Attachment, Ego Resilience, Emerging Adulthood, Social Resources, and Well-Being Among Traditional-Aged College Students

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To improve conceptualizations of college student mental health, the present study (*N* = 538) compared predictors of well-being that comprise both well-established counseling theories (e.g., attachment) and newer models specific to the life experience of the millennial generation and Generation Z. Predictors included internal resources (i.e., attachment security, ego resilience), emerging adulthood identification, and social resources (i.e., social support, social media usage). Each variable set predicted significant variance. The emerging adulthood and social media variables accounted for approximately 7% of variance in both psychological well-being and life satisfaction. Identifying emerging adulthood as a time of negativity and instability was the second strongest predictor of psychological well-being, while identifying emerging adulthood as a time of experimentation and possibilities was the second biggest predictor of life satisfaction. Implications for conceptualizing and treating today's students are discussed.

Keywords: college counseling, emerging adulthood, social media, attachment, social support

In recent years, higher education personnel have noticed declines in college student emotional health and corresponding increases in stress, depression, and anxiety (Watkins et al., 2012). The rates of students exhibiting frequent anxiety and depression symptoms have nearly doubled over a 30-year period and are now two to three times higher than those of the general population (American College Health Association [ACHA], 2015). Administrators have also described corresponding changes in college counseling services, especially regarding the increased need for crisis intervention and triage services (Watkins et al., 2012).

These trends roughly correspond to the millennial generation and Generation Z entering college. The societal forces that characterize these generational cohorts, including the proliferation of social media (Ellison et al., 2007; McCay-Peet & Quan-Haase, 2017) and increases in parental involvement and corresponding decreases in perceptions of college student maturity and autonomy (Watkins et al., 2012), seem to have substantially altered the psychosocial trajectories for today's traditional-aged college populations (Arnett, 2004, 2016). The counseling profession has wrestled with how best to respond to these trends, and in many cases has relied on conceptual frameworks and theories of psychosocial development created long before the emergence of the millennial generation. It seems timely to attempt to develop a framework for mental health and well-being during the college years that incorporates theories specific to present generations of traditional-aged college students with more well-established theories of development. Such is the purpose of the present study, in which the contributions to college student well-being of attachment security (Bowlby, 1969/1997), ego resilience (Block & Block, 1980), and social support are integrated with and compared to the theory of emerging adulthood (Arnett, 2004), a conceptualization of psychosocial development occurring from the late teens through the 20s for contemporary generations.

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Attachment and Ego Resilience

It is generally accepted that the constructs of attachment security and ego resilience play important roles in college student mental health and well-being (e.g., Lane, 2015; Taylor et al., 2014). According to Bowlby (1969/1997), the quality of our earliest interactions with caregivers provides us with relational templates, or types of *attachment*, that influence self-worth and interpersonal functioning throughout the life span. *Ego resilience* is a personality trait reflecting our ability to adapt and thrive amid stress and transition (Block & Block, 1980; Taylor et al., 2014). In the present study, attachment and ego resilience are conceptualized as *internal resources* because they are instilled early in life, relatively stable over time, and influential to mental health during the college years (Lane, 2016; Lane et al., 2017; Taylor et al., 2014).

Attachment and ego resilience also similarly impact functioning in times of challenge. With secure attachment, individuals are more likely to believe themselves capable of handling adversity and that others can be called upon in times of need (Brennan et al., 1998), presumably because of the consistent responsiveness of their caregivers earlier in life. Conversely, insecure attachment can lead individuals to doubt their own capabilities (i.e., attachment anxiety) or the intentions of others to provide them with support (i.e., attachment avoidance) in times of need. These internalized beliefs can lead to problematic outcomes during distressing situations (Wei et al., 2007), including maladaptive interpersonal dependence or isolation and a heightened focus on the distress (Brennan et al., 1998). Similarly, individuals high in ego resilience are generally able to respond to stressful situations with flexibility and an assortment of healthy coping behaviors (Taylor et al., 2014). Conversely, individuals low in ego resilience may lack the diversity of healthy coping strategies necessary to effectively persevere through a range of life challenges, and they may be prone to giving up when frustrated (Block & Block, 1980). Thus, individuals with attachment insecurity and low ego resilience are at an increased risk of accumulating stress during stressful situations rather than persevering through them (Brennan et al., 1998), which is a likely explanation for the associations of each construct with depression and anxiety symptoms (Taylor et al., 2014).

