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The Relationship Between Overparenting, Psychological Needs Satisfaction, and Alcohol Use on Risky Sexual Behavior

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THE RELATIONSHIP BETWEEN OVERPARENTING, PSYCHOLOGICAL NEEDS
SATISFACTION, AND ALCOHOL USE ON RISKY SEXUAL BEHAVIOR

by

Melanie Prater

A Thesis

Submitted to the Graduate School,
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and the School of Psychology
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Master of Science

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ABSTRACT

Studies have shown college students to be vulnerable to negative outcomes, including engaging in risky alcohol use (Lewis et al., 2014; Kilwein & Looby, 2018; Cui et al., 2019) and risky sexual behavior (Dir et al, 2014; Trub & Stark, 2017; Kilwien & Looby, 2018). Understanding predictors and mediating variables associated with risky sexual behavior is one important means of improving prevention strategies. Parenting may be one variable associated with risky sex. Overparenting, a parenting style characterized by parental overinvolvement, has received recent attention due to its association with poor outcomes for adolescents and emerging adults, including an increased risk for alcohol use (Schiffrin & Liss, 2017; Cui et al., 2019; Love et al., 2019). One mechanism connecting overparenting to poor outcomes is psychological needs satisfaction (PNS), commonly associated with well-being. No studies to date have explored the relationship between risky sex and overparenting. Therefore, the present study examined the expected relationship between overparenting and risky sexual behavior and investigated the predicted influence of alcohol use and psychological needs satisfaction on this relationship. This study hypothesized: 1) overparenting will be associated with risky sexual behavior in emerging adults, and alcohol use will moderate this relationship and 2) psychological needs satisfaction will partially explain the relationship between overparenting and risky sexual behavior and these paths will be moderated by alcohol use. This study included 158 college students recruited via SONA who completed electronic surveys of overparenting, risky sexual behaviors, alcohol use, and psychological needs satisfaction. Results did not generally support hypotheses although there is some evidence for the indirect effect of overparenting to

risky sex via PNS. Considerations for future research are discussed.

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LIST OF ABBREVIATIONS

<i>PNS</i>	Psychology Needs Satisfaction
<i>SDT</i>	Social Determination Theory
<i>STI</i>	Sexually Transmitted Illness

CHAPTER I - The Relationship Between Overparenting, Psychological Needs Satisfaction, and Alcohol Use on Risky Sexual Behavior

The transition to college presents unique challenges to students, including immersion in potentially risky environments that they may be underprepared to handle. Studies have shown college students to be vulnerable to the dangers of engaging in risky sexual behavior (Dir et al, 2014; Kilwien & Looby, 2017; Kerpelman, et al., 2016; Moore et al., 2017; Trub & Stark, 2017), which may be exacerbated by increased alcohol consumption (Scott-Sheldon et al, 2010; Lewis et al., 2014; Kilwein & Looby, 2018). Risky sexual behavior among college students has been associated with several negative consequences including contracting a sexually transmitted illness (STI), unwanted pregnancy, and sexual assault (Kilwien & Looby, 2017). With college students at an increased risk of participating in risky sexual behavior, it is crucial to understand factors associated with risky sexual behavior as a means of improving prevention strategies.

Parenting practices may be one of the factors contributing to college students' risky sexual behaviors. For example, elevated levels of parental control are associated with an increased risk for engaging in risky sexual behavior in young adults (Kerpelman, et al., 2016). Further, avoidant or anxious attachment styles are associated with an increased risk in engaging in risky sexual behaviors, with a strong relationship between these attachment styles and having sex without a condom (Trub & Stark, 2017). Alternatively, a positive and open parent-child communication style, specifically about sexual themes, is associated with a lower risk of participating in dangerous sexual behaviors (Coakley et al., 2017).

Overparenting, a parenting style characterized by parental overinvolvement, has received recent attention in the literature (Odenweller et al., 2014; Schiffrin et al., 2014; Schiffrin & Liss, 2017; Cui et al., 2019; Love et al., 2019). Overparenting is often associated with poor outcomes for adolescents and emerging adults (Odenweller et al., 2014; Schiffrin et al., 2014; Schiffrin & Liss, 2017; Cui et al., 2019; Love et al., 2019) and has been associated with risky alcohol use (Cui et al., 2019; Perez et al., 2021). Overparenting has not been explored in relation to risky sexual behavior.

Further, Social Determination Theory (SDT, Johnston & Finney, 2010; Wang et al., 2017) has been recently examined in connection with both overparenting (Schiffrin et al., 2014) and alcohol use (Cui et al., 2019) as one of the mechanisms that may impact negative consequences associated with these constructs. In short, SDT posits that overparenting may impact the development of psychological needs (autonomy, competence, relatedness) which are associated with well-being in young adults (Schiffrin et al., 2014). Low levels of autonomy, competence and relatedness have also been associated with both alcohol use (Cui et al., 2019) and negative consequences (Kirkland et al., 2011; Tian et al., 2014; Orkibi & Ronen, 2017). Therefore, the purpose of the present study was to examine the relationship between overparenting and risky sexual behavior, examining psychological needs satisfaction and alcohol use as potential mechanisms by which overparenting may impact risky sex in a college student population. Specifically, alcohol use was examined as a potential moderator and psychological needs satisfaction was examined as a mediator in the relationship between overparenting and risky sex.

