .08$, n.s.) or at age 26 ($r = .06$, n.s.). Finally,

depressive symptoms at age 22 were positively associated with depressive symptoms at age 26 ($r = .27, p < 0.05$).

Main analyses

The link between friendship instability and depressive symptoms, as well as the moderating effect of pursuing (or not pursuing) postsecondary education and gender, were examined using multiple hierarchical regressions. The dependent variable was the level of depressive symptoms at age 26. Independent variables were included in the regression model in four steps. In the first step, the depressive symptoms score at age 22 was introduced into the model, to control for the initial level of this variable. In the second step, friendship instability, gender, and the pursuit (or not) of postsecondary education were added to the model. In the third step, the interaction terms were added to test the distinct effect of the two moderators (Gender x Instability, Education x Instability and Education x Gender). Finally, in the fourth step, a triple interaction was added to the model (Gender x Education x Instability). The results of this regression analysis are presented in Table 1.

The results reveal that depressive symptoms at age 22 accounted for a significant portion of the variance in depressive symptoms at age 26. The addition of friendship instability, gender, and the pursuit of postsecondary education did not significantly contribute to an increase in the explained variance. The inclusion of the two interaction terms did not help improve the model either. However, the addition of the triple interaction term led to a significant improvement in the model.

Additional analyses were performed to better understand this triple interaction. The first three steps of the regression model described above were tested again, but separately this time for women and men, in order to test the moderating effect of pursuing postsecondary education in

each of these two subgroups. The results of these analyses are reported in Table 2. For men, apart from depressive symptoms at age 22, no other variable significantly contributed to explaining depressive symptoms at age 26. However, for women, adding the interaction term Instability x Education in the third step of the regression significantly increased the explained variance. For women who were pursuing postsecondary education, friendship instability was positively associated with depressive symptoms at age 26 ($\beta = 0.25$; $p < 0.01$). This effect was not observed for women who were not pursuing postsecondary education ($\beta = -0.14$; $p = 0.26$).

Discussion

This study focused on friendship instability during EA, as some fluctuations in interpersonal relationships are likely to be observed during this period. Indeed, EA is characterized by several life transitions, such as in the educational, occupational, residential, and romantic domains. These changes are likely to affect the maintenance of friendships, which makes EA a particularly relevant period in which to study the effect of friendship instability on the psychological adjustment of individuals. This study aimed to test the hypothesis that instability in friendships during EA would be positively associated with depressive symptoms. In addition, this link was not expected to apply equally to all, but rather to be more pronounced for women and for individuals pursuing postsecondary education. These hypotheses were tested among a sample of emerging adults evaluated at five time points between the ages of 22 and 26.

Friendship instability in EA

The first contribution of this study was to bring out the variations in friendship instability observed across different individuals during EA. Earlier research on this issue during EA focused specifically on changes in friendships following a transition (e.g. entering university) and used only two measurement times (pre / post transition; Oswald & Clark, 2003; Wang et al., 2007;

Wrzus et al., 2015. By including a measurement time each year over a five-year period, the present study provided better insight into the levels of friendship instability during EA and a better understanding of individual differences with regard to this dimension.

Participants in this study were asked to name their three closest friends each year. On average, they identified 6.20 different friends over the five-year period. Considering that this variable could theoretically range from 3 (the same three friends being named again each year) to 15 (no friend ever being named twice), this result suggests that, overall, friendships fluctuate relatively little during this period. In contrast, higher levels of instability in friendships have been observed during earlier developmental periods. For example, a meta-analysis conducted by Meter and Card (2016) revealed that, during childhood and adolescence, approximately 50% of friendships are not maintained from one year to the next. In early adolescence, one-third of friendships have been found to be unstable over periods as short as one month (Chan & Poulin, 2007). This increase in friendship stability between adolescence and EA could be explained by the growing level of intimacy in these relationships (Tanner, 2011) and the fact that, over time, people tend to increasingly invest in long-term relationships (Rusbult et al., 1998) and strive for stability in their social lives (Granic & Hollenstein, 2006).

In the present study, inter-individual variations were nevertheless observed in the level of friendship instability. These variations can be explained by the participants' gender, with a higher level of instability being observed among the women compared to the men. Research indicates that women's friendships tend to be warmer, more intimate, more open to feelings, and therefore more supportive, than men's (Demir & Hortel, 2009; Johnson et al., 2007). However, the many transitions that take place during EA limit the amount of time young people can spend with their friends (Arnett, 2007), which may result in a greater loss of social support for women than for

men. This loss might in turn be perceived as the breaking of a social norm for women (Miething et al., 2016) and encourage them to move towards new friendships.

Finally, postsecondary education was also associated with friendship instability, with emerging adults who were pursuing postsecondary education reporting a higher level of friendship instability than emerging adults who were not. This result is in line with the existing literature, which has reported that the transition to postsecondary education leads individuals to make new friends at the expense of existing friendships (Oswald & Clark, 2003; Paul & Brier, 2001).

Friendship instability and depressive symptoms

The first steps of our regression model revealed that friendship instability was not associated with depressive symptoms. The moderating effects of postsecondary education and gender were also not significant. However, a triple interaction involving both moderators was observed. A detailed examination of this interaction revealed that the pursuit of postsecondary education significantly moderated the relationship between friendship instability and depressive symptoms for women only. Specifically, friendship instability was positively associated with depressive symptoms in EA, but only among women who pursued postsecondary education. It should be noted that this link was observed after controlling for the initial level of depressive symptoms (at age 22).

