

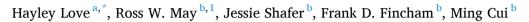
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Overparenting, emotion dysregulation, and problematic internet use among female emerging adults



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ABSTRACT

Although associated with adverse mental health and occupational outcomes, the etiology of internet addiction and displays of risqué social media content are two understudied issues. Research has suggested that overparenting could be associated with these internet-related behavioral issues either directly or indirectly through the development of emotion dysregulation. The association between overparenting and problematic internet use was examined among a sample of female emerging adults. Emotion dysregulation was also investigated as a potential mediator for this association. Female college students (N=257) completed surveys at three time points over the course of one semester. Structural equation modeling suggested differential associations based on specific domains in which overparenting occurred. Emotion dysregulation fully mediated the association between overparenting in the personal/social domain and both internet addiction and risqué social media content. Academic/career-related overparenting was directly associated with internet addiction. Future directions for research and implications of the current study were provided.

Research assessing the prevalence of social media use and professionalism among emerging adults suggests that a large majority engage in social media activities (e.g., Facebook, Osman, Wardle, & Caesar, 2012; Pempek, Yermolayeva, & Calvert, 2009). According to recent data collected by the Pew Research Center (2019), the most popular social networking sites (SNS) used by emerging adults include YouTube, Facebook, Instagram, Snapchat, and Twitter. Further, individuals falling within the emerging adult age-range (18–29) are especially likely to engage in social media activity compared to their older cohorts (Pew Research Center, 2019). The continued prevalence of SNS consumption warrants further investigation into the likelihood for this mode of media use to become problematic in terms of frequency (addiction) and content (inappropriate/risqué).

The salience of the parent-child relationship suggests that parenting behavior plays an important role in the development of problematic internet use (Elder & Giele, 2009). Indeed, parents still play an influential role in their emerging adult child's life despite the increased need for autonomy and independence during this period of development (Arnett, 2015). Overparenting, also referred to as helicopter parenting, has become an increasingly prevalent concern in parent-child research due to the negative implications this parenting style has on emerging

adult development (Kelly, Duran, & Miller-Ott, 2017; Love, May, Cui, & Fincham, 2020; Segrin & Flora, 2019). Notable by its absence in the current digital era, is research on whether overparenting has an impact on emerging adults' internet use and risqué social media behaviors. As such, more research is needed to fully understand the relation between overparenting more specifically, and problematic internet use. Thus, the goal of the current study is to investigate the association between overparenting and both problematic internet use and risqué social media content, with consideration of emotion dysregulation as a potential mediating mechanism. Female emerging adults are especially of interest in the current study as they may be more susceptible to the negative implications of overparenting (Kouros, Pruitt, Ekas, Kiriaki, & Sunderland, 2017) and may be at greater risk of developing problematic internet use (Ha & Hwang, 2014).

Problematic internet use among emerging adults

According to Young (1998, 2004), internet addiction is an "impulse-control disorder" of internet use that is not pertinent to work or academic demands. Research has documented that 8% of U.S. college students experience internet addiction (Tang et al., 2018), with even

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greater percentages reported for specific internet-related addictions such as online gaming (24.8%) and online social networking (25.4%). Further, internet addiction is associated with numerous adverse outcomes such as poorer mental health and college student adjustment (Baturay & Toker, 2019). Another issue related to internet addiction is inappropriate SNS content. Inappropriate or risqué content shared or posted on the internet is characterized by the use of profane or discriminatory language, use of drugs or depictions of being under the influence, and content that is sexually suggestive (Chretien, Greysen, Chretien, & Kind, 2009). Additionally, Chretien et al. (2009) interviewed a national sample of medical school deans of student affairs to investigate SNS professionalism among their students. Over half of the medical school deans (60%) reported seeing unprofessional content posted by students on social media accounts (Chretien et al., 2009). Consequences of such lack of professionalism on SNS has been found to include formal disciplinary action and in some cases termination (Langenfeld & Batra, 2017). As such, it is crucial that scholars investigate factors that influence problematic internet use among emerging adults, such as addiction or risqué content.

