Emerging Adults’ Psychological Symptom Profiles: Differential Associations with Peer Victimization and Gender Typicality

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Abstract

Evidence is mixed regarding the trajectory of emerging adults’ psychological profiles. While most research has shown an upward trend in psychological health, other research suggests that some emerging adults experience serious mental health problems. Ambiguity surrounding the research could be tied, at least in part, to study methods. I sought to examine the variability in emerging adults’ psychological health through latent profile analysis, a statistical procedure that organizes individuals into relatively homogenous subgroups based on their responses to a set of continuous measures. Participants were 98 undergraduates (M age = 19) recruited from a private, liberal arts university in the southeastern United States. Participants completed self-report measures of psychological symptoms, peer victimization, and gender typicality. Results revealed two distinct classes of individuals: a low-symptom class and a higher-symptom class. As compared to the low-symptom class, the higher-symptom class experienced higher levels of victimization and lower levels of gender typicality. These results provide evidence for variation in the psychological profiles of emerging adults and suggest that emerging adults with higher levels of psychological symptomatology are at risk for other forms of psychological maladjustment. Furthermore, they underscore the importance in identifying and administering resources to emerging adults who are at risk of higher-symptom group membership and accordingly the impediment of possibly failing to develop a strong sense of self.
Emerging Adults’ Psychological Symptom Profiles:

Differential Associations with Peer Victimization and Gender Typicality

Erik Erikson was the first scholar to theorize about the developmental life course. He proposed a progression in which adulthood immediately follows adolescence (Arnett, 2007). In order to healthfully transition between life phases, Erikson suggested that one must successfully master a crisis unique to each phase. In adolescence, the challenge lies in gaining a sense of identity while overcoming identity diffusion. Without effectively developing a sense of self, Erikson argues that the individual will be unable to adequately make adult decisions, such as those regarding the choice of an occupation or a life partner. Furthermore, they will be unable to tackle the conflict characterizing adulthood, consisting of a struggle to acquire a sense of intimacy and solidarity while avoiding a sense of isolation (Maier, 1965).

Cultural changes in recent decades have significantly altered the dynamics of Erikson’s developmental life course theory (Arnett, 2007). In the 1980’s, earning differentials between high school and college graduates in the United States rose by over ten percentage points (Berman, Bound, & Griliches, 1994). As higher education quickly became a prerequisite for financial success (Arnett, 2007), college attendance began to increase accordingly. Enrollment increased by 11% from 1990 to 2000, and by 37% from 2000 to 2010 (U.S. Department of Education, 2012). Furthermore, in 1970, the median age of marriage was 21 for women and 23 for men. By 2005, the median had climbed by four years for both sexes (U.S. Bureau of the Census, 2006). With more people attending college than ever before, marriage, financial independence, and parenthood were being delayed considerably (Arnett, 2007). Fewer obligations afforded the opportunity for self-focus. This new cultural climate meant that Erikson’s identity crisis would not be resolved in adolescence, but that it would extend into the
late teens and the mid- to late twenties. In addition to the inherent self-focus and identity exploration characterizing this period, Arnett (2000) added that individuals often feel in-between, unstable, and have a sense that endless possibilities await them in the future. He defined this time as being a new developmental period called “emerging adulthood”.

Considering the newness of emerging adulthood theory, it is important to gain an understanding of the psychological profiles of individuals in this developmental period. This is especially true because maladjustment, including psychological symptomatology, has the potential to interfere with the completion of Erikson and Arnett’s critical task of identity exploration. However, research characterizing the psychological profiles of the emerging adult population is inconclusive. Some research describes emerging adulthood as a period of positive psychological adaptation. Galambos, et al. (2006) found that, on average, depressive symptoms and expressed anger declined in emerging adulthood and self-esteem increased. Work by Schulenberg and Zarrett (2006) buoyed these results, while also finding a decrease in theft and property damage and physical aggression and an increase in well-being (which was comprised of three constructs including self-esteem, self-efficacy and social support). A smaller body of work has theorized that emerging adulthood a “quarter-life crisis” marked by extreme unhappiness, anxiety, and pessimism about future plans (Arnett, 2007). It neglects to recognize a decrease in clinical level symptomatology during the emerging adulthood years, which might be expected reflecting on the plethora of research suggesting increased well-being in this period. For example, Tanner et al. (2007) reports stagnancy mental health through emerging adulthood. What’s more, Schulenberg & Zarrett (2006) acknowledge the stability of mental health between adolescence and emerging adulthood, but also describe an increase in the incidence of psychopathology, such as major depressive disorder, during these developmental periods.
Some of the aforementioned studies make broad generalizations about the emerging adult population. Others theorize about some variability but neglect to subject these theories to empirical evaluation. They analyze their samples as a whole, finding overarching trends. However, based on knowledge of emerging adulthood theory, it is likely that there is some level of heterogeneity in the population. This dearth of evidence leaves a gap in emerging adulthood literature that could lead to variability in psychological profiles being disregarded as unfounded or unimportant. One way to empirically tease out variability in a population is through the use of Latent Profile Analysis (LPA). LPA is a method of organizing individuals into relatively homogenous subgroups based on their responses to a set of continuous measures. Using LPA, the current study’s first aim is to derive distinct profiles of psychological symptoms, including depressive symptoms, social anxiety, and self-esteem, for a college-based sample of emerging adults.