1.1 Risky Sexual Behavior

The term ‘risky sexual behavior’ is used in a variety of ways in the literature. The most accepted definition of risky sexual behavior is a sexual behavior which puts an individual at a higher risk for a negative outcome (Mirzaei et al., 2016). This definition encompasses numerous harmful sexual behaviors including lack of condom use, STI’s, having sex under the influence of alcohol, and having multiple sexual partners. Risky sexual behaviors can also involve a lack of communication between partners about sexual boundaries or the use of contraception (Kilwien & Looby, 2017). Given the variability in the types of behaviors which fall under the broad domain of risky sexual behavior, investigators often focus on a few aspects of risky sexual behavior, leading to some concerns when generalizing results to the broader context.

The adverse outcomes often discussed in relation to risky sexual behavior include contraction and spread of STI’s, unwanted pregnancy, having more than one sexual partner at a time, using unreliable birth control, or engaging in sex without a condom (Moore et al., 2017). Although physical risks are crucial to this discussion, an often-overlooked area of adverse outcomes is mental health implications such as an increased risk for sexual regret, emotional distress, and symptoms of depression after engaging in risky sexual behavior (Kilwein & Looby, 2016). Even in some circumstances, these adverse outcomes can be relational, causing damage to several different types of relationships and potentially associated with financial or legal issues (Mirzaei et al, 2016). Some risky sexual behaviors can also put individuals at an increased risk of being a victim of sexual assault. While careful not to suggest that risky sex causes sexual assault, there are some correlations between risky sexual behavior and the incidence of

sexual assault. We know that sexual assault includes other serious outcomes, such as physical injury, and can be associated with symptoms of PTSD, depression, anxiety, and suicidal ideation (Chang et al., 2015; Carey et al., 2018).

College students are of particular interest in the conversation around risky sexual behavior. The research on the topic has shown the college student population is at the highest risk to participate in risky sexual behaviors and consequently experience the most negative outcomes (Kilwien & Looby, 2017). The risky behaviors often associated with the college student demographic include inconsistent condom use, lack of sexual partner communication about contraception and sexually transmitted illnesses, and having multiple sexual partners (Kilwien & Looby, 2017). This demographic also largely contributes to the number of annual STI rates, with individuals ages 15 to 24 contributing 50% of new STI cases in the U.S. each year (Dir et al., 2014). What makes this statistic even more concerning is the fact that individuals in this age demographic only account for 25% of sexually active people in the U.S. (Dir et al., 2014). The college student population also has a lifetime prevalence of multiple partners or “hookups” ranging from 56-81%, contributing to their increased likelihood of experiencing negative outcomes due to the riskiness of the sexual behavior (Kilwien & Looby, 2017). Specifically, college women are at an increased risk for unwanted pregnancy, with 83% of pregnancies in the 18-19 age range being unplanned and 63% of pregnancies being unplanned between the ages of 20-24 (Trub & Stark, 2017).

1.1.1 Risky Sexual Behavior and Alcohol Use

A relevant piece of information to address when discussing college student risky sexual behaviors is the role of alcohol use (Scott-Sheldon et al., 2010; Lewis et al., 2014;

Kilwein & Looby, 2018). Alcohol has been shown to increase the likelihood of sex without the use of a condom and casual sex with a partner the person does not know well (Lewis et al., 2014). This is made more concerning by the fact that college students engage in greater alcohol use. In a study conducted in 2019, 62.3% of college students reported drinking alcohol in the past 30 days, while 40.2% reported having five or more drinks during their last social gathering, and 32.6% reported having 5 or more drinks in 1 to 2 sittings during the last 2 weeks (Cui et al., 2019). Of additional concern is the fact that alcohol is involved in 700,000 sexual assaults and rapes among college students every year (Cui et al., 2019). Sexual regret is often connected to alcohol use, with research finding 31.8% of college students endorsing sexual regret and 31.7% reporting alcohol negatively impacting their decision-making (Peterson et al., 2021). This elevated use of alcohol among the college student population may be a strong predictor of risky sexual behavior. Given the strong association between alcohol use and risky sexual behavior, alcohol use was examined as a potential moderator in the current study. Given that risky sexual behavior and alcohol use are more common among college students, it is important to better understand the predictors associated with these risky behaviors. Overparenting, or the tendency to be overinvolved in a young person's life, has been found to be associated with elevated rates of alcohol use (Cui et al., 2019) and several negative outcomes (Kirkland et al., 2011; Tian et al., 2014; Orkibi & Ronen, 2017). Therefore, it is plausible that overparenting may also be implicated as a significant predictor of risky sexual behavior.

1.2 Overparenting

Overparenting is a parental practice marked by being over-involved in the child's life and their decisions, which restricts autonomy (Cui et al., 2019; Love et al., 2019; Schiffrin & Liss, 2017; Schiffrin et al., 2014). This over-controlling parental style is associated with the parent consistently taking on their child's responsibilities and tasks even into adulthood. This often comes from a well-intentioned place where parents hope to protect their growing children from failure (Cui et al., 2019; Love et al., 2019; Schiffrin & Liss, 2017; Schiffrin et al., 2014). These good intentions and investments in their child's success seem helpful and caring on the surface. However, they may be associated with adverse effects on the child as they emerge into adulthood.

