

The Influence of Relationship Stability Patterns in Emerging Adulthood on Chronic Illness and Health Behaviors

Patricia N. E. Roberson¹, Jerika Norona² and Jennifer Bishop³

¹ University of California, Davis

Received: 10 December 2016 Accepted: 5 January 2017 Published: 15 January 2017

Abstract

Objective: Relationship status (e.g., married, single) is linked to mental and physical health outcomes. However, beyond this static, binary measure of relationship stability it is not known how different patterns of moving in and out of these static statuses effect outcomes. Therefore, using a recent, nationally representative sample of emerging adults, the present longitudinal study examined patterns of relationship stability among young people between the ages of 17 and 27 and their links with mental and physical health outcomes. Method: Using mixed-method, participants' romantic relationship status was coded across five waves into types of relationship stability patterns. Then, using quantitative methods, we determined if relationship stability patterns differed on self-reported measures of mental health (i.e., psychological distress), physical health (e.g., chronic illness, self-reported health), and health behaviors (e.g., sleep, binge drinking, smoking) using appropriate regression models (i.e., linear, Poisson, logistic). Results: Participants (N = 694) were five relationship stability patterns were determined: Stable Single (42.6

Index terms—

is a developmental period during which young people transition from adolescence into adulthood. Arnett (2000) Arnett (, 2015)) proposed that the primary goal of emerging adults is to establish their roles and responsibilities in the domains of love and work. Emerging adults thus strive to gain independence from their families of origin and behave autonomously, as well as create a coherent identity (Arnett, 2015). To add to this journey toward independence, emerging adults are also expected to establish long-term, committed romantic relationships. These tasks are not easy and can often be daunting for young people; indeed, novel experiences such as pursuing higher education, joining the military, joining the workforce, establishing a career, and forming intimate relationships are not small feats. Given the inherent stress of being in transition, it is important for researchers to better understand the factors that contribute to optimal health and well-being for emerging adults as they establish their roles in love and work. Relationship status (e.g., married, single) is linked to mental and physical health both among emerging adults and older adults with those in committed relationship experiencing improved health outcomes (e.g., Ditzen, Hoppmann, & Klumb, 2008; Kumar, Mohan, Ranjith, & Chandrasekaran, 2006). However, beyond this static, binary measure of relationship stability it is not known how different patterns of moving in and out of these static statuses effect outcomes. Specifically, for Emerging Adults, it appears that timing of transitioning into a committed may be linked to health outcomes (Roberson, Norona, Zorotovitch, & Dirnberger, in press) Therefore, using a nationally representative sample of emerging adults, the present longitudinal study examined patterns of relationship stability among emerging adults people between the ages of 17 and 27 and their links with mental and physical health outcomes.

1 II. Romantic Relationships in Emerging Adulthood

Much empirical attention has been given to romantic relationships in emerging adulthood because they contribute greatly to physical and mental health across the life course (Davila, 2004). Unlike in other developmental

stages, emerging adults can take various trajectories toward adulthood in terms of their romantic relationships (Roberson et al., in press); although getting married during this life stage is somewhat uncommon (especially compared to decades ago), emerging adults might choose to cohabit with their committed romantic partners (Stanley, Whitton, & Markman, 2004). Emerging adults also engage in romantic experiences outside the context of romantic relationships, which can include casual sex (Claxton & van Dulmen, 2013). Although romantic experiences can take different forms in emerging adulthood, forming a long-term, committed romantic relationship is reportedly a common goal for emerging adults by the time they turn 30 years old (Arnett, 2015). What is unknown is how relationship stability or instability might impact later health.

2 a) Relationship Stability

In investigating the factors that contribute to emerging adults' physical and mental health, it is important to consider the role of relationship stability. (Ditzen et al., 2008; Kumar et al., 2006). However, for emerging adults, consistent associations are less clear.

