Family communicative environment's effects on young adults' social norms about alcohol:

Examining the mediating effects of implicit privacy rules

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Abstract

Alcohol usage among young adults remains a prominent public health concern. Communicating with family members about alcohol can positively influence young adults' perceptions of social norms, yet the stigmatized nature of alcohol-related conversations in the family create a barrier to occurrence of these conversations. This study examines how young adults' familial communication patterns impact their descriptive and injunctive social norms about alcohol, using Communication Privacy Management Theory as the theoretical framework. Specifically, this study seeks to understand how conversation orientation, conformity orientation, warm conformity orientation, and cold conformity orientation predicts two sets of social norms (descriptive and injunctive), and to investigate how implicit privacy rules mediates each of these relationships. Implicit privacy rules did fully mediate the relationships between conversation orientation and injunctive descriptive norms about alcohol as well as warm conformity orientation and injunctive descriptive norms about alcohol.

Keywords: family communicative environment, communication privacy management theory, young adults, social norms, alcohol

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Alcohol's harmful consequences have been well-established for decades, yet college students continue to engage in alcohol usage and abuse, often illegally. College students' alcohol usage has been demonstrated as costly and a public health problem (O'Hare, 2001). Academic outcomes associated with alcohol abuse by college students include lower grades, missing classes, and involvement with police (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2015). While over 1800 college students between 18-24 years of age die each year in alcohol-related unintentional injuries, nearly 700,000 report being assaulted by another student who was drinking (NIAAA, 2015). Other health consequences arise from alcohol abuse by college students, including suicide attempts, unsafe sex, and injuries (Hingson, Edwards, Heeran, & Rosenbloom, 2009; Weschler et al., 2002). For college students, however, drinking alcohol has become almost synonymous with the college experience (Russell & Arthur, 2016).

Research has demonstrated how family communication patterns can impact how young adults understand their lives (Hesse et al., 2017). Further, other research has found that adults' privacy boundaries are often impacted by the experiences they had with private information as children (Miller, 2009). Using Petronio's (2002) Communication Privacy Management theory (CPM), the goal of this study is to better understand how college students' family communicative environments impact their social norms about alcohol usage. Further, this study aims to examine the impact of privacy boundaries on the aforementioned relationships.

Social Norms and Alcohol

Several factors affecting college student drinking have been established, including "unstructured time, the widespread availability of alcohol, inconsistent enforcement of underage

drinking laws, and limited interactions with parents and other adults" (NIAAA, 2015, p. 2). Research shows that drinking generally happens in social contexts, particularly for young college students (Real & Rimal, 2007). Glazer and colleagues (2010) cite multiple studies showing that those who believe their peers drink a lot of alcohol are more likely to have increased alcohol consumption, even if the reality is opposite. Real and Rimal (2007) concur, discussing that college students who believe drinking is prevalent at their university have increased intentions to drink when peers communicate about alcohol. In the last two decades, studies have begun to break the concept of social norms into smaller components.

Rimal (2008) studied both descriptive and injunctive norms as related to behaviors, finding direct, moderating, and mediating effects on behaviors. Descriptive norms refer to the perceived prevalence of a behavior, while injunctive norms refer to the pressures people perceive to conform to others' expectations (Cialdini et al., 1990). Extending Rimal's (2008) research, Padon and colleagues (2016) differentiated between descriptive and injunctive norms in the context of young adults and alcohol usage. They found that young adults (13-20 years of age) were most vulnerable to drinking excessively if they believed that others drink, they feel an expectation drink, and that consuming alcohol has benefits. Unfortunately, when college students feel higher descriptive or injunctive social norms regarding alcohol usage from their peers, alcohol usage tends to increase (Borsari & Carey, 2001).

Perceptions towards alcohol consumption are formed both directly and indirectly (Glazer, Smith, Atkin, & Hamel, 2010). Health campaigns, television, and social media, as well as interpersonal interactions, are just a few of the primary ways through which young adults glean their information about alcohol, thereby affecting their perceptions about alcohol (Thompson & Romo, 2016). Of particular note is the influence of family.