This latter point is especially important in the context of the present study. The college experience contains numerous life and role transitions, including leaving home, establishing independence, reconstructing social support networks, and developing professional goals (Lane, 2015). Each of these transitions pose opportunities for students high in internal resources to thrive and risks for those who are low in internal resources to accumulate stress and negative mental health symptoms (Lane, 2015). Accordingly, internal resources are conceptualized as the first set of constructs in the present model. That is, they seem to provide a foundation for college student mental health and well-being and perhaps do so by contributing to other potentially relevant aspects of well-being, such as identification with emerging adulthood (Schnyders & Lane, 2018) and social support (Galambos et al., 2006).

Emerging Adulthood

Although attachment and ego resilience have long been considered contributors to college student mental health and well-being, many of the aforementioned factors involved in declining mental health trajectories comprise social forces unique to present-day young adults. *Emerging adulthood* (Arnett, 2004) is a theory that describes the effects of such factors on psychosocial functioning between the ages of 18 and 29. Specifically, it suggests that this age range now represents a period of life distinct from both adolescence and adulthood. The theory describes several dimensions that are representative of the present-day emerging adult experience, including a prolonged period of identity exploration (i.e., using the emerging adulthood years to consider and audition preferences regarding career, worldviews, romantic relationships, and interpersonal characteristics), significant demographic and relational instability (e.g., increased likelihood of multiple residence changes with respect to previous generations,

causing disruptions in social groups), subjectively feeling in between adolescence and adulthood, and idealistic thinking about future possibilities (Arnett, 2004). These dimensions suggest that emerging adulthood is a complex phenomenon with significant individual variation: One's degree of identification with each dimension can shape their relative satisfaction with the overall emerging adulthood experience (Baggio et al., 2015). Moreover, some evidence suggests that parental attachment quality predicts one's identification with the various themes of emerging adulthood (Schnyders & Lane, 2018).

Emerging adulthood theory has several implications in the context of college student well-being. First, life transition is a salient theme of emerging adulthood, given that the late teens and 20s are a time of leaving the parental household, creating new attachment and support networks, entering and persisting through college (for many emerging adults), and entering the world of work (Arnett, 2004). These transitions can leave emerging adults vulnerable to distress (Lane et al., 2017) and are central features of the college student experience. Second, emerging adulthood suggests that present traditional-aged college students are at an earlier stage of psychosocial development than prior generations, even though expectations placed on them have remained stable (Arnett, 2004). Thus, emerging adult college students are still expected to navigate the many transitions of the college experience regardless of whether or not they have developed the necessary maturity and life skills. Finally, the emerging adulthood years constitute a high degree of risk-taking behaviors, impulsivity, and psychiatric risk (Arnett, 2004; Baggio et al., 2015). That is, not only is emerging adulthood a time of vulnerability to stress, but also a time of elevated risk for maladaptive stress responses. Thus, in the context of the present study, it is possible that the emerging adult experience uniquely contributes to mental health and well-being with respect to the contribution of internal resources.

Social Resources

Like interpersonal resources and emerging adulthood, social support is a construct with implications for mental health. The degree to which an individual feels supported by their close relationships mitigates distress during stressful situations (Sarason et al., 1991). Individuals who are satisfied with their social support also report less depression, anxiety, and loneliness, and enhanced well-being compared to those low in social support (Galambos et al., 2006).

The aforementioned societal changes impacting emerging adulthood also have implications for college student social support. Today's emerging adult social support networks have grown in complexity as psychosocial developmental trajectories have continued to evolve (Arnett, 2004) and social media has become an increasingly ingrained aspect of everyday life. These changes necessitate reconsideration of the construct of social support in the 21st century. That is, what are the implications for social support when interpersonal contact is increasingly conducted electronically? Is it possible for one to derive the benefits of social support from social media interactions? To address these questions, Manago et al. (2012) asked a sample of college students to respond to various support-related questions while browsing Facebook. Participants were able to use Facebook to meet certain intimacy needs, especially that of emotional disclosure, and the size of one's Facebook friends list was positively associated with perceived social support and life satisfaction. Others have suggested that social media sites provide social capital and facilitate sustained connection with potentially beneficial relationships (Ellison et al., 2007). In light of these ideas, the present study conceptualizes social resources to include both social support and social media usage. Assessing the degree to which each construct impacts college student mental health and well-being is important given the ubiquity of social media on college campuses and the current disagreement among scholars regarding its benefits (Manago et al., 2012) and drawbacks (Twenge, 2013). Given that social support seems to facilitate the contributions of internal resources to mental health (Taylor et al., 2014) and emerging adulthood contributes to

increasingly complex social networks (Arnett, 2004), social resources are conceptualized as a third level of constructs in the present model, after internal resources and emerging adulthood identification.