Overparenting of emerging adults

Research suggests that parenting style influences the development of problematic internet use (Dogan, Bozgevikli, & Bozdas, 2015); however, the association with overparenting has yet to be investigated and likely has negative implications for emerging adults' internet use. Over the past two decades, the conceptualization and operationalization of overparenting has been empirically refined (Padilla-Walker & Nelson, 2012; Schiffrin et al., 2014). Overall, overparenting is considered a parenting style that reflects high responsiveness, yet conditional demandingness, that sets this parenting style apart from the traditional parenting styles presented by Baumrind (1967) and Maccoby and Martin (1983). Parents who display overparenting behaviors are highly controlling, protective, and involved in their child's life. Most recently, overparenting has also been examined in various domains of emerging adult life (i.e., academic/career, health, financial, personal/social; Love, Cui, May, & Fincham, 2019). Addressing overparenting in this manner can provide more concrete information regarding the specific domains in which overparenting may have negative implications for emerging adult outcomes. For example, overparenting in the financial domain may possibly be viewed as more normative (Lowe, Dotterer, & Francisco, 2015) and thus, may not have a negative impact on emerging adult outcomes. Further, there have been mixed results when examining associations between overparenting and certain emerging adult outcomes (e.g., alcohol use; Cui, Allen, Fincham, May, & Love, 2019; Earle & LaBrie, 2016). By addressing specific domains in which overparenting behaviors occur, we can develop a more accurate understanding of the impact of distinct overparenting behaviors and the contexts in which they occur. In doing so, we may better assist practitioners and institutions in their efforts to more efficiently address parenting behaviors that have the potential for negative outcomes.

Arnett's (2000, 2016) theory of emerging adulthood presents key developmental features that illustrate why overparenting undermines healthy development during this stage. The key features of emerging adulthood highlight it as a time for identity exploration, self-focus, feelings of in-between, optimism, and uncertainty (Arnett, 2000, 2015). Emerging adults require autonomy and independence to pursue their identities, focus on their personal growth, reduce their feelings of being "in-between," facilitate an optimistic outlook on life, and reduce feelings of uncertainty as they learn they can overcome life's many obstacles. Overparenting behaviors such as exerting excessive control, monitoring, and making decisions on the behalf of offspring do not facilitate the autonomy and independence necessary for emerging adults to make a healthy transition into adulthood (Arnett, 2015). Indeed, research documents a negative association between overparenting and autonomy support (Schiffrin et al., 2014). Several studies further

support the notion that overparenting undermines healthy development as such parenting is negatively associated with achieving important developmental milestones such as emotional self-regulation (see Segrin & Flora, 2019 for a review). Furthermore, research has also suggested that overparenting may have a more serious impact on the well-being of female college students (Kouros et al., 2017).

Overparenting and emerging adults' self-regulatory processes

The development of emotion regulation skills is vital when pursuing a more independent lifestyle and transitioning into adulthood. Emotion regulation refers to the ability to control one's emotional state and effectively respond to an emotional experience (Gross, 1998). Emerging adults who are accustomed to a lifestyle where their parents take care of their every need, responsibility, or problem, may not be able to develop healthy emotional self-regulation skills and fail to regulate their emotions without parental assistance. Indeed, research has revealed a positive association between overparenting and emotional dysregulation in emerging adults (Cui, Darling, Coccia, Fincham, & May, 2019; Cui, Janhonen-Abruquah, Darling, Carlos Chavez, & Palojoki, 2019; see Segrin & Flora, 2019 for a review). Given that overparenting undermines important self-regulatory processes such as emotion regulation, overparenting could have an impact on other outcomes that require appropriately developed self-regulatory skill, such as addictive or inappropriate internet and SNS use.

Overparenting and problematic internet use

Currently, no study has directly investigated whether overparenting is associated with internet addiction and risqué social media use among emerging adults. However, research separately addressing both problematic internet behaviors and overparenting suggests why there is a likely association. Regarding internet addiction, increased internet use may be the result of trying to get away from family conflict (Beard, 2005). The underlying motivation of addictive behaviors more generally is to reduce negative emotions by escaping reality (Peele, 1985); and it is well documented that overparenting behaviors are often linked to offspring negative emotions (e.g., Love, Cui, Allen, Fincham, & May, 2020; Perez, Nicholson, Dahlen, & Leuty, 2020). Specific to problematic internet use, one study found that negative parenting behavior (hostility) contributes to negative emotion and escape which leads to internet gaming addiction (Kwon et al., 2011). Thus, it is possible that offspring may also use the internet as an escape from their parents' overbearing, overparenting behaviors. Additional research has suggested that parenting extremes such as overcontrol, or lack thereof (e.g., authoritarian, permissive, protective-demanding) are associated with greater internet addiction (Agbaria & Bdier, 2021; Dogan et al., 2015). It has also been suggested that overparenting may have a stronger negative impact on internet addiction compared to other less optimal parenting styles (Dogan et al., 2015). For example, when addressing the impact of various parenting styles on internet addiction, Dogan et al. (2015) found the strongest association between adolescents' internet addiction and protective-demanding parenting, a parenting style that shows overlapping characteristics with overparenting (see Deniz et al., 2013 for description).