Importance of Family Communication

Familial communication impacts the health behaviors individuals choose, even long after leaving the family of origin (Kam, 2011). Specifically, the enacted family communication patterns impact children's beliefs, attitudes, values, and behaviors both within and outside of the family (Koerner & Fitzpatrick, 2002). Further, family communication impacts health decisions people make (Pecchioni & Keeley, 2011). Rhodes and colleagues (2014) describe that parents *who communicate* (emphasis added) with their children about substance use, including alcohol, can help create a protective or defensive mechanism with long-term effects. Yet, less is known about the specifics of *how* families communicate about alcohol within the family. How families approach difficult topics like alcohol within the family, whether by promoting openness and conversation or by focusing on creating similar familial beliefs across family members, may impact how an individual understands and uses alcohol in the future, specifically in college. Kam and colleagues (2017) note the importance of examining communication as a multidimensional construct – specifically, looking beyond communication frequency and quality.

Family communication patterns are often examined from two dimensions: conversation orientation and conformity orientation (Koerner & Fitzpatrick, 2006). Specifically, conversation orientation refers to how a family emphasizes free and open communication about a variety of topics between all family members. A family with a higher conversation orientation would be more likely to speak on a larger number of topics, with more family members involved in the conversation, than a family with a lower conversation orientation. The families with lower conversation orientations are generally characterized by parent-led conversations, which can limit the types of topics discussed, as well as limiting the content and who is an active participant (Schrodt, 2009). For family conversations about alcohol, this is particularly pertinent as parental

prevention or intervention can help decrease alcohol abuse in (adult) children (Kam &

Cleveland, 2011).

Multiple studies have specifically examined how parental communication in particular

about alcohol impacts youth long-term (Miller-Day, 2005; Shin & Miller-Day, 2017). First, we

know that there is a negative relationship between parental communication patterns and college

students' attitudes towards alcohol safety, with more permissive communication from parents

associated with weaker college student attitudes towards alcohol safety (Booth-Butterfield &

Sidelinger, 1998). The association does not end with just attitudes, however, but extends into

actions. One recent study examined how parental communication to high school students

regarding alcohol were associated with both alcohol-related norms and alcohol-related intentions

(Kam, Basinger, & Abendschein, 2017). Specifically, discussing negative consequences of

alcohol predicted weaker pro-alcohol norms, while a more permissive attitudes towards alcohol

predicted stronger pro-alcohol norms. Therefore, the following hypothesis is proposed: *H1:*

Conversation orientation will impact social norms (descriptive and injunctive) about alcohol.

Another well-established pattern in family communicative environments is that of

conformity, which refers to how strongly some family members are socialized to think and

behave like other family members (Koerner & Fitzpatrick, 2006). Specifically, general

conformity focuses on negative behaviors such as a parental control and coerciveness (Hesse et

al., 2017). Families with higher levels of conformity focus on rule adherence and

interdependence between family members. Rangarajan and Kelly (2006) found that families with

a family member diagnosed with alcoholism tend to have higher levels of conformity, expecting

all family members to share beliefs and suppress opinions regarding the topic. Subsequently, the

second hypothesis is proposed: *H2: Conformity orientation will impact social norms (descriptive and injunctive) about alcohol.*

Recently, conformity has been acknowledged as a more complex process than initially thought, and has been examined through a different lens by operating as two separate yet complementary constructs: cold and warm conformity (Hesse et al., 2017). Therefore, for the purposes of this study, cold and warm conformity will also be examined (Hesse et al., 2017). Cold conformity families are characterized by their strict adherence to the rules and tight reins on conversations that may potentially upset any other family members, similar to the general construct of conformity discussed previously. However, warm conformity refers to the prioritization of rules within the family system, while also acknowledging the importance of warmth and closeness between family members. Hesse and colleagues (2017) discuss how a family high in warm conformity might be characterized by parental rules and discipline, while promoting positivity and warmth within the family system simultaneously. For conversations about alcohol, the differentiation between types of conformity may be vital when it comes to creating family or health interventions.