Present Study

The present study was designed to address several literature gaps concerning college student mental health and well-being. First, it combines several disparate threads of related research by testing a model including internal resources (i.e., attachment security and ego resilience), identification with the dimensions of emerging adulthood, and social resources (i.e., social support and social media usage). Although some research has examined the additive impact of more than one of these sets of constructs together (e.g., attachment and social support), no existing research has examined all three collectively. Second, the present study examined the mental health implications of emerging adulthood and social media usage: two constructs that are the result of 21st century societal forces. A primary hypothesis of the study was that each predictor variable set would explain unique and additive variance for two characteristics of college student mental health (i.e., psychological well-being [PWB] and life satisfaction). A secondary hypothesis was that emerging adulthood identification and social media usage would predict unique variance in each outcome variable even after accounting for the effects of all other predictor variables in the model.

Method

Participants and Procedure

Participants in this IRB-approved study were traditional-aged undergraduate students from a large, public university in a metropolitan area of the Pacific Northwest. Participants were recruited via a recruitment email sent to a random sample of students meeting the inclusion criteria (i.e., 18 to 25 years old and enrolled as a full-time undergraduate student). An a priori power analysis was conducted to determine appropriate sample size (Faul et al., 2007). Given the large number of variables in the model and the fact that Hypothesis 2 was based on semipartial correlations, a small-to-medium effect size was selected ($f^2 = .08$). Results suggested an ideal sample size of approximately 400 participants. Assuming an approximate 10% response rate (Manfreda et al., 2008), recruitment emails were sent to 4,000 undergraduates.

The recruitment email contained a link to an online survey containing all demographic and study variable items. Surveys were received from 616 undergraduates (15.4% response rate). Data were treated according to the recommendations for multivariate analysis by Meyers et al. (2013). That is, 56 cases (9.1%) were removed because they contained missing data on at least 50% of the items. An additional 17 cases (2.8%) were removed for indicating that they were no longer paying attention at the midpoint of the survey. The remaining missing values were replaced with their respective item mean because no item was missing more than seven cases (1.3%) and no variable contained more than two missing items for any remaining participant. Data were screened for multivariate outliers using Mahalanobis distance, resulting in the removal of five (0.9%) participants. Thus, the study sample consisted of 538 participants.

The study sample had a mean age of 21.72 years ($SD = 2.05$) and was predominantly female ($n = 378$, 70.3%), while other participants identified as male ($n = 142$, 26.4%) or other ($n = 16$, 3.0%), and two participants declined to answer. The sample was racially diverse, as 341 (63.4%) participants identified as White, 64 (11.9%) as Latinx, 63 (11.7%) as Asian or Pacific Islander, 14 (2.6%) as Black or African American, 11 (2.0%) as Arab American or Middle Eastern, eight (1.5%) as Native American, 27 (5.0%) as multiracial, and seven (1.3%) as other, while three participants declined to answer.

Instruments

Attachment security. As the first internal resources variable, attachment security was measured using the 12-item Experiences in Close Relationship Scale-Short Form (ECR-S; Wei et al., 2007). The items are evenly divided into two subscales: Attachment Anxiety (e.g., "I need a lot of reassurance that I am loved by my partner") and Attachment Avoidance (e.g., "I am nervous when partners get too close to me"). Items are rated on a 7-point Likert scale. Scores were summed, with higher scores indicating higher attachment insecurity for each dimension. Internal consistencies in the present sample (α = .78 for attachment anxiety, α = .80 for attachment avoidance) mirrored those reported by the ECR-S authors (α = .77 and α = .78, respectively).

Ego resilience. Ego resilience served as the other internal resources variable. It was measured using an 11-item version of Block and Block's (1980) Ego-Resiliency Scale (Taylor et al., 2014). Items (e.g., "I can bounce back and recover after a stressful or bad experience") are rated on a Likert scale ranging from one (*most undescriptive of me*) to nine (*most descriptive of me*). Higher total scores indicate higher ego resilience. The 11-item version has demonstrated internal consistencies ranging from .63 to .81 across multiple time points with a sample of emerging adults (Taylor et al., 2014). Internal consistency in the present sample was .73.

Emerging adulthood. The second level of predictor variables comprised dimensions of emerging adulthood. Identification with emerging adulthood dimensions was assessed using the 8-item Inventory of Dimensions of Emerging Adulthood (IDEA-8; Baggio et al., 2015). The items are evenly divided into four subscales (i.e., Experimentation/Possibilities, Negativity/Instability, Identity Exploration, and Feeling In Between [adolescence and adulthood]) that each represent dimensions of emerging adult theory (Arnett, 2004). Participants rate the degree to which various statements represent the present time in their lives (e.g., "this is a time of deciding on your own beliefs and values") on a 4-point scale (1 = *strongly disagree*, 4 = *strongly agree*). Scores for each subscale are summed to indicate how participants feel each dimension characterizes their emerging adulthood experience. The IDEA-8 subscales demonstrate internal consistencies ranging from .66 to .76 (Baggio et al., 2015), mirroring the range found in the present sample (α = .69 to α = .77).