Several explanations can be put forward to account for this result. First, given that women's friendships are more intimate and more emotionally close than those of men (Johnson et al., 2007), women who experience instability in their friendships may suffer more and experience more depressive symptoms since this instability involves a greater loss of social support for them. Following our conceptualization of instability, a loss of friends should normally be accompanied

by the formation of new friendships. However, since the quality of friendships, in terms of intimacy and support, is greater for relationships that have existed for a longer time (Wrzus et al., 2015), it is possible that the contribution of these new friendships to the well-being of young people is not enough to compensate for the loss of older ones.

Second, pursuing postsecondary education can also lead to some apprehension among women about maintaining their friendships. This apprehension has been defined by the term “Friendsickness” (Paul & Brier, 2001). Researchers have found that individuals, particularly women, who were anxious about losing friends as a result of the transition to postsecondary education showed poorer adjustment to university, as well as greater feelings of loneliness and more guilt following the loss of friendships.

One question remains: why did friendship instability not affect men who were pursuing postsecondary education? Some explanations can be put forward. On the one hand, the main function of men's friends is to act as activity partners (Miething et al., 2016). It is therefore plausible that men's friendships may be more easily replaceable than those of women, particularly in the context of the transition to postsecondary education. On the other hand, for many emerging adult men, the main source of social support is their romantic partner, while friends continue to perform this function for women (Shulman & Connolly, 2013).

Strengths, limitations and future research directions

This study presents several strengths. Friendship instability was measured over a long period of time during a crucial period in EA (ages 22 to 26) by identifying friends at five different time points, and depressive symptoms were measured at the beginning and end of the period covered. Moreover, by including both emerging adults who were pursuing postsecondary education and emerging adults who were not, the present study stands out from most other

research covering this period, which is often based solely on university students (Arnett, 2000; 2004; 2007).

Some limitations must nevertheless be considered. First, our measure of friendships forced the participants to name three best friends. It is possible that some participants had a larger or smaller number of friends that they considered to be "best friends" at the time of the assessments. For example, Wang (2007) reported that young adults generally identify between 2 and 5 friends that they consider to be very close. Although our procedure had the advantage of being uniform from one participant to another, constraining the number of friends identified may have artificially affected the measure of instability. Second, reciprocity of the nominations (i.e. the friends named also recognize the existence of the relationship) was not taken into account in this study, even though reciprocity is considered a central component of friendship (Newcomb & Bagwell, 1995). Third, our procedure did not make it possible to determine whether friends who were not named again from one year to the next were no longer friends with the participant (i.e. complete dissolution) or whether they were still friends but less close, and therefore not included in the list of three best friends (i.e. downgrade dissolution) (Bowker, 2010).

Fourth, despite the use of a longitudinal design, this study did not make it possible to establish the direction of the links between friendship instability and depressive symptoms. We were able to show that friendship instability could predict a change in depressive symptoms, since the previous level of this variable was considered. However, it is possible that the opposite effect may also operate. Interpersonal theories of depression (Coyne, 1976; Rudolph, 2000) argue that a depressive state may affect an individual's ability to maintain interpersonal relationships, and that the presence of depressive symptoms in an individual may also cause his or her friends to take some distance. Only a longitudinal design wherein friendship instability and depressive

symptoms are both assessed jointly at several time points would make it possible to test for these bidirectional effects (see, for example, Chan & Poulin, 2009). Finally, our measure of pursuing postsecondary education was quite static and could be improved. Educational pathways during EA are often more complex than what was reflected here and sometimes involve reorientations, interruptions and returns to school, which were not considered in this study. Moreover, given the period covered in our study (ages 22 to 26), it is possible that some participants had already completed postsecondary education before the first wave of data collection, with the period covered by the study corresponding to their entrance into the labor market. This transition would have been shifted for them compared to those who did not pursue such studies.

Despite these limitations, the present study shed light on the links between friendship instability and depressive symptoms in EA. Specifically, such a link was observed only among women pursuing postsecondary education. Further research could shed light on the direction of the link between friendship instability and depressive symptoms. The results obtained also highlight the role played by friendship in psychological adjustment during EA. The importance of maintaining friendships during EA should thus be addressed in the treatment and prevention of depression in this population.

Table 1. Multiple Hierarchical Regression Predicting Depressive Symptoms at Age 26

	<i>B</i>	<i>SD B</i>	β	ΔR^2	<i>Variation of F</i>
<i>Step 1</i>				0.08	22.10**
Depressive symptoms at age 22	0.44	0.09	0.03**		
<i>Step 2</i>				0.02	1.64
Gender	-1.07	0.57	-0.11		
Postsecondary education	-0.06	0.56	-0.01		
Friendship instability	0.15	0.16	0.05		
<i>Step 3</i>				0.01	1.25
Instability X Gender	-0.25	0.35	-0.02		
Instability X Education	0.50	0.34	0.48		
Gender X Education	1.52	1.14	0.32		
<i>Step 4</i>				0.02*	4.49*
Instability X Gender X Education	-1.49	0.70	-2.20*		

Notes : * $p < .05$; ** $p < .01$.

Table 2. Multiple Hierarchical Regression Predicting Depressive Symptoms at Age 26 for Men and Women Separately

	Men				Women			
	<i>B</i>	SD <i>B</i>	β	ΔR^2	<i>B</i>	SD <i>B</i>	β	ΔR^2
<i>Step 1</i>				0.09**				0.06**
Depressive symptoms at age 22	0.46	0.14	0.30**		0.40	0.12	0.03**	
<i>Step 2</i>				0.01				0.01
Postsecondary education	0.71	0.79	0.08		-0.63	0.78	-0.06	
Friendship instability	0.06	0.25	0.02		0.23	0.21	0.08	
<i>Step 3</i>				0.01				0.03*
Instability X Education	-0.39	0.50	-0.35		1.09	0.46	1.05*	

Notes : * $p < .05$; ** $p < .01$.

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