Alcohol is often a difficult topic to discuss within the family. Haverfield (2016) discusses how some families prefer the children to "establish their own attitudes and behaviors" (p. 286) towards alcohol, while other families have a lack of understanding about the potential consequences of alcohol abuse. Other families feel a sense of stigma when discussing alcohol, as alcoholism is quite common – over 15 million adults were diagnosed with AUD, or alcohol use disorder in 2015 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016). Still others believe that indirect or avoidant strategies are best (Middleton, Pusateri, & Caughlin, 2017). Therefore, while these are clearly important conversations to have, they do not

occur as often as they should, possibly because of conformity orientations within the family. Further, the expectations of the children's responses are less documented, particularly as they age. Therefore, the following hypotheses are proposed:

H3: Cold conformity orientation will impact social norms (descriptive and injunctive) about alcohol.

H4: Warm conformity orientation will impact social norms (descriptive and injunctive) about alcohol.

Yet, family communicative environment is not the only potential factor affecting descriptive and injunctive social norms. Young adults heading off to college for the first time often face an entirely new world away from their parents, which includes immense personal freedom, yet also includes instability as they now must negotiate a separation from their familial identity (Nelson & Padilla-Walker, 2013). Unfortunately, many young adults increase substance abuse (including alcohol) during this transitory stage from their family of origin to their new life as an individual (Johnston, O'Malley, Bachman, & Schulenberg, 2009). Of particular importance is that parent-child privacy boundaries must be renegotiated (Caughlin & Afifi, 2004).

Privacy Management

Communication Privacy Management theory (CPM) was developed by Petronio (2002) and explains how individuals attempt to manage their private information, including whether or not to disclose that information to others. CPM has been used to study private health information management in several contexts in the past (Petronio, 2007). Specifically, it has recently been used to examine how former problem drinkers disclose facets of their identity to others (Romo, Dinsmore, & Watterson, 2016) and young adults' communication of alcohol abstinence (Romo, 2012). Yet, the majority of the studies examining how CPM processes impact alcohol-related

disclosures have been qualitative in nature; therefore, this study will extend the scope of CPM in the context of alcohol usage among college students quantitatively.

As alcohol usage is often stigmatized, disclosing information about alcohol is inherently private (Schomerus et al., 2011). Individuals who use alcohol underage, people who abuse alcohol, or young adults who drink without familial knowledge all face decisions of whom to disclose to, when the disclosure should happen, and how much should be told. When an individual chooses to disclose information to another, the receiver becomes a co-owner of that information (Petronio, 2002). This process creates metaphorical boundaries around the individuals who know the private information. These privacy boundaries are considered permeable if information is less protected, with tighter privacy boundaries seen as impermeable. When private information is disclosed, these boundaries keep the information between only those who are authorized through the creation of privacy rules that are based upon criteria.

Privacy rules dictate who has access to the private information, as well as how the information might be managed outside of the collective (shared) boundary. Two types of privacy rules exist: implicit and explicit (Petronio, 2002). While explicit rules are clear and direct, perhaps beginning with "you can't tell anyone, but…" implicit privacy rules are less clear and have greater potential for misunderstanding (Venetis et al., 2012). Since family communication patterns have been shown to impact an individual's privacy rule management through socialization (Afifi; 2003; Petronio, 2002), the following research question is posed: *RQ: How do implicit privacy rules impact the relationship between family communication patterns and social norms about alcohol?*

Method

Participants

Participants ($N = 444$) were 323 females, 119 males, and 2 who identified as other, ranging in age from 18-32 years of age ($M = 20.37$, $SD = 1.67$), with four participants electing to not disclose their age. A majority of participants were Caucasian (62.4%) with 22.3% self-identifying as Hispanic, 5.0% as Asian/Pacific Islander, 2.9% as African American, 1.1% as Middle Eastern, and 7.3% as other (including multiracial). The majority of participants indicated their year in school as a junior (40.8%), with 26.6% self-identifying as a senior, 22.7% as a sophomore, 9.0% as a freshman, and .9% as other. Over a third of the participants indicated that there was a history of alcoholism in their family (39.4%).