For emerging adults, some studies show that being in a romantic relationship is related to an increase in symptoms of depression (Davila, Steinberg, Kachadourian, Cobb, & Fincham, 2004); in contrast, married and cohabiting emerging adults tend to exhibit fewer depressive symptoms compared to their single counterparts (Brainthwaite, Delevi, & Fincham, 2010; Galambos, Barker, & Krahm, 2006). When these relationships are formed during emerging adulthood is apparently important as those who experience romantic commitment early on during this life stage tend to show decreases in depressive symptoms as they age (Roberson et al., in press). These negative mental health outcomes can potentially affect other areas of life, including work and school (Mayseless & Keren, 2014). Because of the inconsistent findings on the association between romantic relationship status and mental and physical health outcomes in emerging adulthood, further research is needed to deepen our understanding of the factors that contribute to adaptive and maladaptive outcomes.

Emerging adults have been described as shifting in and out of romantic relationships (Shulman & Connolly, 2013) and a handful of studies have found different patterns of relationship instability during late adolescents and early emerging adulthood (Bajoghli et al., 2017; Boisvert & Poulin, 2016; Rauer, Pettit, Lansford, Bates, & Dodge, 2013). While these studies confirm that different patterns of relationship stability exist they only examine precursors to these patterns. However, research has yet to examine how these shifts specifically affect physical and mental health outcomes for emerging adults. Because emerging adulthood is a stage during which young people are expected to explore and develop many types of romantic connections, relationship stability might not impact health in the same ways as it does among older adults. Further, because emerging adults are generally healthier due to their age, we might not see differences in the quality of their physical health. Rather, their health behaviors might be more accurate gauges of their health during this life stage and might predict health quality in middle and later life.

3 III.

4 The Current Study

Using a recent sample of emerging adults, the present longitudinal study examined the link between relationship stability and emerging adults' mental health and physical health behaviors. This study extends previous research in a number of ways. The present study begins to fill the current gap in the literature regarding relationship instability and how it is related to health outcomes in emerging adulthood. Specifically, this study can shed light on either the utility or the detriment of relationship transitions over time and whether they contribute to mental health (aim 1) and physical health (aim 2).

Further, emerging adults are younger than most samples for which relationship status has been linked to health outcomes (mental and physical) and health behaviors established in young adulthood tend to extend into later years. Therefore, we also examine health behaviors that may prevent future health problems (e.g., exercise, doctor visits; aim 3), or be problematic for future health quality (e.g., binge drinking, drug use, poor sleep pattern; aim 4). Importantly, this study is the first step in understanding the relationship among relationship stability and mental and physical health outcomes.

5 IV.

6 Method a) Participants

Participants ($N = 694$) ranged in age from 17 to 19 in 2005 with an average age of 18 ($SD = 0.79$). 50% of the sample reported as men and 50% as women. Participants mostly identified as White (49%) or African-American (42%), and 1% identified as American Indian, Asian, Pacific Islander, or Other. When considering self-reported relationship status, in 2005, the majority reported being Never Married, Not Cohabiting (90%), followed by Never Married, Cohabiting (5%), Married (3%), and then Separated < 1%. In contrast, the majority of relationship statuses at follow-up in 2013 were still Never Married, Not Cohabiting, although a substantially smaller proportion (53%), followed by Married (24%), Never Married, Cohabiting (18%), Separated (2%), Divorced, Not Cohabiting (2%), and then Divorced, Cohabiting (1%).

7 b) Procedures

Data in the present study were part of the Transition to Adulthood project, which is part of the larger ongoing Panel Study of Income Dynamics (Dynamics, 2016); this secondary data study is exempt from IRB approval. The PSID is a nationally representative sample of Americans and the longest running household study survey in the world. The Transition to Adulthood project (the present sample) participants are the grandchildren of the original PSID participants and were contacted once they turned 18 for biannual phone interviews. For the Transition to Adulthood data set, participants were eligible if their parents were part of the larger study, but only one sibling from each family was selected to participate in the next generation of the ongoing study.

The ii. Mental Health The mental health measure was developed by the PSID. This composite measure consisted of six items that assess psychological symptoms (e.g., "How often did you feel nervous in the past month?"), with responses ranging from 1 = all of the time to 5 = none of the time. Items were combined so that higher scores indicate more psychological distress (M 2005 = 5.33, SD 2005 = 3.58; M 2013 = 4.87; SD 2013 = 3.74).