Overparenting is associated with several negative outcomes, including academic difficulties such as avoidance-learning, extrinsic motivation, and perfectionist discrepancy (Schiffrin & Liss, 2017), which can result in an elevated risk for school burnout (Love et al., 2019). This may be partly attributed to the connection between overparenting and a lack of self-control on the part of the child (Love et al., 2019). Studies have also shown a relationship between overparenting and experiencing symptoms of depression, anxiety, dissatisfaction with life, overdependence on others, and emotional dysregulation (Odenweller et al., 2014; Schiffrin et al., 2014; Cui et al., 2019). Overparenting has also been associated with increased alcohol use (Perez, 2021; Cui et al., 2019), which may be partly attributed to lower rates of active strategies shown to minimize the impacts of alcohol use on negative outcomes in these populations. Similar to alcohol use, the authors hypothesize that overparenting may similarly be associated

with risky sexual behaviors by impacting the likelihood of the protective strategies related with minimization of adverse outcomes.

1.3 Psychological Needs Satisfaction

To better understand the impacts of overparenting, researchers often point to Self-Determination Theory (SDT) which states there are three basic needs which contribute to well-being in young adults: autonomy, competence, and relatedness (Johnston & Finney, 2010; Wang et al., 2017). Autonomy refers to the need to feel that behaviors and actions are within the individual's control (Johnston & Finney, 2010; Wang et al., 2017). The basic need for competence refers to the belief in oneself to perform a task efficiently, even while the task increases in difficulty (Johnston & Finney, 2010; Wang et al., 2017). Lastly, relatedness refers to the person's belief in their capability to connect with other people (Johnston & Finney, 2010; Wang et al., 2017). SDT theorizes that all three of the basic psychological needs are essential to well-being in emerging adults (Johnston & Finney, 2010; Wang et al., 2017) and is often referred to as Psychology Needs Satisfaction (PNS). PNS has been found to be associated with overall subjective well-being, as well as specific areas of subjective well-being in school and motivation (Tian et al., 2014; Kirkland et al., 2011). In recent studies, PNS has also been associated with a mediating role between self-control and overall subjective well-being (Orkibi & Ronen, 2017; Cui et al., 2019).

Recent studies have investigated the relationship between PNS and overparenting. Overparenting was found to be associated with lower levels of the PNS and lower levels of well-being (Schiffrin et al., 2014). Overparenting was also associated with higher levels of depression and less satisfaction with life (Schiffrin et al., 2014). Further, the

PNS sub-facets of autonomy and competence were found to be uniquely significant in the associations between overparenting and depression, life satisfaction, and well-being. Cui and colleagues (2019) also found that PNS was associated with increased alcohol use in female college students. Additionally, PNS mediated the relationship between overparenting and self-control. Researchers posit that overparenting is associated with lower levels of psychological needs satisfaction, in part because children are unable to experience and navigate through failure as a normative developmental experience. This can lead to the child not believing in their capabilities (Cui et al., 2019) and thus result in fewer attempts to engage in self-control to modify behaviors, such as alcohol use or risky sex. While no research to date has analyzed the relationship between PNS and risky sexual behavior, given the relation between PNS and alcohol use, the authors hypothesized that overparenting may be associated with increased risky sex behaviors by impacting PNS in a manner similar to what has been found for alcohol use (Schiffman et al., 2014; Cui et al., 2019).

1.4 Present Study

Parental practices have been shown to affect risky sexual behavior in emerging adulthood (Kerpelman, et al., 2016; Coakley et al., 2017; Trub & Stark, 2017). While the incidence of overparenting is on the rise, no studies have examined the impact of overparenting on risky sexual behavior. Overparenting has been associated with similar risky behaviors, such as alcohol use, which is partly explained by deficits in the utilization of practices known to reduce negative consequences (Perez, 2021; Cui et al., 2019). Further, alcohol use has been associated with increased risky sexual behavior (Lewis et al., 2012; Dir et al., 2014; Mirzaei et al., 2016; Kilwein & Looby, 2018).

Overparenting has been associated with deficits in PNS, and PNS has been shown to mediate the relationship between overparenting and negative outcomes (Cui et al., 2019). The current study examined PNS as a mediator in the relationship between overparenting and risky sexual behavior including alcohol use as a potential moderator. Specifically, we examined the following research questions:

- To what degree will overparenting be associated with risky sexual behavior in emerging adults; and is this moderated by alcohol use?
 - Hypothesis 1: It is expected that overparenting will be associated with risky sexual behavior in emerging adults and that alcohol use will moderate this relationship.
- Will the relationship between overparenting and risky sexual behavior in emerging adults be mediated by PNS and will alcohol use moderate these relationships?
 - Hypothesis 2: It is expected that PNS will mediate the relationship between overparenting and risky sexual behavior and it will be moderated by alcohol use.