Procedures

Upon receiving institutional review board approval, participants were recruited from a large southern university's undergraduate communication courses. Participants were required to be at least 18 years of age to take the survey. Minimal extra credit incentive was provided upon completion of the study. Responses were kept anonymous.

Measures

Participants completed several measures on the following constructs: family communicative environment, social norms, and privacy variables.

Family communicative environment. Family communicative environment was measured using four separate subscales measuring the following constructs: conversation orientation, general conformity orientation, warm conformity orientation, and cold conformity orientation. Conversation and conformity orientations were measured using Ritchie and Fitzpatrick's (1990) Revised FCPT scale. All items were scored on a 1 (strongly disagree) to 5 (strongly agree) Likert-type scale. The conversation subscale includes 15 items, such as "My parents encourage me to express my feelings." Higher scores on this subscale indicate increased

familial conversation. Conversation orientation reliability (α = .93) was acceptable. The conformity subscale includes 11 items, such as "When I am at home, I am expected to obey my parents' rules." Higher scores on this subscale indicate increased familial conformity. Conformity orientation reliability (α = .86) was acceptable. Warm conformity was measured using Hesse and colleagues' (2017) 10-item measure, with higher items indicating higher levels of warm conformity orientation. All items were scored on a 1 (strongly disagree) to 7 (strongly agree) Likert-type scale. Reliability (α = .89) was acceptable. Cold conformity was measured using Hesse and colleagues' (2017) 8-item measure, with higher items indicating higher levels of cold conformity orientation. Reliability (α = .87) was acceptable.

Social norms. Social norms were measured using Park, Klein, Smith, and Martell's (2000) 9-item scale, that was broken into two subscales for the purposes of this study. All items were measured on a 1 (strongly disagree) to 5 (strongly agree) Likert-type scale. Three items comprised descriptive norms, with higher scores indicating more positive beliefs towards limiting alcohol at parties. The remaining six items referenced injunctive norms, with higher scores indicating more positive perceptions of others if the participant were to limit alcohol at parties. Sample items include "Most university students limit their alcohol consumption to zero to four drinks when they party" (descriptive norms) and "Most university students would approve of my limiting my alcohol consumption to zero to four drinks when I party" (injunctive norms). Reliabilities for descriptive norms (α = .88) and injunctive norms (α = .84) were acceptable.

Privacy rules. Privacy rules was measured using Venetis and colleagues' (2012) two-item subscale measuring implicit privacy rules. All items were measured on a 1 (strongly disagree) to 7 (strongly agree) Likert-type scale, with higher scores indicating tighter privacy

rules. A sample item includes "Although I did not ask my family not to, s/he knows not to tell others."

Reliability was acceptable for the implicit subscale ($\alpha = .79$).

Data Analysis

SPSS version 25 was used for all statistical analyses. Before running the statistical models to test my hypotheses I investigated several potential control variables that may be related to injunctive norms. An independent samples t-test found no significant differences in injunctive social norms for males (M = 4.01, SD = 1.31) and females (M = 4.24, SD = 1.25); t(440) = -1.645, p = .10. Two separate ANOVAs were then run to test for differences in education and ethnicity. There were no significant effects of education on injunctive norms [$F_{(4, 439)}$ =.92, p = .68], or for ethnicity on injunctive norms, [$F_{(7, 436)}$ = .40, p = .90]. Due to the sample being so close in age, differences due to age were not tested. Participants reported higher internal family privacy orientations (*M* = 4.27, *SD* = 1.01) than they did external family privacy orientations (*M* = 3.05, *SD* = .92). While testing the hypotheses, year in school, a known predictor of alcohol consumption, was controlled for by adding it to the first block of the regression model. Year in school was significant and therefore retained in the model. The other main predictors (conversation orientation, conformity orientation, warm conformity orientation, and cold conformity orientation) were entered into the second block of the regression model for each respective hypothesis.