Further research has attempted to address associations between related parenting behaviors and internet addiction. Specifically, research on Chinese adolescents with internet addiction disorder found a positive association with over-involved parenting (Huang et al., 2010). Additionally, a positive association between parental overprotection and internet addiction was identified among a sample of college students from India (Shivam, Chaudhari, Chaudhury, & Saldanha, 2021) and Turkey (Kumcağız, 2019). While there is a lack of research investigating the association between parenting behavior and emerging adults' inappropriate consumption of SNS, there is evidence that supports a positive association between internet addiction and inappropriate content (Karl,

Peluchette, & Schlaegel, 2010). Thus, parents who show inappropriately high levels of control, involvement, and protection towards their emerging adult children, may inadvertently hinder the development of regulatory skills necessary to avoid addictions and impulsive actions such as internet addiction and inappropriate posting of risqué social media content.

Emotion dysregulation and problematic internet use

Although the connection between overparenting and internet addiction and risqué social media use remains largely unexplored among emerging adults, there is some evidence to suggest that emotional regulation (or dysregulation) may serve as an explanatory mechanism when testing this association. In one study of Italian adolescents, emotion dysregulation was directly associated with a higher risk of internet addiction (Spada & Marino, 2017). Research among U.S. undergraduates has also suggested similar associations, with addiction specifically to SNS being significantly associated with emotion dysregulation (Hormes, Kearns, & Timko, 2014). Additionally, studies have found a negative association between posting inappropriate content on Facebook and college students' emotional stability, a construct inversely related to emotion dysregulation (Horwood and Anglim, 2021; Karl et al., 2010; Newness, Steinert, & Viswesvaran, 2012).

Finally, although limited, there is research to suggest that people may turn to the internet to escape negative emotions. Two studies have found that dysfunctional emotion regulation strategies predicted higher levels of internet addiction (Pettorruso et al., 2020; Yildiz, 2017). The authors of both studies speculate that internet use may be a technique employed by individuals to cope with and escape negative emotions. This research is supported by the tenets of Baumeister's (1990) escape theory. Specifically, Baumeister (1990) suggests that individuals escape from their stressful realities and avoid negative emotions through cognitive deconstruction, focusing only on current actions and sensations and attaining immediate goals. As stated previously, it is argued that the underlying motivation of addictive behaviors, more generally, is escaping reality so as to reduce negative emotions (Peele, 1985). Escaping from (or avoidance of) negative emotions can be considered in the context of maladaptive emotion regulation strategies and coping skills (e.g., Aldao, Jazaieri, Goldin, & Gross, 2014; Aldao, Nolen-Hoeksema, & Schweizer, 2010). In regard to internet addiction, emerging adults' who lack the ability to adaptively cope with and regulate their negative emotions may turn to the internet as a way to escape (or avoid) any negative emotions they experience. Indeed, escape motivation has been identified as a strong predictor for a wide range of problematic internet behaviors (see Fu et al., 2020). This internet use could become excessive over time as these emerging adults continue to use the internet as a means of escape. Further, the inability to adaptively cope with their negative emotions could also translate to a lack of regulation regarding social media content in the form of risqué and inappropriate social media postings.

Emotion dysregulation as a mediator between overparenting and problematic internet use

Although emotion dysregulation has not been explicitly tested as a mediator of the link between overparenting and problematic internet use, there is evidence to suggest that related concepts, such as self-control (a construct that includes ability to regulate emotions), mediates this link. Specifically, research has found an indirect effect of related overparenting behavior (psychological control) on child behavior through child self-control (Finkenauer, Engels, & Baumeister, 2005; Li, Li, & Newman, 2013). Research by Li et al. (2013) suggested that parental psychological control was associated with weaker child self-control, which in turn was associated with greater levels of problematic internet use. More recent research has also addressed emotion dysregulation as a potential mediating mechanism in addressing

overparenting and emerging adult outcomes. Specifically, Perez et al. (2020) found that emotional distress tolerance, a construct closely related to emotion dysregulation, partially mediated the association between overparenting and mental health symptoms.

Internet use and gender

Finally, when investigating internet addiction and risqué social media content, there are several reasons to focus on females specifically. First, research on gender differences in internet use reveals that women may be at greater risk for excessive social media consumption and addiction, compared to their male counterparts (Monacis, De Palo, Griffiths, & Sinatra, 2017; Simsek, Elciyar, & Kizilhan, 2019). This is in line with research that suggests that female internet users tend to prefer online communication applications of the internet (Chak & Leung, 2004; Weiser, 2000); and may be explained by gender norms, as female companionship includes more socialization (Felmlee, Sweet, & Sinclair, 2012). Further, adolescent girls with emotional difficulties were found to be at higher risk for developing internet addiction compared to boys with emotional difficulties (Ha & Hwang, 2014). This is especially concerning for women with emotion regulation problems, as their lack of coping strategies (or use or maladaptive strategies) may make them even more vulnerable to developing internet addiction.

Second, there are unique consequences for women who post risqué social media content compared to men. Research shows that posting risqué content can result in a number of negative consequences for women, including performance decrements, restricted eating, decreased well-being, negative body image, prejudice, sexual harassment, and sexual revictimization (Allen & Gervais, 2012). Because there are great risks associated with risqué social media posts, particularly for women, it is important for researchers to identify factors, such as overparenting, that may drive women to produce this type of content.