CHAPTER II - Method

2.1 Participants and Procedures

The current study collected data using the University of Southern Mississippi's SONA system, which is an online participant management software which utilizes university psychology subject pools to obtain data. This study was reviewed and approved by the University of Southern Mississippi's Institutional Review Board Human Subjects Protection Review Committee (Appendix A). Participants who met screening criteria (i.e., above the age of 18 and sexually active within the past 6 months) were provided a link to a secure online survey system (Qualtrics) and then directed to the informed consent (Appendix B). After consenting to the study, participants were directed to all survey instruments, presented in a randomized order to limit order effects. There were two quality assurance checks presented in the survey, such as "Please select 'always true' for this item" and "Select 'definitely true' for this item" (Meade & Craig, 2012). If a participant failed to answer both quality assurance checks correctly, their data were not included in the final sample.

Data was collected in 2022. Participants included 414 college students. Of these, 256 were removed for the following reasons: 8 due to answering the consent but providing no other data, 8 due to not being sexually active, 138 due to failed validity checks, 25 due to multiple submissions from the same participant, and 11 invalid responses. The final sample included 158 college students. The participants were primarily female (86.7%) and White (59.5%), with a mean age of 23.3 years old ($SD = 7.95$). It is important to note that 18.4% of the sample were above the age of 24. The

sample consisted of freshmen (50.6%), sophomores (17.7%), juniors (21.5%), and seniors (27.8%). See Table 1 for further demographic information.

Table 2.1

Participant Demographics

Demographic		N	%
Racial/ethnic identity	White or Caucasian	94	60%
	African American or Black	55	35%
	American Indian or Alaska Native	2	1%
	Asian	3	2%
	Multiracial	3	2%
Ethnicity	No Hispanic, Latino, or Spanish Origin	153	97%
	Hispanic, Latino, or Spanish Origin	5	3%
Academic Status	Freshman	52	33%
	Sophomore	28	18%
	Junior	34	22%
	Senior	44	28%
Gender Identity	Female	137	87%
	Male	16	10%
	Non-Binary	4	3%
Sexual Orientation	Asexual	3	2%
	Bisexual	22	14%
	Heterosexual or Straight	120	76%

Table 2.1 (continued).

	Lesbian	5	3%
	Pansexual	3	2%
	Queer	4	3%
Relationship Status	Single	59	37%
	Committed Relationship	79	50%
	Married	3	10%
	Divorced	1	2%
Participant living arrangements	Off-campus, with roommates	42	27%
	On-campus, with roommates	45	29%
	At home, with caregiver(s)	16	10%
	Off-campus, alone	22	14%
	On-campus, alone	20	13%
	Other	13	8%

Note. Percentages rounded to the nearest whole number.

2.2 Measures

2.2.1 Demographic Survey

The demographic survey asked the participant's age, gender, race, and academic year. This survey also asked the participant's sexual orientation, living status, and their current relationship status.

2.2.2 COVID-19 Measure

Due to the unknown impact of the stressors of the coronavirus pandemic, this study implemented The Coronavirus Impacts Questionnaire (Conway et al., 2020). This questionnaire contained 9 items addressing the extent to which COVID-19 has impacted the individuals' finances, resources, and psychological wellness. The answers range from 1, indicating "not true of me at all", to 7, indicating "very true of me". Higher scores on this scale are indicative of more distress due to the coronavirus pandemic. While research on this measure and the coronavirus pandemic is limited, there is evidence to support that The Coronavirus Impacts Questionnaire distress scale is associated with increased alcohol use (Rodriguez et al., 2020).

2.2.3 Sexual Risk Survey

To assess risky sexual behavior, we utilized the Sexual Risk Survey (SRS) developed by Turchik and Graske (2009). This measure was developed and normed specifically on college student populations due to past risky sexual behavior measures not effectively and comprehensively measuring the risky sexual behaviors applicable to college-aged individuals (Turchik & Graske, 2009; Mirzaei et al., 2016). The SRS is a 23-item measure designed to address five factors of risky sex: sexual risk-taking with uncommitted partners, risky sex acts, impulsive sexual behaviors, intent to engage in risky sexual acts, and risky anal sex acts. Each item of the measure asks the participant how many times they have engaged in each risky sexual activity in the past 6-month period. The total score was obtained by re-coding the items into ordinal categories to account for the variability in the raw scores. These categories were formulated by all 0 scores being placed in the "0" category. The following scores were treated like they

equaled 100% of scores, such as 40% of responses added to the “1” category, 30% of responses to the “2” category, 20% to the “3” category, and 10% to the “4” category which allows scores to be weighted in reference to the sample. The SRS shows evidence of reliability with a test-retest correlation coefficient of .93 and internal reliability of .88. There is evidence of internal consistency for the 5 subscales as well with Cronbach’s alphas of .88 for sexual risk-taking with uncommitted partners, .80 for risky sex acts, .78 for impulsive sexual behaviors, .89 for intent to engage in risky sexual behaviors, and .61 for risky anal sex acts (Turchik & Graske, 2009). There was also evidence for validity present with sexual risk-taking over the past 6-month period being positively related to the lifetime number of sexual behavior partners ($r = .58, p < .001$), lifetime number of vaginal sex partners ($r = .65, p < .001$), lifetime number of oral sex partners ($r = .64, p < .001$), lifetime number of anal sex partners ($r = .31, p < .001$), and history of sexual infidelity ($r = .40, p < .001$). There was also evidence for concurrent validity with risky sexual behaviors during the past 6-month period being related to greater health concerns related to risky sex, such as STIs, pregnancy, and alcohol use (Turchik & Graske, 2009). This relationship was shown with all the factors except for intent to engage in risky sexual behaviors, with there being no direct health consequence. For the purposes of this study, the total weighted score was used as an indication of risky sexual behavior. For the current study, reliability was calculated at .77 using Cronbach’s alpha.

