

REPORT



Friendship instability and depressive symptoms in emerging adulthood

Simon Lapierre, BS and François Poulin, PhD

Department of Psychology, Université du Québec à Montréal, Montréal, Québec, Canada

ABSTRACT

Objective: This study aimed to examine the link between friendship instability during emerging adulthood and depressive symptoms. The moderating role of gender and the pursuit (or not) of postsecondary education was also tested. **Participants:** A total of 268 participants (60.7% women) was interviewed annually between the ages of 22 and 26. **Methods:** Friendship instability was measured by asking the participants to name their three best friends each year and depressive symptoms were assessed at ages 22 and 26. **Results:** A multiple hierarchical regression analysis predicting depressive symptoms at age 26 (while controlling for symptoms at age 22) revealed 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. **Conclusions:** These results highlight the importance of maintaining friendships for these individuals.

ARTICLE HISTORY

Received 11 March 2019
Revised 23 June 2020
Accepted 17 July 2020

KEYWORDS

depressive symptoms;
friendship; longitudinal

The transitions that characterize emerging adulthood (EA) and the instability resulting from them have repercussions on the formation and maintenance of personal relationships.¹ Instability in personal relationships may contribute in part to the increase in depressive symptoms observed during this period.² This issue has been examined and discussed with regard to romantic relationships³ 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.

An individual's personal network (i.e. family, romantic partners, friends) changes during EA. For example, many young people leave the family nest, some engage in long-term romantic relationships, cohabit with their partners and even become parents. For many, romantic relationships become the main source of support.⁴ However, friends continue to play a significant role in the social life of emerging adults,⁵ acting as confidants, counselors and activity companions,⁶ while contributing to identity development⁷ and providing support.⁸

The numerous transitions and life events that characterize EA are likely to have an impact on the maintenance of friendships. For instance, pursuing postsecondary education or starting a new job often leads to the formation of new friendships that are sometimes formed at the expense of old ones.^{6,9} It is therefore plausible that some instability in the maintenance of friendships might be observed during EA. Several studies have focused on friendship instability in childhood and adolescence.¹⁰ 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. To our knowledge, the maintenance of friendships during EA has never 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.¹¹ Some features of EA, including instability and exploration, might contribute to this increase.¹² These factors are likely to generate "social stress" among individuals during this period.² Social stress refers to the anxiety felt as a result of changes experienced in an individual's social life.¹³ Interpersonal theories of depression argue that social stress could lead to the development of depressive symptoms.¹⁴ Links have been found between social stress and depressive symptoms during EA¹⁵ and these links might be particularly salient when the stress concerns friendships.²

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,¹⁶ in addition to promoting better self-esteem and reducing depressive symptoms.¹⁷ Moreover, the loss of friendships is a source of distress and anxiety during EA.¹⁸ A significant link has been found between friendship instability and depressive symptoms in early adolescence¹⁹ but no study to date has investigated such a link in EA.

Examining two moderators

Taking into account two moderators could help us better understand the nature of the link between friendship

instability and depressive symptoms in EA: the pursuit (or not) of postsecondary education and gender.

Approximately 60% of emerging adults pursue postsecondary education, while most others join the labor market.²⁰ 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 is replaced following the transition to postsecondary education.^{21,22} On the other hand, nearly a quarter of college and university students report experiencing difficulties in their academic functioning because of depressive symptoms.²³ In general, emerging adults pursuing postsecondary education present a series of unique risk factors that can lead to the development of depressive symptoms. Some of these factors are linked to stress resulting from changes in social relationships, particularly friendships.²⁴ 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.²⁵

Gender differences in depressive symptoms and friendships have been reported during EA, with women presenting higher levels of depressive symptoms,²⁶ and reporting having more intimate and committed friendships than men.¹⁶ However, this commitment appears to result in more frequent friendship break-ups, with women reacting more strongly to conflict situations.¹⁶ Women also appear more likely to present separation anxiety than men.²⁷ Friendship instability could therefore affect women more than men.