<div align="center">Results</div>

Conversation orientation. The first hypothesis examined how conversation orientation predicted social norms (descriptive and injunctive) about alcohol. Two regression models were run to test this hypothesis. The descriptive (adjusted R^2 = .01, $F_{(2, 441)}$ = 3.62, *p* < .05) and injunctive (adjusted R^2 = .03, $F_{(2, 441)}$ = 7.85, *p* < .001) social norms models were both

significant. Conversation orientation was a significant predictor in the injunctive social norms model only. Year in school was a significant predictor in both models. See Table 1 for predictor statistics.

Conformity orientation. The second hypothesis examined how conformity orientation predicted social norms (descriptive and injunctive) about alcohol. Two regression models were run to test this hypothesis. The injunctive (adjusted $R^2 = .03$, $F(2, 441) = 5.76$, $p < .01$) social norms model was significant; the descriptive (adjusted $R^2 = .01$, $F(2, 441) = 2.63$, $p = .07$) social norms model was not significant. Conformity orientation was not a significant predictor in either model only. Year in school was a significant predictor in both models. See Table 2 for predictor statistics.

Cold conformity orientation. The third hypothesis examined how cold conformity orientation predicted social norms (descriptive and injunctive) about alcohol. Two regression models were run to test this hypothesis. The descriptive (adjusted $R^2 = .01$, $F(2, 441) = 3.10$, $p < .05$) and injunctive (adjusted $R^2 = .04$, $F(2, 441) = 8.78$, $p < .001$) social norms models were both significant. Year in school was a significant predictor in both models. Cold conformity orientation was a significant predictor in the injunctive social norms model only. See Table 3 for predictor statistics.

Warm conformity orientation. The fourth hypothesis examined how warm conformity orientation predicted social norms (descriptive and injunctive) about alcohol. Two regression models were run to test this hypothesis. The injunctive (adjusted $R^2 = .05$, $F(2, 441) = 11.06$, $p < .001$) social norms model was significant; the descriptive (adjusted $R^2 = .01$, $F(2, 441) = 2.51$, $p = .08$) social norms model was not significant. Warm conformity orientation was a significant

predictor in the injunctive social norms model only. Year in school was a significant predictor in both models. See Table 4 for predictor statistics.

Privacy. The research question examined how implicit privacy rules impacted the relationships between family communication patterns and social norms about alcohol. Because the descriptive social norms variable was not predicted by any of the family communicative environment variables, only injunctive social norms was used as the dependent variable. The PROCESS macro, with 10,000 bootstrapping iterations, was used to examine mediation effects (Hayes, 2013). Mediation effects were interpreted significant when the lower and upper 95% CIs were either both below or both above zero. The research question contains four independent variables (conversation orientation, conformity orientation, warm conformity orientation, and cold conformity orientation), but since PROCESS can only run one independent variable per model, they will be broken into four corresponding models. Neither conformity nor cold conformity showed significant mediation effects.

Conversation orientation. The first model investigated how implicit privacy rules might influence the relationship between conversation orientation and injunctive social norms. Significant direct effects were found for the relationship between conversation orientation and implicit privacy rules, $\beta = .25$, $p < .001$. After the mediator was added to the model, no significant direct effects were found for the relationship between conversation orientation and injunctive social norms, $\beta = .08$, $p = .28$, but significant direct effects were found for the relationship between implicit privacy rules and social norms, $\beta = .20$, $p < .001$. The indirect effect between conversation orientation and implicit privacy rules was significant, CI [.0192, .0807], indicating partial mediation effects on the relationship between conversation orientation and injunctive social norms via implicit privacy rules. See Table 5.