The current study

Due to the negative implications of problematic internet use for emerging adults (i.e., depression and anxiety; Rosenthal, Cha, & Clark, 2018; Tang et al., 2018), it is imperative to investigate potential influential factors such as emotion dysregulation and overparenting behaviors. In particular, special attention should be given to females as they are at an increased risk for excessive social media use and social media addiction (Monacis et al., 2017; Simsek et al., 2019), an issue that has also been linked to greater reports of inappropriate content (Karl et al., 2010). Both escape theory and emerging adulthood theory suggest that overparenting behaviors may facilitate internet addiction and risqué social media content directly and through hindering the development of appropriate self-regulation skills. Further, overparenting behavior may present itself in a variety of domains (i.e., personal/social, financial, health, academic/career). Due to the complexity of this parenting style and the potential for overparenting in specific domains to have differential impacts on emerging adult outcomes, associations between overparenting, emotion dysregulation, internet addiction, and risqué social media content were assessed separately by life domain. Additionally, as argued earlier, emotion dysregulation likely serves as a mediator for the relationship between overparenting and emerging adults' internet addiction and risqué social media content. As such, a mediation model will be explored in the current study. The primary research questions addressed by the current study were as follows:

RQ1: Is overparenting associated with emerging adults' internet addiction and risqué social media content ratings for female college students?

Hypothesis 1. We hypothesized that overparenting would be positively associated with later internet addiction and risqué social media content.

RQ2: Does emotion dysregulation account for the association

between overparenting and emerging adults' internet addiction and risqué social media content for female college students?

Hypothesis 2. We hypothesized that emotion dysregulation would mediate the association between overparenting and emerging adults' internet addiction and risqué social media content. Specifically, overparenting would be positively associated with emotion dysregulation and emotion dysregulation would be positively associated with internet addiction and risqué social media content.

Method

Participants and procedures

Data were collected in 3 separate waves of online surveys from 330 undergraduate students at a large state university in the U.S. southeast region. The waves of data were collected in six-week intervals over one semester. Wave 1 was collected at week 2, Wave 2 was collected at week 8 and Wave 3 was collected at week 14. The majority of participants identified as female (92.1%). For the purpose of this study, we included only females within the age range of 18-29, which resulted in a final sample of N = 257 reporting an average age of 20.18 years (SD = 1.04). Further, the majority of participants identified as White (69%) and smaller proportions identified as Black (13%), Hispanic (13%), Asian (2%), and other (3%). Complete details of participant demographics can be found in Table 1. Participants were asked to complete specific measures in each wave of data collection. Wave 1 asked participants to report their perceptions of overparenting behavior displayed by their parents and wave 3 evaluated participants' emotion dysregulation, internet use, and content of their social media accounts. Students were recruited from university classes in which professors offered extra credit for participation. All participants gave written consent prior to participating as approved by the IRB.

Measures

Overparenting

Overparenting was assessed using a newly developed multidimensional measure assessing overparenting in various life domains of an emerging adult college student (see appendix, Love et al., 2019). These domains include overparenting among 1) academic and career related aspects, 2) health habits, 3) personal and social relationships, and 4) financial aspects of an emerging adults' life. Based on our data in this study, exploratory factor analysis suggested that the overparenting measure contains 4 subscales of overparenting behavior, and confirmatory factor analysis revealed additional support. The Domain Specific Overparenting Scale contained a total of 12 items that evenly divided

Table 1Descriptive information on study variables.

Variables	M or % (%)	S.D.	Min.	Max.	
Overparenting Domains					
Personal/Social	5.27	2.17	3	14	
Academic/Career	6.37	2.79	3	15	
Health	5.52	2.37	3	14	
Financial	8.02	2.90	3	15	
Emotion Dysregulation	34.53	10.01	17	72	
Social Media Rating	14.54	4.09	6	26	
Internet Addiction	38.25	13.44	20	100	
Demographics					
Age	20.18	1.04	18	26	
Race/Ethnicity					
Black	13.0%				
White	69.0%				
Latino/Hispanic	13.0%				
Asian/Pacific Islander	2.0%				
Other/Prefer not to say	3.0%				

Note. N = 257.

into the four domains. The "Academic/Career" subscale contained 3 items assessing overparenting behavior such as, "My parents regularly check on academic or career updates from my university" ($\alpha = 0.82$). The "Health" subscale contained 3 items assessing overparenting behavior such as, "My parents tell me how much I should exercise" ($\alpha=$ 0.77). The "Personal/Social" subscale addressed related overparenting behaviors such as, "My parents want to control what kind of romantic partner I should have" ($\alpha = 0.78$). Finally, the "Financial" subscale addressed specific overparenting behaviors such as, "My parents let me plan and handle my own financial matters," reverse scored ($\alpha = 0.73$). Participants were asked to report the degree to which they agreed with each statement on a scale from 1, strongly disagree to 5, strongly agree. Subscales were computed by summing indicator items where greater scores indicated greater levels of overparenting behavior. These subscales were treated as separate, but correlated, manifest variables in model testing.