8 iii. Physical Health Status

Number of chronic illness was assessed by, "Has a doctor or other health professional ever told you that you have or had?" (a) asthma, (b) diabetes or high blood sugar, (c) cancer, (d) high blood pressure, (e) other chronic disease. Response options included (0) no, (1) yes, (8) don't know, or (9) not applicable. Response were summed into the used variable ranging from 0 to 5; don't know and not applicable were coded as missing. In 2005, 50% of participants reported having 0 chronic illnesses, followed by having 1 chronic illness (47%), 2 chronic illnesses (3%), and then 3 chronic illnesses (< 1%). In 2013, 54% of participants reported having 1 chronic illness, followed by having 0 chronic illnesses (42%), 2 chronic illnesses (4%), and then 3 chronic illnesses (1%).

Self-reported physical health was assessed by, "Would you say your health in general is excellent, very good, good, fair, or poor?" with response options of 1 = excellent to 5 = poor (M 2005 = 1.17, SD 2005 = .92; M 2013 = 1.20, SD 2013 = .95).

Body mass index (BMI) was calculated by the PSID. Participants were organized into 4 BMI groups (0) < 18.5, underweight; (1) 18.5 -24.9, Normal; (2) 25.0 -29.9, Overweight; (3) ? 30.0, Obese. In 2005, most participants were coded as having a normal BMI (57%), followed by overweight (26%), obese (13%), and then underweight (4%). In 2013, a smaller proportion were coded as having a normal BMI (42%), followed by overweight (30%), obese (25%), then underweight (2%). Cigarette smoking was assessed by, "Do you smoke cigarettes?" with respondents reporting (0) no or (1) yes. Respondents reports of 'don't know' or 'refuse' were coded as missing. In 2005, 76.9% reported as nonsmokers and in 2013, 78.5% reported as non-smokers. Binge drinking was assessed by, "In the last year, on how many days have you had (if male then 'five' / if female then 'four') or more drinks on one occasion?" Total drug use was assessed by, "On how many occasions (if any) have you used _____ in the past 12 months": diet pills, amphetamines, marijuana, cocaine, barbiturates, tranquilizers, and steroids. We coded each as 0 (never used) or 1 (used at least once) then summed for a total number of drugs used which ranged from 0 to Stable, into relationship, out of relationship, in and out of relationship. Each participant's response across all time points was examined, and only those who responded to the question about relationship status at least three out of the five possible times received a code. In other words, some participants did not provide an answer about their relationship status at all five time points, but if they provided at least three answers, a pattern could be established and was coded.

ii. Health Outcomes For the second research question, we sought to understand the effects of the relationship stability patterns on a number of outcomes relating to mental health, physical health, and health behaviors in 2013. For each of the outcome variables, we first examined bivariate association in SPSS. Depending on the type of variable (e.g., continuous, dichotomous, or count) we used different statistical tests. Namely, we used cross tabulations for the dichotomous outcomes and analysis of variance (ANOVA) for continuous or count outcomes. Next, we examined the same outcome variable in predictive regression models controlling for baseline levels of each variable, gender (male and female), age in 2005 ??17, 18, and 19), and minority status (White and other). In the predictive models, the relationship stability patterns were dummy coded so that the largest category was used as the reference group. For continuous outcomes variables, we use linear regression, for count outcome variables we used Poisson regression, and for dichotomous variables we used logistic regression. All predictive models were run in Mplus so that we could handle missing data using full information maximum likelihood. We examined the 95% confidence interval of each parameter and variance explained (R^2) of the predictive model, in addition to significance level, when evaluating the effect of the determined relationship stability patterns on health outcomes.

V.

9 Results

10 a) Relationship stability patterns

The patterns of relationships stability for each participant was coded according to the pre-determined patterns. However, during the coding process, we determined that stable had two sub-categories, stable committed and

stable single. 2) indicated that only emerging adults who Move Out Of Commitment have 60% more chronic illnesses compared to Stable Single.