Social support. Social support served as the first social resources variable. It was measured using the 6-item Subjective Social Support subscale of the Duke Social Support Index (Blazer et al., 1990). Items (e.g., "Can you talk about your deepest problems with at least some of your family and friends?") are rated on a 5-point scale (1 = *none of the time*, 5 = *all of the time*), with higher scores indicating higher perceived social support. Internal consistency in the present sample was .85, mirroring estimates found in prior studies (α = .82; Hawley et al., 2014).

Facebook usage. The other social resources variable was social media usage, measured using the 8-item Facebook Intensity Scale (FIS; Ellison et al., 2007). Although numerous social media platforms are popular among college students, developers of social media usage instruments have focused on Facebook. Given its recognizability and ubiquity, it remains the best proxy for assessing overall social media usage (Ortiz-Ospina, 2019). The first FIS item asks participants to approximate their number of Facebook "friends," while the second item asks them to approximate time spent on Facebook each day. The remaining items ask participants to rate their agreement with various items assessing the importance of Facebook in their lives (e.g., "Facebook has become a part of my daily routine"). Items are first standardized and then summed to create an index of Facebook usage. The FIS authors reported strong convergent validity and internal consistency (α = .83), mirroring that found in the present sample (α = .87).

College student mental health. Operationalizing mental health is challenging given its many existing conceptualizations. Some authors have argued that mental health and mental illness are separate constructs entirely (e.g., Lent, 2004). Lent (2004) suggested that a complete understanding of mental health incorporates both PWB and subjective well-being (i.e., happiness) and added that subjective well-being is best conceptualized as a higher-order outcome of PWB. Others have argued that PWB and depression are opposite ends of the same construct (Bech et al., 2003), suggesting that PWB instruments also measure depressive affect and vice versa. Collectively, and in conjunction with the focus on depressive symptoms in the aforementioned college student mental health research, it seems useful to conceptualize mental health using indices of PWB and life satisfaction (Lent, 2004).

Psychological well-being. PWB was measured using the 5-item World Health Organization-Five Well-Being Index (WHO-5; Bech et al., 2003). Each item is a positively worded self-statement measuring the absence of various symptoms of depression (e.g., "I have felt calm and relaxed"). Because of its ability to measure both well-being and depression, it was selected as an ideal candidate for the present study. The presence of each statement over a 2-week period is rated on a 6-point scale (0 = *not present*, 5 = *constantly present*). Scores are multiplied by four to create a 0–100 scale, with higher scores indicating higher PWB, and scores below 28 indicating clinical depression (Bech et al., 2003). The authors reported strong evidence for reliability (α = .82) and validity. In the present sample, internal consistency was .81.

Life satisfaction. Life satisfaction was measured using the Satisfaction with Life Scale (SWLS; Diener et al., 1985). Participants rate agreement with five items (e.g., "In most ways my life is close to my ideal") on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Internal consistency in both the validation study and present sample was .87.

Results

Table 1 presents the descriptive statistics and intercorrelations for all study variables. With the exception of the emerging adult feeling in between variable, all variables were significantly correlated with each of the outcome variables. Significant correlations ranged from small to large for both PWB (r = .12, $p < .05$ for Facebook usage and r = .44, $p < .001$ for ego resilience) and life satisfaction (r = .12, $p < .01$ for identity exploration and r = .50, $p < .001$ for social support). Also, the outcome variables were significantly associated with three emerging adulthood variables in different directions. That is, they were positively correlated with experimentation/possibilities and identity exploration, and they were negatively and moderately correlated with negativity/instability; however, neither outcome variable was significantly associated with the feeling in between variable.

To reduce the possibility of confounds in the regression results, several potential covariates were tested for their relatedness to the outcome variables. Based on prior research, age, gender, and race were tested (Galambos et al., 2006; Schnyders & Lane, 2018). Gender and race were dummy coded so that a) 0 = *non-woman* (i.e., man or other) and 1 = *woman*, and b) 0 = *non-White* and 1 = *White*. Significant differences were present in the Satisfaction with Life Scale scores on the basis of gender: $t(537)$ = -2.841, $p < .01$. The mean life satisfaction score for women in the sample was 1.91 points higher than for non-women. Thus, all subsequent analyses controlled for the effects of gender. No other significant associations involving the potential covariates were present.