If variability does surface in emerging adults’ psychological profiles, there is the possibility that those individuals with higher symptom levels will be at risk for other forms of psychological maladjustment. In particular, previous research on children and adolescents suggests psychosocial maladjustment (including depression, social anxiety, and a lack of social self-worth) is positively related to peer victimization (Hawker & Boulton, 2000). Similarly, research has found moderate to high correlations between psychological symptomatology and gender identity (Yunger et al, 2004). Accordingly, the current study sought to investigate the nature of associations between identified psychological profiles and the proximal factors of peer victimization and gender typicality in an emerging adult sample.
Method

Participants

Participants included 98 undergraduate students (67 female, Mdn_{age} = 19) recruited from learning communities at a private, liberal arts university in the southeastern United States. Students in learning communities were the particular interest of a larger investigation in which this study was involved. This larger investigation included measures assessing peer relationships. Students in learning communities were ideal candidates for this type of evaluation, as they develop a well-rounded understanding of one another as a product of living, studying, volunteering, and traveling together in the context of their community during the academic year. Participants were racially diverse (60.2% White, 16.3% Asian, 9.2% Black or African American, and 14.3% Other). The majority of participants reported middle to upper class income backgrounds (10.2% less than $25,000, 22.5% $25,000 – 99,000, 25.5% $100,000 - 199,000, and 13.3% greater than $200,000).

Measures

Psychological adaptation.

Participants completed three measures of psychological adaptation. The Center for Epidemiologic Studies Depression Scale (CES-D; NIMH) consists of 20 items assessing participants’ feelings and displays of depressive symptoms over a period of two weeks. I used a modified version consisting of 18 items with an assessment period of four months. Respondents evaluated themselves on a four-point scale, with anchors at zero, indicating “rarely or none of the time” and three, indicating “most or all of the time”. The Social Anxiety Scale for Children-Revised (SAC-R; La Greca & Lopez, 1998) consists of 18 items assessing participants’ displays of social anxious symptomatology over a period of four months. Participants responded on a
five-point scale, with anchors at one, indicating “never” and five, indicating “very often”. The Self-Esteem Scale (Rosenberg, 1979) was used to assess respondents’ perception of their self-worth. Participants indicated their level of agreement with ten different items on a four-point scale, with anchors at one, indicating “strongly disagree” and four, indicating “strongly agree”.

*Peer victimization.*

A nine item self-report measure of victimization was developed specifically for the current study. Participants indicated the extent to which they have been aggressed upon physically, verbally, and relationally by a peer in the past four months. Participants answered each item on a five-point scale, with anchors at one, indicating “never” and five, indicating “everyday”.

*Gender-typicality.*

A measure of gender-typicality was obtained from Patterson (2008) and adapted for the current study. Participants were asked to report the extent to which they identified with traits and behaviors characteristic of their sex. Participants answered each of the ten items on a four-point scale, with anchors at one, indicating “not at all” and four, indicating “a lot”.

*Procedure*

Recruitment emails were sent to professors of eight learning communities. With each professor’s permission, researchers visited their classrooms, giving a brief description of the study and inviting students to participate. Interested students supplied their availability within the next week. Researchers contacted interested students via email to coordinate a time to meet and complete the online survey.

Surveys were administered in a residence hall computer lab. Upon arrival, participants were greeted by a researcher and administered informed consent. Participants were informed that
they were free to skip any questions that they felt uncomfortable answering and that they were free to withdraw from the study at any time. Furthermore, participants were made aware that peer reported data collected on non-participants (acquired as part of a larger investigation) would be destroyed following data collection.