11 d) Self-reported physical health

The ANOVA indicated mean differences among the relationship stability pattern, $F(??$

12 Discussion

In this study, we sought to investigate different types of relationship stability patterns among emerging adults in the United States ages 17-29 [1] and how those stability patterns differed on health outcomes near the end of this period. After examining these results, four patterns emerged.

First, emerging adults in the Moving out of Commitment pattern seemed to fair the worst compared to those in the Stable Single pattern. Namely, that the Moving Out of Commitment pattern tended to report higher psychological distress, a higher number of chronic diseases, worse self-reported physical health, and were more likely to smoke (although also less likely to binge drink alcohol) compared to those in the reference relationship stability pattern. All in all, it appears that young people who start emerging adulthood in a committed relationship and end it not in a relationship fair worse in terms of psychological and physical health. However, we do not know the direction of association among these variables as previous research has found a bi-directional association among adults (Torvik, Gustavson, Røysamb, & Tambs, 2015).

Future research is needed to further disentangle the association between relationship quality, relationship stability, and health; however, the findings here make it clear that the patterns that exist in emerging adulthood are similar to those in middle and later adulthood.

The second pattern found that those in the Moving In and Out of Commitment pattern did not have any physical or mental health differences compared to the reference group, they were more likely to smoke and binge drink alcohol, but reported using a fewer number of drugs. Therefore, relationship instability during emerging adulthood may be more related to health behaviors than mental and physical health status. However, these health behaviors might be indicative of poorer health in middle and later adulthood (BURNS et al., 2008), but they might also be a function of a lifestyle often reported during this developmental period (e.g., casual sex; (Claxton & van Dulmen, 2013)). If these health behaviors change as individuals move out of this developmental period, their physical health in later adulthood might not be negatively impacted. Future research should examine the long reaching impact of health behaviors during this developmental stage.

The third pattern was that those in the Moving into Commitment pattern tended to fair better than the ??013). As to why this disparity occurs, some argue that the health disparity is partially because of a selection process, those who are healthier select into marriage/relationship commitment and those who are less healthy do not (Waldron, Hughes, & Brooks, 1996). This may be true as is evidenced by those who move out of commitment; however, this is a minority of individuals during emerging adulthood (3.4%). What we believe may explain the marital health disparity for a larger portion of the population is the reduction in problematic health behaviors for those choosing relationship commitment, which should be related to better physical health in middle and later adulthood. Therefore, it might be most effective to improve longterm relational and physical health by implementing brief prevention programs which focus on both characteristics of healthy relationships, as well as improvement of health behaviors during this emerging adulthood.

13 VII.

14 Limitations/Future Research

This study is not without limitations. First, some of the outcome measures are limited in number of items measuring each construct and the variability of some measures. Therefore, results may not be generalizable to emerging adults with more problematic health and should be replicated with such a population. Second, some scholars point to emerging adulthood as lasting until the late 20s or early 30s. Therefore, the findings here may not be an accurate representation of all of emerging adulthood as they only extend to age 27.

Third, we only include self-report measures of health and do not include biological measures such as all static load which is linked to future health problems. While those measures were not available to us, future research should include these to better predict long term effects of relationship stability.

15 VIII.

16 Conclusion

The findings of this study suggest that there are multiple patterns of relationship stability (or instability during Emerging Adulthood and that these patterns differentially impact subsequent mental health, physical health, and health behaviors. Namely, "Moving out of Commitment" is most problematic for health outcomes while "Stable Single or Committed" are less problematic for health. These finding can inform future integrative health

Introduction
merging adulthood (ages 18 to 29; Arnett, 2015)

Figure 1:

c) Measures
i. Romantic Relationship Status
Romantic relationship stability types were coded from the marital/cohabitation status variable in 2005, 2007, 2009, 2011, and 2013. At each time point participants were coded by the PSID as (1) Never married, cohabiting; (2) Never married, not cohabiting; (3) Married, spouse present; (4) Married, spouse not present; (5) Separated; (6) Divorced, cohabiting; (7) Divorced, not cohabiting; (8) Widowed; (9) Not applicable, don't know.