2.2.4 Helicopter Parenting Instrument

The Helicopter Parenting Instrument (HPI) was used to assess overparenting in this study. The HPI measure asks about participants recollection of overparenting using a 7-point Likert scale, with a range from 1 (very strongly disagree) to 7 (very strongly

agree) with higher scores indicating more experiences of overparenting (Odenweller et al., 2014). There is evidence the HPI has strong validity with construct validity showing a positive relationship with the theoretically related variables of the authoritarian parenting style ($r = .26, p < .001$) and conformity orientation ($r = .42, p < .001$), and no relationship with the divergent variable of conversation orientation ($r = .10, p = .12$) (Odenweller et al., 2014). There is also evidence of reliability with an internal consistency score of $\alpha = .80$ (Odenweller et al., 2014). The total score was used in the current study and Cronbach's alpha reflected a reliability score of .70.

2.2.5 The Basic Needs Satisfaction Scale-general version

To assess psychological needs satisfaction The Basic Needs Satisfaction Scale-general version (BNSG-S; Gagne, 2003) was utilized. The BNSG-S has 21 items on a 7-point Likert scale, with a range from 1 (not true at all) to 7 (definitely true). There are 3 subscales which are autonomy (7 items), relatedness (6 items), and competence (8 items). The internal consistencies of the subscales have been shown with alpha scores of .69, .71, and .86 for autonomy, competence, and relatedness with a total score of .89 (Gagne, 2003). Regarding the current study, a score of .90 was calculated using Cronbach's alpha. For the purposes of this study, the total score was used to assess psychological needs satisfaction, with higher scores indicating higher levels of need satisfaction. However, reliability coefficients were evaluated for the subscales as well, consisting of .74 for autonomy, .76 for competence, and .80 for relatedness.

2.2.6 The Daily Drinking Questionnaire

This study utilized the Daily Drinking Questionnaire (DDQ) developed by Collins and colleagues to measure alcohol use (1985). Using visual images and fluid-ounce measurements, participants are asked to rate their typical weekly drinking resulting in a score being calculated from the sum of standard drinks consumed on each day of a typical week. Past literature has indicated acceptable test-retest reliability for this measure after a two-year period ($r = .55$ to $.72$; Marlatt et al., 1998). The score was calculated by adding the amount of drinks consumed daily during the week into a total score, with higher scores indicating greater consumption of alcohol. The authors presented the question as a slider-bar on the online survey with zero as the starting point. We considered two approaches to scoring. One included using the raw scores as reported by the slider bar (continuous score) and the other was to create dichotomous groups (drinkers vs non-drinkers, defined as anyone indicating zero on the slider bar presented in the online survey). Neither approach emerged as superior in this sample, so the raw scores were used in our analyses. Typical weekly drinking has been found to be the best predictor of alcohol use issues among college students (Borsari et al., 2001).

2.3 Data Analysis

Prior to conducting the analysis, data screening was performed to discover any missing data. In addition, if a participant completed only 70 percent or less of the study, their data were not included in the final sample. Basic descriptive information was addressed by assessing means, standard deviations, and bivariate correlations for the variables of interest. Frequencies were checked to see the spread of the data. Outliers

were assessed using tests of studentized residuals, leverage values, and standardized DFFITs; no outliers were detected.

To test the hypothesized model, this study used the PROCESS macro for SPSS (models 1 and 4) to examine whether psychological needs satisfaction mediates the relationship between overparenting and risky sexual behavior and whether alcohol use moderates this relationship.

CHAPTER III - Results

Means, standard deviations, and intercorrelations for all measures are provided in Table 2. It was expected that overparenting would be positively associated with risky sexual behavior. However, the relationship between overparenting and risky sex was non-significant ($p = 0.45$). Further, psychological need satisfaction was negatively associated with overparenting ($p < .001$). Additionally, the impact of COVID-19 was found to have a negative relationship with psychological needs satisfaction ($p < .001$) and a positive relationship with overparenting ($p = .019$). Results of the COVID-19 measure were not included in the subsequent models, but results should be considered in light of the possible impacts the pandemic may have continued to have on overparenting and needs satisfaction. It is also important to point out that reported means for both alcohol use and risky sex are well below those reported in the literature which could reduce the strength involving these variables (Lewis et al., 2014; Kilwein & Looby, 2018; Turchik & Garske, 2009; Mirzaei et al., 2016). Because the DDQ is typically utilized in samples with drinkers, this may impact the interpretation of these results.