After completing the consent form, participants were escorted to a computer, at which time the researcher opened a program-specific survey via a hyperlink to Qualtrics Online Survey Software. The researcher showed the participant their unique, predetermined ID code, and asked them to enter the code as the answer to the first question of the survey. Upon thanking them for their participation, a researcher administered a one-page reference sheet listing campus and outside resources in the event that the participant felt concerned about their mental health after taking the survey. As compensation, participants received $10, and their names were entered in a raffle to win a pizza party for their learning community. Four programs were randomly selected to receive a pizza party, which was coordinated by the researchers on the date of the community’s choosing.

Results

I examined psychological symptoms of a college-based sample of emerging adults through the analysis of descriptive statistics. Means and standard deviations indicate that, on average, participants rarely to occasionally reported experiencing depressive symptoms. Furthermore, on average, participants reported experiencing some social anxiety and presented with moderate to high self-esteem. On average, participants reported almost never experiencing peer victimization and viewed themselves as being moderately gender-typical (Table 1).

To create distinct psychological symptom profiles from our sample, I conducted a latent profile analysis (LPA) in Mplus. LPA is a method of organizing individuals into relatively
homogenous subgroups based on their responses to a set of continuous measures. I first performed LPA to identify profiles based on depression, social anxiety, and low self-esteem. Fit indices, including log likelihood (LL), Adjusted BIC (ABIC), Lo-Mendell-Rubin Likelihood Ratio Test (LMR) and entropy, as well as theoretical considerations (e.g. class size) were used to evaluate model fit. LL and ABIC values that are closer to zero suggest better fitting models. LMR provides a $p$-value that can be used to determine if there is an improvement in fit with the inclusion of an additional class. Entropy is a measure of classification certainty, with higher values indicating an increased likelihood of accurate classification.

Results suggested that the two-class model (LL = -189.50, ABIC = 393.28, LMR = $p < .05$; entropy = .96) was the best-fitting solution relative to the one- and three-class models, respectively (LL = -231.79, ABIC = 472.14; LL = -171.35, ABIC = 362.68, LMR = $p < .05$, entropy = .85). Means and standard errors for the latent profiles (Table 2) indicate that the “higher-symptom” class (12% of sample) included emerging adults whose psychological symptoms exceeded those of emerging adults within the “low-symptom” class (88% of sample).

To identify the associations between the identified profiles, and peer victimization and gender typicality, I included measures of these variables as covariates in the two-class solution. I then conducted a logistic regression in which latent profile was regressed on the covariates. The logistic regression coefficient (logit) and odds ratio (OR) results for victimization (3.88, OR = 48.40, $p < .05$), gender typicality (2.43, OR = 11.36, $p < .05$), and gender (1.26, OR = 3.52, $ns$) indicate that, compared to the low-symptom class, the higher-symptom class experienced higher levels of victimization; relative to the higher-symptom class, the low-symptom class experienced higher levels of gender typicality; and boys were no more or less likely than girls to belong to the low- versus higher-symptom class.
Discussion

In the current study, two findings were of particular interest. First, in using LPA analysis to derive two distinct classes from the sample, I found a small group of emerging adults, the higher-symptom class, experiencing moderately high levels of psychological problems. Most previous research on emerging adulthood (e.g. Galambos et al., 2006), characterizes emerging adulthood as a period of psychological well-being. A small body of work (e.g. Tanner et al., 2007) does not find support for this upward trend, defining emerging adulthood as a static period with regard to mental health. Some studies (e.g. Schulenberg & Zarrett, 2006) acknowledge variability within the emerging adulthood developmental period, but neglect tease it out empirically. The current study extends previous research by employing an empirically driven approach to provide evidence for heterogeneity in an emerging adult sample, and by pinpointing that variability.

I also found that membership in the higher-symptom class is associated with an elevated risk for peer victimization and low gender typicality. This implies that emerging adults in this category are in danger of facing additional hardships beyond those purely resulting from their psychological symptomatology, or, perhaps, that they are experiencing other forms of maladjustment simultaneously. Furthermore, it is possible that peer victimization and low gender typicality, in conjunction with psychological symptoms, impede identity exploration, a critical task of the emerging adult development period (Arnett, 2000).