Figure 2:

1

The

Figure 3: Table 1 :

2

BMI
2.5000
2.0000
1.5000
1.0000
0.5000
0.0000

Figure 4: Table 2)

2

Smoking Status: The bivariate association (Chi-squared) indicated that there was a difference across relationship stability patterns. Post-hoc analysis of the adjusted residuals indicates that a significantly smaller proportion of those Moving into Commitment smoked (14.4%; $Z = -2.2$), while those Moving Out of Commitment smoked more (42.9%; $Z = 2.2$). The predictive model (logistic regression; Table 3) indicated that emerging adults Moving In and Out of Commitment were 35% more likely to smoke compared to those who were Stable Single (trending toward significance). Additionally, those Moving out of Commitment were 114% more likely to smoke compared to those who were Stable Single.

Binge Drinking: The bivariate association (ANOVA) indicated that there were no bivariate associations, $F(4,412) = .86$, $p = .49$. The predictive model (Poisson regression; Table 3) indicated that those Moving into Commitment (80%) or Moving Out of Commitment (51%) were less likely to drink, but those Moving In and Out of Commitment (122%) were more likely to drink compared to emerging adults who were Stable Single.

[Note: e) Health Behaviors Sleep: First the ANOVA indicated that there were no significant mean differences among the relationship stability patterns, $F(4,419) = .55$, $p = .70$. The predictive model (Table 3) confirmed this. Number of drugs used: The ANOVA indicated that there were no bivariate associations, $F(4,606) = 1.72$, $p = .14$. Results of the predictive model (Poisson regression; Table 3) indicated that those Moving into Commitment (20%) and those Moving In and Out of Commitment used fewer drugs (19%; trending toward significant) compared to Stable Single. © 2017 Global Journals Inc. (US) s]

Figure 5: Table 2 :

3

Figure 6: Table 3 :

The Influence of Relationship Stability Patterns in Emerging Adulthood on Chronic Illness and Health Behaviors

significantly different on any physical health measures, they were less likely to engage in problematic health behaviors. Because of the decreased problematic behaviors, it is plausible to assume that those who move M (SD)/ % into commitment during emerging adulthood may also B(SE) Model 1: Sleep 2013 a Stabl

Stable Committed physical health (Umberson, Williams, Powers, Liu, & 6.75(1.16) -.29(.40)

Year Stable Committed Sleep 2005 Needham, 2006), indicating that better relationship 2.4% .26(.49) 1.30 – 2017

	Smoking 2005	–	1.39(.14)**	
8	Model 3: Binge Drinking c			
	Stable Single		1.21(1.40)	
Volume XVII	Into Commitment Out Of Commitment In & Out Of	.97(1.30)	.20 .49 1.22 .16 1.02 –.80 1.14 .81	
Is-	Commitment Stable Committed Binge Drinking 2005	1.46(1.49)*		
sue	Model 4: Number of drugs used c (N = 611) Stable	1.02(1.28)		
VII	Single Into Commitment Out Of Commitment In &	1.47(1.50)*		
	Out Of Commitment Stable Committed Number of	– .20(.36)		
Ver-	drugs used 2005	10.34(34.32)		
sion		5.68(13.25)*		
I		6.23(12.01)**		
		9.38(25.84)		
		1.25(2.22)*		
		– .13(.16)		
		–		
		.21(.12)		
		? –		
		.06(.25)		
		.11(.04)**		

214 programs to target types of stability patterns (rather than divorce in general) and potentially reduce health
215 problems from manifesting or becoming exacerbated. ^{1 2}

¹© 2017 Global Journals Inc. (US) sThe Influence of Relationship Stability Patterns in Emerging Adulthood
on Chronic Illness and Health Behaviors