Table 1

Pearson Intercorrelations Among Study Variables

Variables			Intercorrelations									
	M	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1. AAn.	23.42	7.28	–									
2. AAv.	17.03	6.76	.07	–								
3. ER	69.10	11.94	-.33**	-.08	–							
4. EP	7.08	1.16	-.17**	-.04	.24**	–						
5. NI	6.90	1.24	.20**	.06	-.25**	-.06	–					
6. IE	6.80	1.34	-.05	.04	.12*	.38**	.07	–				
7. IB	6.83	1.38	.06	.06	-.01	.22**	.12*	.41*	–			
8. SS	21.98	4.27	-.25**	-.27**	.32**	.21**	-.19**	.07	.05	–		
9. FB	21.75	8.72	.13*	-.11*	-.05	.08	-.02	.08	.16**	.14*	–	
10. PWB	55.35	18.72	-.27**	-.14*	.44**	.32**	-.34**	.16**	.03	.40**	.12*	–
11. LS	21.72	7.21	-.25**	-.25**	.39**	.36**	-.30**	.12*	-.02	.50**	.14*	.61**

Note. N = 538. AAn. = attachment anxiety; AAv. = attachment avoidance; ER = ego resilience; EP = experimentation/possibilities; NI = negativity/instability; IE = identity exploration; IB = feeling in between; SS = social support; FB = Facebook usage; PWB = psychological well-being; LS = life satisfaction.
*p < .05. **p < .001

Hypothesis 1 predicted that internal resources, emerging adulthood identification, and social resources would each predict unique and additive variance in each outcome variable. Thus, two hierarchical regression analyses were conducted (one with PWB as the outcome variable and one with life satisfaction as the outcome). Each set of predictors was entered as an individual level in the hierarchical regression. Table 2 presents the results of these analyses. As can be seen in Table 2, Hypothesis 1 was fully supported. Each predictor variable set predicted significant additive variance in each outcome variable after accounting for the preceding predictor variable sets in the model. It is also useful to note that the social resources variables predicted over twice as much additive variance in life satisfaction (ΔR^2 = .08, $p < .001$) compared to that of PWB (ΔR^2 = .03, $p < .001$). The model accounted for 36% of the variance in PWB and 41% of the variance in life satisfaction.

Table 2

Summary of Hierarchical Regression Analyses Predicting PWB and Life Satisfaction

Step and Variable	ΔR^2	ΔF	β	t	r_{sp}
Outcome variable: PWB					
Step 1 – Internal resources	.22	38.619***			
Attachment anxiety			-.14	-3.438**	-.07*
Attachment avoidance			-.09	-2.308*	-.03
Ego resilience			.40	9.685***	.23***
Step 2 – Emerging adulthood	.09	8.259***			
Experimentation/possibilities			.19	4.677***	.14***
Negativity/instability			-.23	-6.177***	-.20***
Identity exploration			.06	1.403	.05
Feeling in between			.00	0.03	-.02
Step 3 – Social resources	.03	1.681***			
Social support			.19	4.679***	.16***
Facebook usage			.09	2.361*	.08*
Outcome variable: Life satisfaction					
Step 1 – Internal resources	.22	32.966***			
Attachment anxiety			-.12	-2.960**	-.03
Attachment avoidance			-.20	-5.185***	-.11**
Ego resilience			.36	8.711***	.17***
Step 2 – Emerging adulthood	.09	8.131***			
Experimentation/possibilities			.26	6.571***	.20***
Negativity/instability			-.19	-5.139***	-.15***
Identity exploration			.01	0.304	.02
Feeling in between			-.05	-1.273	-.07*
Step 3 – Social resources	.08	4.872***			
Social support			.31	8.138***	.27***
Facebook usage			.08	2.176*	.07*

Note. N = 538. Results control for the effects of gender. r_{sp} = semipartial correlation. r_{sp} is reported for the last step in each model.
* *p* < .05, ** *p* < .01, *** *p* < .001.