Limitations

The majority of limitations associated with the current study are linked to the uniqueness of the sample. It is likely that our sample represents characteristics of only a small subset of the emerging adult population. Our participant pool consisted of students in learning communities
attending a private, liberal arts university. The current results are only one part of a larger data collection, largely intended to garner information on peer relationships. Accordingly, the selective sample was necessary, as it ensured the collection of a group of respondents who were familiar enough with one another to be able to provide peer ratings of their community members on a variety of indices. This research design may have been detrimental to the self-report data. Learning community members must self-select into their learning community based on interest and be selected into their community based on merit. Consequently, students participating in the program are inherently different than those who do not choose to enter this academically focused commitment, and in some ways similar to one another. For example, these students might be more stress-prone than their outside peers. This may lead to their greater risk of depressive symptomatology in some individuals (Caspi et al., 2003). Similarly, but on a larger scale, in selecting, and being selected, to attend a small, private, liberal arts university, students may be inherently different from their peers attending large state colleges, those attending community colleges, and those who have forgone higher education to enter the workforce. Each of these environments can contribute to more or less autonomy, support, and stress, which can contribute to heightened variability in psychological profiles. Future research would benefit from including a greater breadth of emerging adults to gain a more holistic understanding of the population.

The time of year at which participants are assessed has the potential to contribute to variability in symptomatology exhibited by a college-aged sample. During examination periods, students are more prone to exhibiting signs of stress and depressive symptoms than during breaks or the average school day. Data collection for the current study began in February and continued through March, during which students could have been preparing for and taking mid-term examinations.
Future Research

Future research would benefit from a longitudinal design. A longitudinal study would eliminate the variability associated with surveying students during a particular time of year and shed light on the direction of associations between variables.

Research in the adolescent developmental period suggests less optimism from adolescent respondents regarding their health and well-being than was communicated by knowledgeable others in their lives. Research by Waters, Stewart, Brown, and Fitzpatrick (2003) showed that adolescents were only in close agreement with their parent informants on aspects of their health and well-being that they rated highly. While the validity of self-reports as compared to those of other informants has not yet been studied in emerging adults, this findings from adolescent research may also be applicable to an emerging adult population. That is, there might be value in obtaining more than one point-of-view on participants’ psychological health. To gain a more complete understanding of each participant’s psychological profile, future research should gather data from multiple informants, in addition to more traditional self-report measures.

Conclusion

A significant body of research defines emerging adulthood as a developmental period largely characterized by increased psychological wellbeing. As a result of this information, the time and resources necessary to isolate and assist those emerging adults who are experiencing distress might not be adequately invested. Future research should work toward building on the evidence presented in the current study, suggesting heterogeneity among college students’ psychological health, in order to redirect this perspective. Additional research is particularly crucial in light of the current study’s findings of associations between higher-symptom class and an elevated risk for peer victimization and low gender typicality. College administrations should
seriously consider formulating a plan to identify these individuals. Only then will at-risk students have access to the resources needed to mitigate adjustment difficulties.
References


Appendix

I. Table 1

*Descriptive Data for Measures of Psychological Symptoms*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressive symptoms</td>
<td>.67</td>
<td>.43</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>2.04</td>
<td>.65</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>3.31</td>
<td>.55</td>
</tr>
<tr>
<td>Peer victimization</td>
<td>1.24</td>
<td>.29</td>
</tr>
<tr>
<td>Gender-typicality</td>
<td>2.75</td>
<td>.30</td>
</tr>
</tbody>
</table>

Note. Anchors for measures of depressive symptoms (0 = Rarely or none of the time, 3 = Most or all of the time); social anxiety (1 = Never, 5 = Very often); self-esteem (1 = Strongly disagree, 4 = Strongly agree); peer victimization (1 = Never, 5 = Every day); gender-typicality (1 = Not at all, 4 = A lot).

II. Table 2

*Estimated Means and Standard Errors for Two-class LPA Solution*

<table>
<thead>
<tr>
<th></th>
<th>Depressive symptoms</th>
<th>Social anxiety</th>
<th>Self-esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SE</td>
<td>M</td>
</tr>
<tr>
<td>Low-symptom</td>
<td>.57</td>
<td>.03</td>
<td>1.92</td>
</tr>
<tr>
<td>Higher-symptom</td>
<td>1.57</td>
<td>.11</td>
<td>3.11</td>
</tr>
</tbody>
</table>

Note. Anchors for measures of depressive symptoms (0 = Rarely or none of the time, 3 = Most or all of the time); social anxiety (1 = Never, 5 = Very often); self-esteem (1 = Strongly disagree, 4 = Strongly agree).