We also examined age as a possible covariate, given the high number of nontraditional students. Age was significantly associated with psychological needs satisfaction ($p < .001$) but not risky sex; therefore, age was not considered in the analyses below. While not used in the planned analyses, we were curious about the relationships between the various BNSG-S subscales and other variables of interest in this study. See Table 2 for a brief correlation table which examines these relationships. Overparenting was significantly correlated with the BNSG-S subscales: autonomy ($p < .001$), competence ($p < .001$), and relatedness ($p = .002$). Given the similar relationship patterns

between the BNSG-S total scores and the subscales, we proceeded with the total score for the BNSG as a potential mediator in the analyses that follow.

Table 3.1

Means, SD, Reliability and bivariate correlations among study variables including age and BNSG-S subscale scores

	Mean	SD	<i>a</i>	1	2	3	4	5	6	7
1.SRS	16.05	10.83	(.772)	-	.154	.157	.138	.109	-.064	.175
2.BNSG-S	106.56	17.29	(.898)		-	.898**	.880**	.874**	-	.052
									.316**	
3. BNSG-SA	34.88	6.36	(.740)				.728**	.656**	-	.018
									.324**	
4. BNSG-SC	29.92	6.02	(.760)					.624**	-	.028
									.274**	
5. BNSG - SR	41.73	7.13	(.800)						-	.092
									.244**	
6. HPI	56.99	12.23	(.695)							-.021
7. DDQ	5.99	5.37	(.794)				-			

Note. Sexual Risk Survey (SRS), The Basic Needs Satisfaction Scale-general version (BNSG-S; BNSG-SA – Autonomy subscale; BNSG-SC – Competence Subscale; BNSG-SR – Relatedness subscale), Helicopter Parenting Instrument (HPI), Daily Drinking Questionnaire (DDQ) *p < .05. **p < .01.

3.2 Hypothesis 1 – Moderation Results

We tested the hypothesis DDQ (coded as 0 = nondrinkers and 1 = drinkers) would moderate the relationship between HPI and SRS, using Process model 1 v2.16 (Hayes, 2013) in SPSS v. 24. The total of nondrinkers to drinkers was 46 to 112. In this model, HPI was entered as the predictor variable, SRS as the outcome variable and the DDQ scores were recoded to 0 = no alcohol use reported and 1 = alcohol use reported and

examined as a moderator. DDQ was not found to moderate the effect of HPI on SRS ($B = .0359$, $SE = .1749$, $t = .2053$, $p = .8376$). To ensure this was not a function of dichotomizing the variable, this was rerun using continuous DDQ scores, with similar, non-significant results ($p = .1377$).

3.3 Hypothesis 2 – Mediation Results

The model was then reanalyzed without the moderator using Process Model 4 v2.16 (Hayes, 2013) using 10000 bootstrapped samples and a 95% confidence interval to assess indirect effects of BNSG-S on the relationship between HPI and SRS. Results indicated that HPI had a significant indirect effect on SRS via BNSG-S ($B = -.0461$, $SE = .0336$, 95% CI: $-.1335, 1.0014$). A main effect was found for HPI to BNSG-S ($B = -.4828$, $SE = 11.29$, $p < .001$); however, no other paths in this model were significant [HPI to SRS, $B = -.0086$, $SE = .0808$, $p = .9149$; BNSG-S to SRS, $B = .0956$, $SE = .0574$, $p = .0982$]. The model accounted for 15% of the variance in SRS; however, it was found to be non-significant, $R^2 = .0236$, $F(2, 136) = 1.6468$, $p = .1965$.

Given the lack of correlational data supporting links between the study variables, no additional follow up analyses were conducted with BNSG-S subscales or other study variables. Begin a new chapter here.

CHAPTER IV - Discussion

This study aimed to examine the relationship between overparenting and risky sexual behavior using alcohol use as a potential moderator and psychological needs satisfaction as a mediator. Results did not support these hypotheses, although they did provide evidence for the link between overparenting and psychological needs satisfaction found in other literature.

The first research question sought to examine if overparenting was associated with risky sexual behavior in college students and if this relationship was moderated by alcohol use. Alcohol use was not found to moderate the relationship between overparenting and risky sex. Furthermore, results showed no relationship between overparenting and risky sexual behavior. Previous research has demonstrated a link between overparenting and alcohol use (Schiffrin & Liss, 2017; Cui et al., 2019; Love et al., 2019) and between alcohol use and risky sex (Scott-Sheldon et al., 2010; Lewis et al., 2014; Kilwein & Looby, 2018).