²© 2017 Global Journals Inc. (US) s

- [Hawkins et al.] , A J Hawkins , S M Stanley , P A Cowan , F D Fincham , S R Beach , C P Cowan .
- [Rutledge et al. ()] ‘A meta-analysis of mental health treatments and cardiac rehabilitation for improving clinical outcomes and depression among patients with coronary heart disease’. T Rutledge , L S Redwine , S E Linke , P J Mills . *Psychosomatic Medicine* 2013. 75 (4) p. .
- [Daire ()] *A more optimistic perspective on government-supported marriage and relationship education programs for lower income couples*, A P Daire . 2013.
- [Danese and McEwen ()] ‘Adverse childhood experiences, allostasis, allostatic load, and age-related disease’. A Danese , B S McEwen . *Physiology & Behavior* 2012. 106 p. .
- [Adam et al. ()] ‘Associations between mental disorders and the common cold in adults: A population-based crosssectional study’. Y Adam , G Meinlschmidt , R &lieb . *Journal of psychosomatic research* 2013. 74 p. .
- [Wood ()] ‘Beyond the “psychosomatic family”: A bio behavioral family model of pediatric illness’. B L Wood . *Family Process* 1993. 32 (3) p. .
- [Norona et al. ()] ‘Breaking Up in Emerging Adulthood A Developmental Perspective of Relationship Dissolution. Emerging Adulthood, Advance online publication’. J C Norona , S B Olmstead , D P Welsh . doi:2167696816658585. 20. *Panel Study of Income Dynamics, public use dataset*, (Ann Arbor, MI) 2016. 2016. Institute for Social Research, University of Michigan (Produced and distributed by the Survey Research Center)
- [Rhoades et al. ()] ‘Breaking up is hard to do: the impact of unmarried relationship dissolution on mental health and life satisfaction’. G K Rhoades , C M Kamp Dush , D C Atkins , S M Stanley , H J Markman . *Journal of Family Psychology* 2011. 25 p. 366.
- [Claxton and Van Dulmen ()] ‘Casual sexual relationships and experiences in emerging adulthood’. S E Claxton , M H M Van Dulmen . *Emerging Adulthood* 2013. 1 p. .
- [Roberson et al. ()] *College adjustment, relationship satisfaction, and conflict management: A cross-lag assessment of developmental ‘spillover’*. *Emerging Adulthood, online publication*, P N E Roberson , J Fish , S B Olmstead , F D Fincham . 10.1177/2167696815570710. 2015.
- [Galambos et al. ()] ‘Depression, self-esteem, and anger in emerging adulthood: seven-year trajectories’. N L Galambos , E T Barker , H J Krahn . *Developmental Psychology* 2006. 42 p. 350.
- [Roberson et al.] *Developmental trajectories and health outcomes among emerging adult women and men*, P N E Roberson , J C Norona , J Zorotovich , Z &dirnberger . *Emerging Adulthood*. (in press)
- [Arnett ()] ‘Emerging adulthood: A theory of development from the late teens through the twenties’. J J Arnett . *American Psychologist* 2000. 55 p. .
- [Konstam ()] *Emerging and young adulthood: Multiple perspectives, diverse narratives*, V Konstam . 2014. New York, NY: Springer.
- [Mays Less and Keren ()] ‘Finding a meaningful life as a developmental task in emerging adulthood: The domains of love and work across cultures’. O Mays Less , E Keren . *Emerging Adulthood* 2014. 2 (1) p. .
- [Jobin and Wrosch ()] ‘Goal disengagement capacities and severity of disease across older adulthood: The sample case of the common cold’. J Jobin , C Wrosch . *International Journal of Behavioral Development* 2016. 40 p. .
- [Torvik et al. ()] ‘Health, health behaviors, and health dissimilarities predict divorce: results from the HUNT study’. F A Torvik , K Gustavson , E Røysamb , K Tambs . *BMC Psychology* 2015. 3 p. .
- [Schone and Weinick ()] ‘Healthrelated behaviors and the benefits of marriage for elderly persons’. B S Schone , R M Weinick . *The Gerontologist* 1998. 38 (5) p. .
- [Bajoghli et al. ()] ‘I love you forever (more or less)”—stability and change in adolescents’ romantic love status and associations with mood states’. H Bajoghli , V Farnia , N Joshaghani , M Haghighi , L Jahangard , M Ahmadpanah , D S Bahmani , E Hoisboer-Trachsier , S Brand . <https://www.ncbi.nlm.nih.gov/pubmed/28380109?dopt=Abstract> *Revista Brasileira de Psiquiatria* 2017.
- [Arnett ()] ‘Introduction to the special section: Reflections on expanding the cultural scope of adolescent and emerging adult research’. J J Arnett . *Journal of Adolescent Research* 2015. 30 p. .
- [Robles et al. ()] ‘Marital quality and health: A meta-analytic review’. T F Robles , R B Slatcher , J M Trombello , M M McGinn . *Psychological Bulletin* 2014. 140 (1) p. 140.
- [Waldron et al. ()] ‘Marriage protection and marriage selectionprospective evidence for reciprocal effects of marital status and health’. I Waldron , M E Hughes , T L Brooks . *Social Science & Medicine* 1996. 43 p. .
- [Stanley et al. ()] ‘Maybe I do: Interpersonal commitment and premarital or no marital cohabitation’. S M Stanley , S W Whitton , H J Markman . *Journal of Family Issues* 2004. 25 p. .