Hypothesis 2 predicted that the emerging adulthood variables and Facebook usage would each predict significant individual variance in each outcome variable after accounting for the effects of all other predictor variables. To test this hypothesis, semipartial correlations (r_{sp}) were examined for all variables at the last step of the hierarchical regression (i.e., the step in which all variables are entered into the model). Semipartial correlations examine the unique variance explained by a single predictor after accounting for the collective variance explained by all other predictors (Meyers et al., 2013). As

can be seen in Table 2, significant semipartial correlations predicting PWB included the negativity/instability (r_{sp} = -.20, p < .001), experimentation/possibilities (r_{sp} = .14, p < .001), and Facebook usage (r_{sp} = .08, p < .05) variables. Of all the predictors of PWB in the model, negativity/instability made the second largest individual contribution. Of the predictors of life satisfaction, significant semipartial correlations included experimentation/possibilities (r_{sp} = .20, p < .001), negativity/instability (r_{sp} = -.15, p < .001), feeling in between (r_{sp} = -.07, p < .05), and Facebook usage (r_{sp} = .07, p < .05). The experimentation/possibilities variable made the second largest individual contribution to life satisfaction. However, because identity exploration was not significant for either outcome variable, and feeling in between was not significant for life satisfaction, Hypothesis 2 was only partially supported. Collectively, the emerging adulthood and Facebook variables accounted for 7.4% of unique variance in PWB and 7.1% of unique variance in life satisfaction.

Discussion

The present findings yield several useful contributions. First, they bridge disparate threads of research by comparing the contributions of well-established mental health predictors with those of constructs unique to present-day college students, each of which contributed uniquely to college student mental health. Although many of the effects of the individual variables were small, the emerging adulthood and Facebook variables collectively explained roughly 7% of unique variance in the mental health variables over and above that explained by the more well-established constructs. As such, the findings are consistent with the assertion that constructs like attachment, ego resilience, and social support, while useful to conceptualizing college student mental health, may nevertheless be aided by also considering factors unique to 21st-century students.

The positive associations between Facebook usage and college student mental health are noteworthy, given the current disagreement regarding the impact of social media use. Contrary to concerns regarding social media overuse (e.g., Twenge, 2013), the present study found that Facebook usage positively predicted PWB and life satisfaction, albeit with a small effect. This was true even after controlling for other predictor variables, suggesting that Facebook provided a small but unique contribution to college student mental health. This finding supports the conclusions of Manago et al. (2012) that Facebook can fulfill certain social support needs for students. There may also be negative implications for societal reliance on social media use (e.g., Twenge, 2013), including its promotion of unhealthy comparison behaviors and cyberbullying. Nevertheless, the present findings and those of Manago et al. demonstrate the positive contributions of social media to college student mental health.

The significance of some of the emerging adulthood variables also warrants discussion. The degree to which participants identified with emerging adulthood being a period of experimentation and possibilities was positively associated with PWB and life satisfaction, while the degree to which they identified with emerging adulthood being a period of negativity and instability was negatively associated with PWB and life satisfaction. Moreover, identifying emerging adulthood as a time of feeling in between adolescence and adulthood was negatively associated with life satisfaction. Even after accounting for all other control and predictor variables, emerging adult instability was the second strongest predictor of PWB (after ego resilience), while emerging adult experimentation/possibilities was the second strongest predictor of life satisfaction (after social support). These findings add important context to prior empirical conclusions that emerging adulthood is associated with negative mental health (Baggio et al., 2015). That is, while each of the dimensions of emerging adulthood represents important developmental processes toward reaching adulthood (Arnett, 2004), only some of these dimensions (especially viewing emerging adulthood as a period of experimentation or instability) seem relevant

to college student mental health. Additionally, feeling in between adolescence and adulthood was negatively associated with life satisfaction but unassociated with PWB. This finding underscores the complex contributions of emerging adulthood to college student mental health. Previous research has indicated that life satisfaction decreases during adolescence (Goldbeck et al., 2007). Accordingly, it is plausible that subjectively identifying the emerging adult years as feeling in between adolescence and adulthood results in life satisfaction trajectories that more closely mirror those of adolescence compared to emerging adults who feel less in between adolescence and adulthood. Although such conclusions require further validation, it nevertheless can help college counselors understand which factors of the emerging adult experience are relevant foci of clinical attention.

Implications for Counselors

The present results yield several useful insights that can aid mental health counselors who work with college-aged populations. Most prominently, counselors are encouraged to conceptualize their clients using a blend of foundational and contemporary models. Life for 21st-century college-aged individuals is unprecedentedly complex (Arnett, 2004; Kruisselbrink Flatt, 2013). It is important for college counselors to acknowledge this complexity, as doing so may represent an important form of cultural competence working with millennial generation and Generation Z individuals (Lane, 2015). Counselors are encouraged to utilize emerging adulthood theory when conceptualizing their clients, as this framework contains important departures from other identity development models. For example, counselors are likely to be more familiar with Erikson's (1959/1994) framework than emerging adulthood theory. The former model suggests that identity development occurs during the teenage years, while the latter model asserts that identity development is a process that now extends well into the 20s (Arnett, 2004). Emerging adulthood theory also suggests that, as a result of this prolonged identity development process, traditional-aged college students are likely to temporarily exhibit heightened self-focus and idealistic thinking. Acknowledging these factors could facilitate a more empathic understanding of the behaviors that contribute to some counselors and scholars endorsing negative stereotypes against millennials and Generation Z individuals (Lane, 2015). Incorporating emerging adulthood theory could help college counselors be more mindful of the evolving nature of the transition to adulthood and its contributions to mental health.