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 symptoms (at age 22). 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. Finally, the interaction between the two moderators was also explored, although no hypothesis was formulated.

Methods

Participants

This study was part of a longitudinal research project initially involving 390 Grade 6 students (58% women) at eight schools in a major city in Canada (Province of Quebec). Most were Caucasian (90%) and came from families with an average annual income of over \$50,000 (68%). These participants were assessed annually up to age 26 on various aspects of their social development and personal relationships, and the rates of retention varied between 77% and 82% of the initial sample. The data used for this report were collected each year from 2013 to 2017 when participants were between the ages of 22 and 26. Participants who took part in these five waves of assessments constituted the selected

sample ($n = 268$; 60.7% women). They were more likely to be women ($X^2 = 10.66$, $p < 0.01$).

Procedure

At ages 22 and 25, a trained research assistant went to the participants' homes and provided the questionnaires to complete. At ages 23, 24 and 26, structured telephone interviews were conducted by research assistants. Participants provided written consent and received financial compensation each year. 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,¹⁹ 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 assessment and a value of 15 indicating that the participant had consistently named different friends. A higher value 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*.²⁸ This short version was developed and validated by Anderson et al.²⁹ and includes 10 of the 20 original items. Participants were asked to specify how often they had presented certain behaviors, thoughts or emotions during the previous week using a four-point Likert scale. An average score was calculated at each age ($\alpha = .81$ at age 22 and $.76$ at age 26).

Postsecondary education

Participants were asked to indicate the highest level of education attained using five options: (1) secondary education not completed, (2) secondary education completed and no further education pursued, (3) attending junior college, but not yet graduated, (4) junior college completed, (5) attending university. These response options were then grouped into two categories for the analyses: (1) Non-pursuit of postsecondary education (options 1 and 2; 47% of the sample) and (2) Pursuit of postsecondary education (options 3, 4 and 5; 53%).

Results

Preliminary 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 ($M = 5.91$; $SD = 1.72$; $t(319) = -2.78$, $p < 0.01$).

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.).

Main analyses

The link between friendship instability and depressive symptoms, as well as the two moderators, was examined using a moderation procedure in the Process macro for SPSS (v.3.4). The two dichotomous moderators were coded as dummy variables and the continuous variables (depressive symptoms at ages 22 and 26 and friendship instability) were standardized prior to the analyses. The interaction terms were coded using the dummy and standardized variables. This procedure allowed the examination of the triple interaction between the independent variable (friendship instability) and the two moderators (gender, and post-secondary education status), as well as the simple effect of both the moderators on the relationship between friendship instability and depressive symptoms. A significant triple interaction was found between the two moderators and the independent variable in its relationship to depressive symptoms at age 26, while controlling for depressive symptoms at age 22. The results of this triple interaction are presented in Table 1.

The analysis of simple effects reveals that the moderator effect of the post-secondary education status on the relationship between friendship instability and depressive symptoms differs in men and women. This moderator effect is present in women ($\beta = .39$, $p = .014$), but not in men ($\beta = -.15$, $p = .45$).

Finally, the effect of friendship instability on depressive symptoms at age 26 was evaluated at every level of both the moderators. It is observed that the relationship is different across the level of both these variables. For men, the association between friendship instability and depressive symptoms was not significant both for those who had begun or finished some sort of postsecondary education ($\beta = .09$, $p = .50$) and for those who did not begin or finish some sort of postsecondary education ($\beta = -.06$, $p = .68$). For women, there is a significant interaction between friendship instability and depressive symptoms for those who begun or finished some sort of postsecondary education ($\beta = .20$, $p = .02$), but not for those who did not begin or finish some sort of post-secondary education ($\beta = -.19$, $p = .14$).

Discussion

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

Table 1. Multiple hierarchical regression predicting depressive symptoms at age 26.