Conformity orientation. The second model investigated how implicit privacy rules might influence the relationship between conformity orientation and injunctive social norms. Significant direct effects were not found for the relationship between conformity orientation and implicit privacy rules, β = -.05, *p* = .33. After the mediator was added to the model, no significant direct effects were found for the relationship between conformity orientation and injunctive social norms, β = .05, *p* = .33, but significant direct effects were found for the relationship between implicit privacy rules and social norms, β = .21, *p* < .001. The indirect effect between conformity orientation and implicit privacy rules was not significant, CI [-.0327, .0103], indicating no mediation effects on the relationship between conformity orientation and injunctive social norms via implicit privacy rules. See Table 6.

Warm conformity orientation. The third model investigated how implicit privacy rules might influence the relationship between warm conformity orientation and injunctive social norms. Significant direct effects were found for the relationship between warm conformity orientation and implicit privacy rules, β = .21, *p* < .001. After the mediator was added to the model, significant direct effects were found for the relationship between warm conformity orientation and injunctive social norms, β = .15, *p* < .001, and for the relationship between implicit privacy rules and social norms, β = .19, *p* < .001. The indirect effect between warm conformity orientation and implicit privacy rules was significant, CI [.0106, .0582], indicating partial mediation effects on the relationship between warm conformity orientation and injunctive social norms via implicit privacy rules. See Table 7.

Cold conformity orientation. The fourth model investigated how implicit privacy rules might influence the relationship between cold conformity orientation and injunctive social norms. Significant direct effects were not found for the relationship between cold conformity

orientation and implicit privacy rules, $\beta = -.06$, $p = .21$. After the mediator was added to the model, significant direct effects were found for the relationship between cold conformity orientation and injunctive social norms, $\beta = .13$, $p < .01$, and for the relationship between implicit privacy rules and social norms, $\beta = .22$, $p < .001$. The indirect effect between cold conformity orientation and implicit privacy rules was significant, CI [-.0362, .0076], indicating no mediation effects on the relationship between cold conformity orientation and injunctive social norms via implicit privacy rules. See Table 8.

Discussion

The goals of this study were 1) to examine how family communicative environments affect young adults' descriptive and injunctive social norms about alcohol, and 2) to investigate how implicit privacy rules affects the relationship between the predictor and dependent variables.

This study confirms previous literature discussing how familial communicative environments have long-standing effects on young adults' social norms related to alcohol (Rhodes et al., 2014; Shin & Miller-Day, 2017). Yet, this study also expands on previous literature by examining descriptive and injunctive norms separately (Rimal, 2008). Specifically, conversation orientation, warm conformity orientation, and cold conformity orientation each predicted injunctive social norms about alcohol. An open and supportive family communicative environment has long been shown to have increased parental involvement in alcohol-related communication, with college students later reporting more responsibility about their alcohol usage (Booth-Butterfield & Sidelinger, 1998). Yet, this study's findings describe that, for young adults, having an open and supportive communicative family environment positively predicted the pressures people perceived to conform to others' expectations. This may be explained by the fact that those from open environments may be able to identify more clearly when others are

placing pressure on them to conform to expectations. Haverfield and Theiss (2016) describe how families who avoid communicating about others' perceptions of alcohol often (unintentionally) encourage the idea that alcohol usage should be stigmatized. Therefore, when families communicate openly about alcohol, the young adults from those family systems are easily able to move past the often-taboo nature of alcohol.

Both cold and warm conformity orientations also positively predicted college students' injunctive norms about alcohol. Yet, general conformity orientation was not a significant predictor of injunctive norms about alcohol. These findings extend Hesse and colleagues' (2017) rationale of breaking the conformity into separate constructs, as well as Kranstuber Horstman and colleagues' (2018) recommendation. Adherence to authority (e.g., cold conformity) understandably aligns with injunctive norms, where individuals perceive pressure to conform to others' expectations (Cialdini et al., 1990). Further, Miller-Day (2008) found that parents who tell their children directly that they would not condone alcohol usage related to decreased alcohol usage. Of course, more research is needed to examine the differences between general conformity and cold conformity. Warm conformity, or the warmth and closeness in the family system, also was positively associated with injunctive norms about alcohol, or the pressures people perceive to conform to others' expectations (Cialdini et al., 1990). One explanation is that a young adult whose family encouraged warmth and closeness may be more likely to identify the pressures that others may attempt to enact on them.