It is important to note that alcohol use rates in the current study were significantly lower than in comparison samples (Collins et al., 1985; Marlatt et al., 1998; Borsari et al., 2001; Lewis et al., 2014; Kilwein & Looby, 2018). It is also important to note the DDQ is designed to be used in a sample consisting of drinkers only, which this study was not limited to. Perhaps an artifact of the irregularities with the way the question was presented to respondents, we found 20.1% of the sample reported no alcohol use. Despite having examined this research question with both a categorical moderator (defined as non-drinkers – “0”; and drinkers) or as a continuous moderator (using the raw scores as reported), we were not able to identify any relationship between alcohol use and risky

sex. While the DDQ is commonly used in studies regarding alcohol use and risky sex within the college student population (Lewis et al., 2014; Kilwein & Looby, 2018), we are left with the conclusion that the non-significant findings in our study were a factor of measurement selection error rather than a true indication of deviation from the body of research examining these constructs, given the DDQ is designed for drinkers solely which this studies sample was not limited to. It should also be noted that due to data being collected while the impacts of the Covid-19 pandemic were still in effect, this could have limited college student's ability to engage in drinking at social gatherings which could have influenced these results. Further, the sample included a larger age range expected of traditional college students (18-57). It is possible that previous research examining these relationships with a younger sample does not generalize well to a more diverse sample of participants. This may especially true when considering the impacts of overparenting on outcomes in college students. Effects of parenting may be diluted over time and be less influential with participants older than traditional college aged students.

The second research question aimed to understand the relationship between overparenting and risky sexual behavior as mediated by psychological needs satisfaction and moderated by alcohol use. Given the non-significant findings from Hypothesis 1, alcohol use was not included in this analysis. The results of the simple mediation model found a significant indirect effect between overparenting and risky sex via psychological needs satisfaction, with a 15% variance in risky sex being accounted for by this model. However, the model was found to be non-significant; therefore, any significant paths should be interpreted with caution. PNS are important components to college student well-being (Schiffrin et al., 2014; Cui et al., 2019) and have been shown to be associated

with overparenting (Schiffrin et al., 2014; Cui et al., 2019). Specifically, self-determination theory posits that PNS is found to predict outcomes in this population including self-control (Orkibi & Ronen, 2017; Cui et al., 2019), academic motivation (Tian et al., 2014; Kirkland et al., 2011), and subjective well-being (Orkibi & Ronen, 2017; Cui et al., 2019). Additionally, previous research has demonstrated that overparenting can have detrimental impacts on PNS (Schiffrin et al., 2104; Cui et al., 2019) and this may be one way by which overparenting can contribute to higher levels of risky sex. While this study examined these paths using total scores, correlations examining study variables and the three subscale scores showed a similar pattern of relationship. Again, sample characteristics may be impacting the interpretation of these results.

There are several sample and measurement-related limitations to keep in mind when reflecting on the results of this study. Self-report measures are susceptible to participant bias or misinformation, especially regarding taboo topics such as alcohol use and sexual activity, providing participants opportunity to omit perceived undesirable information (DiClemente et al., 2013; DiClemente, 2015; McKenna et al., 2018). However, this limitation is likely minimal due to most anonymous surveys mitigating desirability. This sample was also limited to its small sample size which, although obtained sufficient G power, could have decreased the strength of the results. Further, this sample had a higher-than-expected rate of non-traditional participants, with 18.4% of respondents being over the age of 24 (age range 18-57). Given the study design was developed based on research conducted on traditional college-age based on research conducted on traditional college age samples, this may have had greater than expected

influences on the results of this study. Research on risky sex behaviors with this broad demographic is limited. However, research has provided evidence that specifically men between the ages of 34-41 may engage in significant risky sexual behavior, which does not provide a clear explanation for the low levels of risky sex reported in this sample (Astone et al., 2013). Further, risk-taking is higher in adolescence and early adulthood, which could support non-traditional aged college engaging in less risky sex and lowering the results on the SRS (Steinburg, 2017). Additionally, the sample included 60% of participants who were either married or in a committed partnership, which may have also impacted reports of risky sex. Further, the sample was predominately female, and care should be taken in generalizing to male or nonbinary samples.

Among respondents, we found an overall low level of risky sex reported. This may have been a function of the stigma attached to risky sex (DiClemente et al., 2013; DiClemente, 2016), or the age of participants (noted above). This restricted range undoubtedly contributed to the overall lack of significant findings. Further, the SRS has a complicated scoring methodology which adapts to the samples' reporting characteristics. Again, we re-ran the analyses using raw vs weighted scores and the results were similar. One consideration is that data were collected while Covid-19 restrictions were still impacting daily functioning. There is an emerging literature which provides evidence that the pandemic did impact mental health outcomes for college students (Wang et al., 2020; Kim et al., 2021) and adults (Raihan, 2020; O'Connor et al., 2020). While some literature has provided support for a decrease in sexual behavior during the pandemic (Feng et al., 2021; Griffin et al., 2022), other sources report evidence of increased sexual

activity among individuals quarantined with a partner (Griffin et al., 2022). It may be that reports of risky sex were impacted by pandemic-related abnormalities in sexual behavior.

The DDQ was included as a measure of daily drinking. On the survey, respondents were asked to move a slider bar indicating drinking from 0-50 standard drinks each week. Given the high frequency of zero drinks, we cannot determine whether participants skipped the item, or if the zero indicates zero drinks. We attempted to account for this by analyzing the results using both dichotomous (drinkers vs non-drinkers) and continuous (allowing for the range of responses) variables. Neither of these attempts resulted in any significant findings. Future researchers will need to consider another question type to ensure the data collected represents a valid response rather than a skipped item.