Variables	β	SD β	T	p
Depressive symptoms at 22	.24	0.06	4.11	**
Gender	-.35	0.18	-2.00	*
Postsecondary education	-.14	0.15	-0.91	ns
Friendship instability	-.19	0.13	-1.45	ns
Instability X Gender	.28	0.19	1.50	ns
Instability X Education	.39	0.16	2.47	**
Gender X Education	.26	0.24	1.07	ns
Instability X Gender X Education	-.54	0.26	-2.11	*

Note:.

* $p < .05$;

** $p < .01$.

to apply to all, but rather to be more pronounced for women and for individuals pursuing postsecondary education.

A higher level of friendship instability was observed among women compared to men. Research indicates that women's friendships tend to be warmer, more intimate, more open to feelings, and therefore more supportive, than men's.³⁰ However, the many transitions that take place during EA limit the amount of time young people can spend with their friends,³¹ 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 women¹⁶ and encourage them to move toward new friendships. Finally, emerging adults who were pursuing postsecondary education reported a higher level of friendship instability than those who were not. This result is in line with previous studies showing that the transition to postsecondary education leads individuals to make new friends at the expense of old ones.^{19,21}

Friendship instability and depressive symptoms

Our analyses revealed that friendship instability was positively associated with depressive symptoms in EA, but only among women who pursued postsecondary education. Importantly, this link was observed after controlling for the initial level of depressive symptoms. 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,³² women who experience instability 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,⁶ 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".¹⁸ 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.

Why did friendship instability not affect men, including those who were pursuing postsecondary education? On the one hand, the main function of men's friends is to act as activity partners.¹⁶ 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.³

Strengths, limitations and future research directions

This study presents several strengths. Friendship instability was measured over a long period of time during EA (ages 22 to 26) by identifying friends at five different occasions, and depressive symptoms were measured at the beginning and end of the period covered. Moreover, by including both emerging adults who were and those who were not pursuing postsecondary education, the present study stands out from most other research covering this period, which is often based solely on university students.^{20,31}

These findings should be interpreted with cautions as the effect size was relatively small. The expected link between friendship instability and depressive symptoms was not found in the total sample but rather for a specific subgroup. This result is exploratory and may be due to the sheer number of comparisons conducted. Moreover, the finding regarding this subgroup should be replicated in other samples to allow for generalization. Finally, this study is based on a correlational design and we cannot exclude the possibility that the observed effect may be caused by a third variable.

Other limitations must also be considered. First, participants were asked 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, a study found that young adults generally identify between 2 and 5 friends that they consider to be very close³² and another recent study reported this number to vary between 3 and 4.³³ Although our procedure had the advantage of being uniform, it may have artificially affected the measure of instability and research also underlined the impact of emotional well-being on young adults' number of close friends.³³ Second, reciprocity of the nominations was not taken into account in this study, even though it is considered an important component of friendship.³⁴ Third, 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.

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

change in depressive symptoms for women who were pursuing postsecondary education, since the initial level of this variable was considered. However, it is possible that the opposite effect may also operate. Interpersonal theories of depression³⁵ argue that a depressive state may affect an individual's ability to maintain personal relationships, and that the presence of depressive symptoms 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.

Conclusions

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. Those informations might prove useful in the intervention and prevention of depression amongst emerging adults. Specifically, the importance of maintaining close friendship should be addressed in prevention programs developed for college students. Several prevention programs for depression address the interpersonal relationship and friendship as a part of their content.^{36,37}

Conflict of interest disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of Canada and received approval from the Institutional Review Board of Université du Québec à Montréal.

Funding

This research was supported in part by grants from the Social Sciences and Humanities Research Council of Canada [Grant No. 435-2012-1171] and from the Fonds de Recherche du Québec sur la Société et la Culture [Grant No. 2008-AC- 118531].