The findings involving the social resources variables also have novel implications for counseling college students. Although social support has long been established as an important target for improving mental health, counselors are encouraged to acknowledge both the unprecedented complexity of emerging adult social support networks (Arnett, 2004) and also the ability of emerging adults to receive social support from face-to-face and electronic interactions (Manago et al., 2012). Accordingly, it is important to continue exploring the potential therapeutic applications of social media and other forms of technology. For example, an exciting direction in this regard is the growing use of informal support groups via social media (Manago et al., 2012), which exist for many counseling-relevant issues. Such groups provide a sense of community and help members remember that they are not alone in their struggles. Moreover, present mental health trajectories among college students have necessitated a shift in focus for many college counseling centers toward crisis intervention and outreach (Watkins et al., 2012). For many college counseling centers, social media remains an underutilized tool, despite the recent development of social media and text-based initiatives for each of these objectives (Evans et al., 2013). Such programs might be especially useful in today's higher education climate in which symptom severity seems to be increasing while budgetary resources for college counseling centers are often stagnant or decreasing (American College Health Association, 2015; Watkins et al., 2012).

Limitations

Several limitations in the present study warrant consideration. First, the results relied on a convenience sample, and it is impossible to know whether there are group differences between the 15.4% of invited college students who participated compared to those who did not. Second, the findings are correlational in nature, and the directionality of the relationships cannot be assured. Third, although the sample was racially diverse, it was predominantly female. Fourth, it should be noted that the social media variable in this study consisted solely of Facebook usage; the findings may have been different had other prominent social media platforms been represented.

Implications for Future Research

Future research efforts should continue to explore the mental health implications of the study's variables. First, it would be useful to confirm the findings with a more gender-representative sample. The model should also be explored with a longitudinal sample to determine mental health trajectories through various transitions common during the college experience. It would also be useful to explore potential mediating effects among the variables in the model, which could provide further empirical support for the theoretical sequencing of the variable sets. Other research efforts could further explore the therapeutic applications of social media. Such efforts could aid understanding of the evolving needs of college-aged populations.

Conclusion

The college years constitute considerable mental health risks that seem particularly pronounced for current generations of traditional-aged college students. The present findings suggest that traditional models of college student mental health can be aided by also incorporating generation-specific factors, including emerging adulthood identification and social media usage. Such generation-specific factors seem to predict unique variance in college student mental health characteristics, namely PWB and life satisfaction. The findings underscore the importance that counselors consider contemporary models, including emerging adulthood theory, when conceptualizing and treating traditional-aged college student clients.

References

American College Health Association. (2015). *Spring 2015 reference group executive summary*. https://www.achaorg/documents/ncha/NCHA-II_WEB_SPRING_2015_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf

Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties.* Oxford University Press.

Arnett, J. J. (2016). College students as emerging adults: The developmental implications of the college context. *Emerging Adulthood*, 4(3), 219–222. https://doi.org/10.1177/2167696815587422

Baggio, S., Iglesias, K., Studer, J., & Gmel, G. (2015). An 8-item short form of the Inventory of Dimensions of Emerging Adulthood (IDEA) among young Swiss men. *Evaluation & the Health Professions*, 38(2), 246–254. https://doi.org/10.1177/0163278714540681

Bech, P., Olsen, L. R., Kjoller, M., & Rasmussen, N. K. (2003). Measuring well-being rather than the absence of distress symptoms: A comparison of the SF-36 Mental Health subscale and the WHO-Five Well-Being Scale. *International Journal of Methods in Psychiatric Research*, *12*(2), 85–91. https://doi.org/10.1002/mpr.145

Blazer, D., Hybels, C., & Hughes, D. C. (1990). *Duke Social Support Index.* Educational Testing Service.

Block, J. H., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of behavior. In W. A. Collins (Ed.), *Minnesota symposia on child psychology* (Vol. 13, pp. 39–101). Erlbaum.

Bowlby, J. (1997). *Attachment and loss: Vol. 1. Attachment* (Original work published 1969). Basic Books.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). Guilford Press.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, *49*(1), 71–75.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, *12*(4), 1143–1168. https://doi.org/10.1111/j.1083-6101.2007.00367.x

Erikson, E. H. (1994). *Identity and the life cycle* (Original work published 1959). W. W. Norton.