Emotion dysregulation

Emotion dysregulation was assessed with the Difficulties in Emotional Regulation Strategies measure (DERS-18; Kaufman, Cundiff, & Crowell, 2015). The DERS-18 assesses six areas of emotion dysregulation including, 1) a lack of awareness of emotions (e.g., "I am attentive to my feelings," reverse scored), 2) a lack of emotional clarity (e.g., "I am confused about how I feel"), 3) a lack of pursuing and attaining goals when experiencing negative emotions (e.g., "When I'm upset, I have difficulty getting work done"), 4) an inability to control impulses when experiencing negative emotions (e.g., "When I'm upset, I lose control over my behaviors"), 5) nonacceptance of experiencing negative emotions (e.g., "When I'm upset, I become embarrassed for feeling that way"), and 6) an inability to cope with negative emotions (e.g., "When I'm upset, I believe that wallowing in it is all I can do"). Respondents were asked to report how often they experience each statement on a scale from 1 almost never (0-10%) to 5 almost always (91-100%). A total DERS score was computed by summing items ($\alpha = 0.88$). Greater scores were indicative of greater emotion dysregulation.

Internet addiction

Internet addiction was measured by the Internet Addiction Test (IAT; Young, 1998, $\alpha=0.93$ in the current sample). The IAT consists of 20 items that assess internet use characterized by compulsivity (e.g., "Do you check your email before something else that you need to do?"), escapism (e.g., "Do you block disturbing thoughts about your life with soothing thoughts of the Internet?"), and dependency (e.g., "Do you find yourself saying 'just a few more minutes' when online?"). Participants were asked to respond to items on a scale from 1, not at all to 5, always. Items were summed to create a composite IAT score. Greater scores were indicative of greater issues with internet addiction.

Risqué social media content

Ratings of risqué social media content was assessed using a newly developed measure, the *Risqué Social Media Measure* (RSMM). The RSMM presents participants with the following prompt, "Imagine your social media accounts having a movie rating. Please rate your postings and/or feeds of your social media accounts as if they are movies" and asks participants to assess content on five social media platforms (Facebook, Instagram, Twitter, YouTube and Snapchat; NA = 1, G = 2, PG = 3, PG-13 = 4, R=5, NC-17 = 6). Items were summed to create a composite rating on risqué social media content ($\alpha=0.73$). Greater scores indicated more risqué social media content ratings.

Statistical analyses

The proposed research questions were tested using correlational analyses and structural equation modeling (SEM) in IBM SPSS and Mplus 8.0. Correlational analyses describe associations among constructs and were used to evaluate mediation model (mis)specification.

Second, regression analyses were conducted via SEM with temporal data to assess direct associations between study variables and to assess whether difficulties in emotional regulation help explain (mediate) the relationships between overparenting among various life domains and internet addiction and risqué social media content.

Results

As a preliminary step, descriptive statistics of the study variables and demographics were assessed. Means, standard deviations, and range of scores are presented in Table 1. Prior to further data analysis, it was also determined that there were no missing data.

Correlations showed important associations between the predictors, mediator, and outcomes (see Table 2). Specifically, overparenting in the personal/social and health domains were positively associated with emotion dysregulation. Further, overparenting in the personal/social domain was positively correlated with the RSMM ratings and internet addiction. Overparenting in the health domain yielded similar findings.

Although not correlated with emotion dysregulation, overparenting in the academic/career domain was positively associated with one of the outcome variables, internet addiction. Overparenting in the financial domain was positively correlated with the other overparenting subscales, however, there were no significant correlations between this domain of overparenting and the mediator and outcome variables. Finally, the correlations between emotion dysregulation and the outcome variables revealed positive associations.

SEM was used to test the associations (and mediation) theorized between overparenting, emotion dysregulation, and outcomes ratings (RSMM and IAT scores). Race was also entered as a covariate in the analysis (coded as 1= white and 0= other). Given that we aimed to determine whether emotion dysregulation mediated the relationship between overparenting and the outcome variables, all paths from the overparenting scales to the mediator were retained. However, any nonsignificant direct paths from the overparenting domains to the outcome variables were dropped. Fig. 1 illustrates the final mediation model. Results of the chi-square statistic and fit indices suggested excellent model fit: $\chi^2(9) = 11.81$, p = .22, CFI = 0.98, RMSEA = 0.03, p close (Pc) = 0.64.