References

1. Collins A, van Dulmen M. Friendships and romance in emerging adulthood: Assessing distinctiveness in close relationships. In: Arnett, JJ, & Tanner JL, eds. *Emerging Adults in America: Coming of Age in the 21st Century* (pp. 219–234). Washington, DC: American Psychological Association; 2006.
2. Chow CM, Ruhl H. Friendship and romantic stressors and depression in emerging adulthood: Mediating and moderating roles of attachment representations. *J Adult Dev.* 2014;21(2): 106–115. doi:10.1007/s10804-014-9184-z.
3. Shulman S, Connolly J. The challenge of romantic relationships in emerging adulthood: Reconceptualization of the field. *Emerg Adult.* 2013;1(1):27–39. doi:10.1177/2167696812467330.

4. Barry CM, Madsen SD, Nelson LJ, Carroll JS, Badger S. Friendship and romantic relationship qualities in emerging adulthood: differential associations with identity development and achieved adulthood criteria. *J Adult Dev.* 2009;16(4):209–222. doi:10.1007/s10804-009-9067-x.
5. Tanner JL. Emerging adulthood. In: Levesque JR, ed. *Encyclopedia of Adolescence*. New York: Springer editions; 2011: 818–825.
6. Wrzus C, Zimmermann J, Mund M, Neyer FJ. Friendships in young and middle adulthood: normative patterns and personality differences. In: Hojjat M & Moyer A. eds. *Psychology of Friendship*. New York: Oxford University Press; 2015:1–17
7. Galliher RV, Kerpelman JL. The intersection of identity development and peer relationship processes in adolescence and young adulthood: contributions of the special issue. *J Adolesc.* 2012; 35(6):1409–1415. doi:10.1016/j.adolescence.2012.09.007.
8. Fehr B. *Friendship Processes*. Thousand Oaks, CA: SAGE Publications Ltd. 1996.
9. Asendorpf JB, Wilpers S. Personality effects on social relationships. *J Person Soc Psychol.* 1998;74(6):1531–1544. doi:10.1037/0022-3514.74.6.1531.
10. Poulin F, Chan A. Friendship stability and change in childhood and adolescence. *Dev Rev.* 2010;30(3):257–272. doi:10.1016/j.dr.2009.01.001.
11. Ferrari AJ, Charlson FJ, Norman RE, et al. Burden of depressive disorders by country, sex, age, and year: Findings from the global burden of disease study. *PLoS Med.* 2013;10(11):e1001547., doi: e1001547. doi:10.1371/journal.pmed.1001547.
12. Lanctot J, Poulin F. Emerging adulthood features and adjustment: a person-centered approach. *Emerg Adult.* 2018;6(2): 91–103. doi:10.1177/2167696817706024.
13. Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychol Bull.* 2003;129(5):674–697. doi:10.1037/0033-2909.129.5.674.
14. Weissman MM, Markowitz JC, Klerman G. *Comprehensive Guide to Interpersonal Psychotherapy*. New York: Basic Books editions; 2008.
15. Sheets ES, Craighead WE. Comparing chronic interpersonal and noninterpersonal stress domains as predictors of depression recurrence in emerging adults. *Behav Res Ther.* 2014;63:36–42. doi:10.1016/j.brat.2014.09.001.
16. Miething A, Almquist YB, Östberg V, Rostila M, Edling C, Rydgren J. Friendship networks and psychological well-being from late adolescence to young adulthood: a gender-specific structural equation modeling approach. *BMC Psychol.* 2016;4(1): 1–11. doi:10.1186/s40359-016-0143-2.
17. Tanner JL. Recentering during emerging adulthood: a critical turning point in life span human development. In: Arnett JJ, Tanner JL, editors. *Emerging Adults in America: Coming of Age in the 21st Century*. Washington, DC: American Psychological Association; 2006:21–55.