Evans, W. P., Davidson, L., & Sicafuse, L. (2013). Someone to listen: Increasing youth help-seeking behavior through a text-based crisis line for youth. *Journal of Community Psychology*, *41*(4), 471–487. https://doi.org/10.1002/jcop.21551

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. https://doi.org/10.3758/BF03193146

Galambos, N. L., Barker, E. T., & Krahn, H. J. (2006). Depression, self-esteem, and anger in emerging adulthood: Seven-year trajectories. *Developmental Psychology*, *42*(2), 350–365. https://doi.org/10.1037/0012-1649.42.2.350

Goldbeck, L., Schmitz, T. G., Besier, T., Herschbach, P., & Henrich, G. (2007). Life satisfaction decreases during adolescence. *Quality of Life Research*, *16*(6), 969–979. https://doi.org/10.1007/s11136-007-9205-5

Hawley, L. D., Leibert, T. W., & Lane, J. A. (2014). The relationship between socioeconomic status and counseling outcomes. *The Professional Counselor*, *4*(4), 390–403. https://doi.org/10.15241/ldh.4.4.390

Kruisselbrink Flatt, A. (2013). A suffering generation: Six factors contributing to the mental health crisis in North American higher education. *College Quarterly*, *16*(1).

Lane, J. A. (2015). Counseling emerging adults in transition: Practical applications of attachment and social support research. *The Professional Counselor*, *5*(1), 15–27. https://doi.org/10.15241/jal.5.1.15

Lane, J. A. (2016). Attachment, well-being, and college senior concerns about the transition out of college. *Journal of College Counseling*, *19*(3), 231–245. https://doi.org/10.1002/jocc.12046

Lane, J. A., Leibert, T. W., & Goka-Dubose, E. (2017). The impact of life transition on emerging adult attachment, social support, and well-being: A multiple-group comparison. *Journal of Counseling & Development*, *95*(4), 378–388. https://doi.org/10.1002/jcad.12153

Lent, R. W. (2004). Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment. *Journal of Counseling Psychology*, *51*(4), 482–509. https://doi.org/10.1037/0022-0167.51.4.482

Manago, A. M., Taylor, T., & Greenfield, P. M. (2012). Me and my 400 friends: The anatomy of college students' Facebook networks, their communication patterns, and well-being. *Developmental Psychology*, *48*(2), 369–380. https://doi.org/10.1037/a0026338

Manfreda, K. L., Bosnjak, M., Berzelak, J., Haas, I., & Vehovar, V. (2008). Web surveys versus other survey modes: A meta-analysis comparing response rates. *International Journal of Market Research*, *50*(1), 79–104. https://doi.org/10.1177/147078530805000107

McCay-Peet, L., & Quan-Haase, A. (2017). What is social media and what can social media research help us answer? In L. Sloan & A. Quan-Haase (Eds.), *The SAGE handbook of social media research methods* (pp. 13–26). SAGE.

Meyers, L. S., Gamst, G., & Guarino, A. J. (2013). *Applied multivariate research: Design and interpretation* (2nd ed.). SAGE.

Ortiz-Ospina, E. (2019). *The rise of social media*. Oxford University. https://ourworldindata.org/rise-of-social-media

Sarason, B. R., Pierce, G. R., Shearin, E. N., Sarason, I. G., Waltz, J. A., & Poppe, L. (1991). Perceived social support and working models of self and actual others. *Journal of Personality and Social Psychology*, *60*(2), 273–287. https://doi.org/10.1037/0022-3514.60.2.273

Schnyders, C. M., & Lane, J. A. (2018). Gender, parent and peer relationships, and identification with emerging adulthood among college students. *Journal of College Counseling*, *21*(3), 239–251. https://doi.org/10.1002/jocc.12106

Taylor, Z. E., Doane, L. D., & Eisenberg, N. (2014). Transitioning from high school to college: Relations of social support, ego-resiliency, and maladjustment during emerging adulthood. *Emerging Adulthood*, *2*(2), 105–115. https://doi.org/10.1177/2167696813506885

Twenge, J. M. (2013). Does online social media lead to social connection or social disconnection? *Journal of College and Character*, *14*(1), 11–20. https://doi.org/10.1515/jcc-2013-0003

Watkins, D. C., Hunt, J. B., & Eisenberg, D. (2012). Increased demand for mental health services on college campuses: Perspectives from administrators. *Qualitative Social Work*, *11*(3), 319–337. https://doi.org/10.1177/1473325011401468

Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The Experiences in Close Relationship Scale (ECR)-Short Form: Reliability, validity, and factor structure. *Journal of Personality Assessment*, *88*(2), 187–204. https://doi.org/10.1080/00223890701268041

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