First, paths from overparenting in the health, academic/career, and financial domains to emotion dysregulation were all non-significant (β = 0.08, β = -0.12, and β = -0.01, respectively; p > .05 for all). Overparenting in the personal/social domain was significantly associated with emotion dysregulation (β = 0.32, p < .01). Emotion dysregulation was significantly associated with risqué social media ratings (β = 0.21, p < .01) and internet addiction (β = 0.49, p < .01).

Thus, a mediation test was performed using bootstrapping (N=1000) to determine whether emotion dysregulation mediated the association between overparenting in the personal/social domain and the outcome variables. Results of the mediation test showed that emotion dysregulation was a significant mediator between overparenting in the personal/social domain and risqué social media ratings (0.07, 95% CI [0.02, 0.14]) and internet addiction (0.16, 95% CI [0.07, 0.25]). The results of the mediation test revealed that emotion dysregulation fully

mediated the association between overparenting in the personal/social domain and both outcome variables. Finally, it is important to highlight that the results of the SEM analysis supported a direct path from overparenting in the academic/career domain to internet addiction, $\beta = 0.15$, p < .01, as well as a significant association between race and emotion dysregulation indicating lower emotion dysregulation among those identified as white, $\beta = -0.11$, p < .05.

Discussion

Social media use is a growing trend that has become a significant part of work (Vayre & Vonthron, 2019), education (Engelbrecht, Llinares, & Borba, 2020), and emerging adult development (Bjornsen, 2018). Accordingly, research on the prevalence of social media use among emerging adults suggests that a large majority of individuals in this life stage engage in social media use (e.g., Facebook, Osman et al., 2012; Pempek et al., 2009). Further, evidence suggests that females may be particularly at-risk of developing problematic internet use (Ha & Hwang, 2014) and may experience uniquely harsh consequences for posting risqué social media content compared to their male counterparts (Allen & Gervais, 2012). As such, any attempt to provide a better understanding of how this technology use is affected by interpersonal relationships, namely the parent-child relationship, is highly valuable. Theory and research highlight parents' continued influence on their children's life even as they enter emerging adulthood and, in particular, point to the importance of avoiding developmentally inappropriate parenting (e.g., overparenting) that negatively impacts emerging adult development and well-being. Indeed, in the context of emerging adult engagement in problematic internet use, research has found associations with developmentally inappropriate parenting behaviors that are characteristic of overparenting (e.g., overprotection, Kumcağız, 2019; psychological control, Li et al., 2013; over-involvement, Huang et al., 2010) either directly or indirectly through self-regulatory skill. The current study extended previous research and made an important, and novel contribution by showing a link between overparenting and problematic internet use (RQ1/H1) and that difficulties with emotion regulation among emerging adults fully explained the relationship between overparenting (in the personal/social domain) and internet addiction and posting of risqué social media content (RQ2/H2).

Our findings suggested that overparenting is related to higher levels of both internet addiction and risqué social media content by emerging adults through blunted development of emotional regulation strategies. This result is consistent with research that suggests overparenting is negatively associated with poor emotion regulation skill (Cui, Darling, et al., 2019; Love, May, et al., 2020; Perez et al., 2020; Segrin & Flora, 2019) and positively associated with internet addiction (Huang et al., 2010; Kumcağız, 2019; Shivam et al., 2021). Results from this study are also consistent with research on how emotion dysregulation may be linked to internet addiction (Spada & Marino, 2017) and posting risqué social media content (Karl et al., 2010). Our findings also add to the research suggesting that parenting behaviors similar to that of overparenting (psychological control) are linked to problematic internet use through hindered self-regulatory skill (self-control; Li et al., 2013).

Table 2 Correlations among study variables.

correlations among study variables.							
Variables	1	2	3	4	5	6	7
Overparenting Domains							
1. Personal/Social	1.00						
2. Academic/Career	0.41**	1.00					
3. Health	0.54**	0.42**	1.00				
4. Financial	0.19**	0.48**	0.28**	1.00			
5. Emotion Dysregulation	0.32**	0.03	0.20**	-0.01	1.00		
6. Social Media Rating	0.16*	0.11	0.16*	0.12	0.21**	1.00	
7. Internet Addiction	0.17**	0.18**	0.18**	0.07	0.49**	0.21**	1.00

Note. **p < .01, *p < .05. Two-tailed tests.

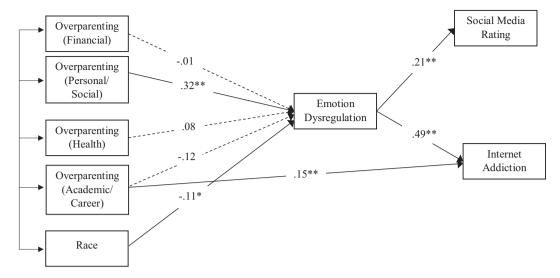


Fig. 1. Model of overparenting, emotion dysregulation, social media rating, and internet addiction. Note. ** p < .01, * p < .05. Dashed lines indicate non-significant pathways.