18. Paul EL, Brier S. Friendsickness in the transition to college: pre-college predictors and college adjustment correlates. *J Counsel Dev.* 2001;79(1):77–89. doi:10.1002/j.1556-6676.2001.tb01946.x.
19. Chan A, Poulin F. Monthly instability in early adolescent friendship networks and depressive symptoms. *Soc Dev.* 2009;18(1): 1–23. doi:10.1111/j.1467-9507.2008.00461.x.
20. Arnett JJ. Emerging adulthood: a theory of development from the late teens through the twenties. *Am Psychol.* 2000;55(5): 469–480. doi:10.1037/0003-066X.55.5.469.
21. Oswald DL, Clark EM. Best friends forever?: high school best friendships and the transition to college. *Pers Rel.* 2003;10(2): 187–196. doi:10.1111/1475-6811.00045.
22. Swenson LM, Nordstrom A, Hiester M. The role of peer relationships in adjustment to college. *J Coll Stud Dev.* 2008;49(6): 551–567. doi:10.1353/csd.0.0038.
23. American College Health Association-National College Health Assessment II: Reference Group Executive Summary Spring 2010. Hanover, MD: American College Health Association; 2010.
24. Arria AM, O’Grady KE, Caldeira KM, Vincent KB, Wilcox HC, Wish ED. Suicide ideation among college students: A multivariate analysis. *Arch Suicide Res.* 2009;13(3):230–246. doi:10.1080/1381110903044351.
25. Norona JC, Preddy TM, Welsh DP. How gender shapes emerging adulthood. In: Norona JC, Preddy TM, & Welsh DP. *The Oxford Handbook of Emerging Adulthood*. New York: Oxford University Press, 2015:62–86.
26. Galambos NL, Barker ET, Krahn HJ. Depression, self-esteem, and anger in emerging adulthood: Seven-year trajectories. *Dev Psychol.* 2006;42(2):350–365. doi:10.1037/0012-1649.42.2.350.
27. de Lijster JM, Dierckx B, Utens EMWJ, et al. The age of onset of anxiety disorders: a meta-analysis. *Can J Psychiatry.* 2017;62(4): 237–246. doi:10.1177/0706743716640757.
28. Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. *App Psy Meas.* 1977;1(3): 385–401. doi:10.1177/014662167700100306.
29. Andresen EM, Malmgren JA, Carter WB, Patrick DL. Screening for depression in well older adults: evaluation of a short version of the CES-D (Center for Epidemiologic Studies Depression Scale). *Prev Med.* 1994;10:77–84. doi:10.1016/S0749-3797(18)30622-6.
30. Demir M. Close relationships and happiness among emerging adults. *J Happiness Stud.* 2010;11(3):293–313. doi:10.1007/s10902-009-9141-x.
31. Arnett JJ. Emerging adulthood: what is it, and what is it good for?. *Child Dev Persp.* 2007;1(2):68–73. doi:10.1111/j.1750-8606.2007.00016.x.
32. Wang ZG. The development of personal friendship networks. *Dissertation Abstr Int: Sect B: Sci Eng.* 2007;68(2-B):1364–1380.
33. Elmer T, Boda Z, Stadtfeld C. The co-evolution of emotional well-being with weak and strong friendship ties. *Net Sci.* 2017; 5(3):278–307. doi:10.1017/nws.2017.20.
34. Newcomb AF, Bagwell CL. Children’s friendship relations: a meta-analytic review. *Psy Bull.* 1995;117(2):306–347. doi:10.1037/0033-2909.117.2.306.
35. Coyne JC. Depression and the response of others. *J Abn Psychol.* 1976;85(2):186–193. doi:10.1037/0021-843X.85.2.186.
36. Conley CS, Durlak JA, Kirsch AC. A meta-analysis of universal mental health prevention programs for higher education students. *Prev Sci.* 2015;16(4):487–507. doi:10.1007/s11121-015-0543-1.
37. Conley CS, Shapiro JB, Kirsch AC, Durlak JA. A meta-analysis of indicated mental health prevention programs for at-risk higher education students. *J Couns Psychol.* 2017; 64(2):121–145. doi:10.1037/cou0000190.