We would encourage future researchers to consider limiting participants to those in a more traditional college-age span (e.g., 18-24). Given past research focusing on college students' risky sexual behavior is analyzing traditional-age college students in emerging adulthood, it is important to differentiate between students at different stages of psychological development. Further, utilizing a more precise mechanism for reporting both alcohol use and risky sex is recommended. Given there is a small pool of risky sex measures, research should focus on developing all-encompassing risky sex measures which are less sensitive to sample variants.

This study found that psychological needs satisfaction may be related to overparenting and this may be related risky sexual behavior. Overparenting has been found to impact the development of autonomy (Schiffrin et al., 2014; Cui et al., 2019) and we believed that this lack of autonomy may impact the decisions that college students

may be making related to risky sex. Given that risky sex has compounding impacts on college student well-being, we hope that future researchers will continue to work to identify predictors of risky sex in an effort to consider what preventative approaches we can develop to help minimize negative outcomes. Further, we remain focused on the previous body of literature which connects alcohol use and risky sex (Scott-Sheldon et al., 2010; Lewis et al., 2014; Kilwein & Looby, 2018) and hope that substance use will continue to be a consideration in studies addressing risky sex in college students.

APPENDIX A

Office of Research Integrity



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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: 22-051
PROJECT TITLE: The Impact of Overparenting on Risky Sexual Behavior
SCHOOL/PROGRAM: Psychology
RESEARCHERS: PI: Melanie Prater
Investigators: Prater, Melanie~Nicholson, Bonnie~
IRB COMMITTEE ACTION: Approved
CATEGORY: Expedited Category
PERIOD OF APPROVAL: 27-Jan-2022 to 26-Jan-2023

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX B



INSTITUTIONAL REVIEW BOARD STANDARD (ONLINE) INFORMED CONSENT

STANDARD (ONLINE) INFORMED CONSENT PROCEDURES

- ***Use of this template is optional.*** However, by federal regulations ([45 CFR 46.116](#)), all consent documentation must address each of the required elements listed below (purpose, procedures, duration, benefits, risks, alternative procedures, confidentiality, whom to contact in case of injury, and a statement that participation is voluntary).

Last Edited August 13th, 2021

Today's date: 1/17/2021		
PROJECT INFORMATION		
Project Title: The Impact of Overparenting on Risky Sexual Behavior		
Principal Investigator: Melanie Prater	Phone: 706-881-0950	Email: Melanie.Prater@usm.edu
College: Education and Human Sciences	School and Program: Counseling Psychology Doctoral Program	
RESEARCH DESCRIPTION		
<p>1. Purpose: This study aims to explore the effects of overparenting on college students engagement in risky sexual behaviors.</p> <p>2. Description of Study: Study participants will be asked to respond to a series of questionnaires that will take approximately 25 to 35 minutes to complete. Please read carefully and respond thoughtfully, as quality assurance checks will be included to ensure the validity of responses. Participants who do not pass the quality assurance checks will be excluded from data analyses and will not receive SONA credit.</p> <p>3. Benefits:</p>		

Participants will receive 0.5 SONA credits for completing the survey and passing the quality assurance checks. Additionally, knowledge gained from the survey may help individuals better understand the parental practices they experienced in childhood and how that has impacted their sexual behaviors in adulthood. Participating in this study can also help researchers discover how parental practices impact sexual behaviors. This study does not pose a risk for medical injury, nor does it involve any treatment procedures that could pose additional risks.

4. Risks:

The risks associated with your participation are minimal. You may find that a few questions may be difficult to answer or that you grow tired of answering questions. You may refuse to answer any question without penalty. This study does describe sexual practices some may find distressing. If the content of this questionnaire causes distress, please contact the National Sexual Assault Hotline at 1-800-656-4673.

5. Confidentiality:

To ensure confidentiality, identifying information like name and contact information will not be retained with the participants' survey responses. All information that participants provide will be kept confidential and stored in a secure location for six (6) years before being destroyed. Only aggregate data will be reported.

6. Alternative Procedures:

No alternative procedures are required or provided.

7. Participant's Assurance:

This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5125, Hattiesburg, MS 39406-0001, 601-266-5997.

Any questions about this research project should be directed to the Principal Investigator using the contact information provided above.

CONSENT TO PARTICIPATE IN RESEARCH

I understand that participation in this project is completely voluntary, and I may withdraw at any time without penalty, prejudice, or loss of benefits. Unless described above, all personal information will be kept strictly confidential, including my name and other identifying information. All procedures to be followed and their purposes were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected. Any new information that develops during the project will be provided to me if that information may affect my willingness to continue participation in the project.

() The University of Southern Mississippi has no mechanism to provide compensation for participants who may incur injuries as a result of participation in research projects. However, efforts will be made to make available the facilities and professional skills at the University. Participants may incur charges as a result of treatment related to research injuries. Information regarding treatment or the absence of treatment has been given above.

CONSENT TO PARTICIPATE IN RESEARCH

By clicking the box below, I give my consent to participate in this research project. ***If you do not wish to participate in this study, please close your browser now.***

☐ Yes, I consent to participate.

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