- [Ditzen et al. ()] 'Positive couple interactions and daily cortisol: On the stress-protecting role of intimacy'. B Ditzen , C Hoppmann , P &klumb . *Psychosomatic Medicine* 2008. 70 p. .
- [Dynamics ()] *Produced and distributed by the Survey Research Center*, P S O I Dynamics . 2016. Ann Arbor, MI. Institute for Social Research, University of Michigan
- [Maestripieri et al. ()] 'Relationship status and relationship instability, but not dominance, predict individual differences in baseline cortisol levels'. D Maestripieri , A C Klimczuk , M Seneczko , D M Traficonte , M C Wilson . *PloS one* 2013. 8 (12) p. e84003.
- [Wood et al. ()] *Review of family relational stress and pediatric asthma: The value of bio psychosocial systemic Family Process*, B L Wood , B D Miller , H K Lehman . 2015. 54 p. .
- [Davila et al. ()] 'Romantic involvement and depressive symptoms in early and late adolescence: The role of a preoccupied relational style'. J Davila , S J Steinberg , L Kachadourian , R Cobb , F Fincham . *Personal Relationships* 2004. 11 p. .
- [Boisvert and Poulin ()] 'Romantic relationship patterns for adolescence to emerging adulthood: Associations with family and peer experiences in early adolescence'. S Boisvert , F Poulin . 10.1007/s10964-016-0435-0. *Journal of Youth Adolescence* 2016. 45 (5) p. .
- [Rauer et al. ()] 'Romantic relationship patterns in young adults and their developmental antecedents'. Rauer , Pettit , Lansford , Bates , Dodge . *Developmental Psychology* 2013. p. 49.
- [Braithwaite et al. ()] 'Romantic relationships and the physical and mental health of college students'. S R Braithwaite , R Delevi , F D &fincham . *Personal Relationships* 2010. 17 p. .
- [Woods and Denton ()] *The bio behavioral family model as a framework for examining the connections between family relationships, mental, and physical health for adult primary care patients. Families, Systems, & Health*, S B Woods , W H Denton . 2014. 32 p. 235.
- [Priest et al. ()] 'The biobehavioral family model: Close relationships and allostatic load'. J B Priest , S B Woods , C A Maier , E O Parker , J A Benoit , T R Roush . *Social Science & Medicine* 2015. 142 p. .
- [Burns et al. ()] 'The Effect of Smoking in Midlife on Health-Related Quality of Life in Old Age: A 26-Year Prospective Study'. D M Burns , A Y Strabddberg , T E Strandberg , K Pitkala , V V Salomaa , R S Tilvis , T A Miettinen . *Commentary. Archives of Internal Medicine* 2008. (18) p. 168.
- [Strand Berg et al. ()] *The effect of smoking in midlife on healthrelated quality of life*, A Y Strand Berg , T E Strand Berg , K Pitkälä , V V Salomaa , R S Tilvis , T A Miettinen . 2008. (in old age: A 26-year)
- [Priest et al.] 'under review) An application of the Bio behavioral Family Model for emerging adult health'. J Priest , P N E Roberson , A Wojciak , J Woods , S . *Family Process*
- [Umberson et al. ()] 'You make me sick: Marital quality and health over the life course'. D Umberson , K Williams , D A Powers , H Liu , B Needham . *Journal of Health and Social Behavior* 2006. 47 p. .