Unique to the current study is the finding that this link may be domain specific; only overparenting in the personal/social domain was associated with emotion dysregulation, while other facets of overparenting were not (i.e., academic/career, health, financial).

The widespread use of unidimensional overparenting measures has limited our understanding of the associations with emerging adult outcomes. Thus, these research results, being the first to investigate overparenting behavior in various life domains, may be explained through the following theoretical lens. Consistent with escape theory (Baumeister, 1990), social media and other digital devices may initially be used as a strategy to relieve negative feelings. As highlighted in previous research (Pettorruso et al., 2020; Yildiz, 2017), if emerging adults have not developed appropriate emotion regulation strategies, they may develop a habit of turning to media to alleviate negative emotions, which in turn can become an addiction as they come to rely on this escape behavior. This emotion regulation strategy may not arise from an explicit, conscious decision but reflect nonconscious processes.

Arnett's (2015) theory of emerging adulthood provides a deeper look into why emerging adults may react so negatively to overparenting and thus use the internet as an escape. Arnett (2015) stresses the importance of facilitating autonomous and independent behaviors among emerging adults as this is a time in which individuals pursue personal growth. The major features outlined by Arnett (2015) highlight the need for self-exploration and the ability to make important personal decisions which overparenting may hinder. Arnett (2016) also supported Erikson's (1963) theory of psychosocial development highlighting the development of long-term friendships and romantic relationships as a critical milestone of emerging adulthood. Emerging adults may be especially distressed by their parents' interference with their personal and social relationships, thus resorting to problematic internet use as a maladaptive emotion regulation strategy (i.e., escape).

It may also be that overparenting behavior in the personal/social domain is especially detrimental to self-regulatory processes (i.e., emotion regulation), by thwarting independence and autonomy in forming long-term friendships and romantic relationships, which is a particularly important life domain of emerging adulthood (Arnett, 2016). Additionally, this particular facet of overparenting may be less frequently observed compared to the other domains that were addressed as the mean score for overparenting in the personal/social domain was the lowest among the other overparenting domains in our data. The non-normativity of overparenting in the personal/social domain may facilitate negative internalizations among emerging adults who are unable to complete important milestones such as independently developing and

maintaining romantic or personal relationships (Arnett, 2016). Specifically, overparenting behaviors in the personal/social domain may impair the ability of emerging adult children to form social relationships (e.g., Odenweller, Booth-Butterfield, & Weber, 2014; van Ingen et al., 2015), which in turn, could be linked to problematic internet and SNS use to meet their social needs.

The current study also revealed that overparenting in the academic/career domain predicted greater reports of internet addiction. These results are consistent with research on overparenting behaviors (i.e., over-involvement, psychological control) that have been associated with adolescents' problematic internet use and addiction (Huang et al., 2010; Li et al., 2013). Although research with U.S. emerging adult samples regarding overparenting and internet use is very limited, studies on Korean adolescents have found that academic stress is associated with internet addiction (Kim, Epstein, & Moon, 2016). Academic stress was not addressed in the current study; however, it may be possible that overparenting particularly in the academic and career-related domain causes academic stress, which may lead to greater issues with internet addiction. Emerging adults thus may escape their parents' academic and career-related overparenting behaviors by engaging in online activities on a frequent basis.

Finally, the current study also identified a link between race and emotion dysregulation. Specifically, emerging adult females who identified as White reported having lower emotion dysregulation compared to others. Research on race/ethnic differences in overall emotion dysregulation are limited. However, research on race/ethnicity, emotions, and socialization has found that White individuals tend to score higher on interpersonal, intrapersonal, and emotional intelligence tests compared to other groups (Smith, 2002). Smith speculates that the socialization process regarding emotions and emotional expression vary between different race/ethnic groups. As such, it may be that part of the socialization process that may differ between racial/ethnic groups are emotion regulation strategies, which subsequently may impact the level of emotion dysregulation experienced.

Limitations and future directions

Although the current study has produced new insights regarding links between overparenting, emotion dysregulation, and problematic internet use, several limitations need to be considered when interpreting its findings. As with many studies, this sample is largely White with all of the participants included in the analysis being female undergraduate students. Future research should strive to achieve a more diverse sample

in terms of gender, race/ethnicity, and education status to increase the generalizability of the findings to additional populations, especially those populations that have traditionally experienced additional hardships entering higher education tracks (e.g., first generation college students, minority students, and transfer or international students).

Further, even though the current study used data over a period of 14 weeks, each measure was only assessed at one time period. A potential issue in mediation models is the potential of reverse causation; in this case the mediator (emotional regulation) or outcomes (internet addiction, risqué social media posting) preceding the predictors (overparenting behaviors). Future studies need to evaluate the temporal order of the processes.

It is also important to note that only one potential mediator was explored in this study. As mentioned earlier in the discussion, academic stress (or burnout) may also help explain the association between academic/career-related overparenting behavior and emerging adults' tendencies towards internet addiction. Although, no significant associations were found between financial and health-related overparenting behaviors and problematic internet behaviors, there may be other mechanisms that link these specific domains of overparenting to internet addiction and displays of risqué social media content. For example, low parental SES has been associated with internet addiction among adolescents (Chou, Liu, Yang, Yen, & Hu, 2015). Parents who are from lower SES backgrounds may very well engage in overparenting their emerging adult children in the financial domain to assure better outcomes than their own. However, due to the link between low SES and internet addiction, there may be an indirect association between overparenting among the financial domain and internet addictive behaviors.

Due to the limited research available on health-related parenting behaviors and problematic internet behaviors, it is difficult to speculate whether an association does exist. It is possible that parents who overemphasize the importance of diet and exercise through negative/inappropriate messages (e.g., expectations of certain body type vs. doing it for health) might encourage extreme dieting or even eating disorders (e.g., anorexia, bulimia). These emerging adults may avidly search the internet for ways to achieve a certain look or endlessly scroll through pictures of icons that they strive to look like to appease their parents or peers. Furthermore, these emerging adults may also post sexually explicit photos on social media as a way to reduce their feelings of insecurity about their body image.

A potentially promising avenue of future research stimulated by the current study is the continued development and refinement of the risqué social media measure (RSMM). While existing measures have provided adequate information regarding frequency of internet and social networking site use, measures assessing the content of what is being shared on social media sites is still lacking (see review by Sigerson & Cheng, 2018). The RSMM that was constructed for this research creatively assesses the self-perceived appropriateness of shared social media content. Although work needs to be done to further assess the factor

structure and information quality underlying this construct (via either classical measurement theory or item-response theory methodologies), this study demonstrated the RSMM to have acceptable internal consistency and to produce appreciable relationships with the constructs of overparenting, emotion dysregulation, and internet addiction (similar to the results of Karl et al., 2010 and their Facebook Faux Pas scale measuring risqué content on Facebook). This research therefore provides the first evidence to document the reliability and validity of the RSMM.

Additionally, the Domain Specific Overparenting Scale used in this study was created as part of a continuing program of research investigating overparenting among various life domains and emerging-adult outcomes. Within the current study, this measure yielded acceptable reliability coefficients and demonstrated significant associations with emerging adult outcomes that have been established in previous studies addressing overparenting (i.e., emotion dysregulation, Cui, Darling, et al., 2019). Further investigation of this measure, however, regarding the consistency of its factor structure, validity, and reliability across diverse samples needs to be conducted.

Conclusion

In summary, the current study provides an initial attempt to document a mechanism, emotion dysregulation, to help explain the association between overparenting and problematic internet use (i.e., internet addiction and risqué social media posting) in emerging adults. These novel findings build upon the current literatures regarding overparenting, emotion dysregulation, and dysfunctional technology use. These findings also provide the field with important implications. First, the construct of overparenting seemingly consists of multiple subdomains, each with potentially differential relationships with aspects of regulatory processing and problematic internet use. Second, our findings highlight a growing need to better identify determinants or risk factors of problematic internet use beyond adolescence, especially due to the large proportion of emerging adults who report regularly engaging in internet use. As media and technology become increasingly embedded in everyday life, it is important to understand when the use of these commodities becomes dysfunctional and what factors may contribute to the development of addictive and problematic behavior. Third, this research has the potential to inform recommendations and interventions aimed at overparenting practices, emotion regulation strategies, and inappropriate social media consumption in contemporary society. However, much work is needed before we can translate findings into clinical practice.

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Appendix

Domain Specific Overparenting Scale.

Item	Domain
1. My parents let me plan and handle my own financial matters. *	Financial
2. My parents try to control my personal relationships.	Personal/social
3. My parents track my spending.	Financial
4. My parents tell me how much I should exercise.	Health
5. My parents regularly check on academic or career updates from my university.	Academic/career
6. My parents regularly check on what food I eat each day.	Health
7. My parents regularly check on my exercise schedule.	Health
8. My parents want to control what kind of romantic partner I should have.	Personal/social
	(continued on next page)

(continued)

Item	Domain
9. My parents track my grades.	Academic/career
10. My parents respect my decision in my personal relationships. *	Personal/social
11. My parents track my credit/debit card expenses.	Financial
12. My parents track my schoolwork.	Academic/career

Note. Participants were provided with the following prompt: Thinking about your parents (or parental figures) please indicate to what degree you agree or disagree with the following statements about your parents since you started college... Scores were rated as follows: 1 = Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree. * Items are reverse scored.

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