Interestingly, this study had no significant findings related to descriptive norms about alcohol. Some prior research reports that individuals believing their peers consumed more alcohol (e.g., higher descriptive norms) were more likely to consume higher quantities of alcohol (Padon et al., 2017). Yet other previous research has encountered nonsignificant findings when

examining descriptive social norms related to alcohol, citing both inconsistency between measures examining descriptive social norms and mixed findings (Lapinski et al., 2017). This study's findings lend credence to the idea that measures for descriptive social norms may lack inherent validity. Theoretically, while perhaps it is indeed peers, rather than family members (specifically parents) who have the stronger impacts on descriptive norms, consistent findings across multiple studies are needed to clearly make claims.

Implicit Privacy Rules

This study was also unique in using Communication Privacy Management theory (CPM) to extend research on young adults' social norms about alcohol. The findings show that the relationship between an open and supportive communicative environment and injunctive social norms is partially mediated by implicit privacy rules. Additionally, the relationship between warm conformity orientation and injunctive social norms is partially mediated by implicit privacy rules.

An open and supportive communicative environment, and an adherence to rules with a simultaneous focus on warmth and closeness in the family, were found to cause injunctive social norms about alcohol because of implicit privacy rules, yet other concepts likely influence these relationships. One unexpected finding was that gender and ethnicity, previously established as known predictors of either communication about alcohol or alcohol usage (Haverfield, 2016), as well as privacy boundaries (Hong, 2018), were not significant predictors for either variable. One explanation may be that the sample was primarily Caucasian.

An explanation for the general findings may be that the content (e.g., alcohol) being discussed may be connoted differently depending upon individuals, thereby affecting the usage of specific types of privacy rules. Specifically, Venetis and colleagues (2012) found that

negatively valenced information tended to use more explicit privacy rules than implicit privacy rules. Since alcohol usage within the family is typically negatively valenced (e.g., discussing consequences rather than benefits of alcohol usage) Kam, Basinger, & Abendschein, 2017), it is possible that implicit privacy rules may not be used frequently, thereby allowing other factors to be at play. One such factor is family health history. Alcohol usage has been demonstrated to have a genetic and familial link (National Institute on Alcohol Abuse and Alcoholism, 2008), so how family health history of alcohol is communicated within the family is likely not limited to only privacy rules, but also privacy boundaries (Hong, 2018). Further, a family history of alcoholism is thought to impact how adult children of people who abuse alcohol communicate about alcohol (Haverfield, 2016), particularly through increased feelings of stigma, thereby potentially creating impermeable boundaries.

Implications

Several practical and theoretical implications exist from this study's findings. First, this is among the first studies to examine both general conformity orientation alongside cold and warm conformity orientations. Previous research (Kranstuber Horstman et al., 2018; Hesse et al., 2017) have recommended updates to the conformity constructs, yet most studies have yet to test differences between the extended or newer conformity measures. A clearer understanding of the existing conformity measures is important so that interventions may be developed on the basis of family type. While conformity orientation as a predictor was not significant in any of the models tested, both cold and warm conformity were significant predictors in their respective models. This lends heuristic value to Hesse and colleagues' (2017) study reconceptualizing family communication patterns orientations as more complex than initially thought. Further research

using both general conformity and the cold and warm conformity orientations should be continued to examine the reliability and validity of the measures in multiple contexts.

Second, previous research has shown that resistance efficacy can decrease alcohol consumption (Jang & Rimal, 2012). The findings of this study, in which an open and supportive environment, as well as warmth and closeness together with rule adherence, within the family's communication patterns impacts a young adult's injunctive norms about alcohol, echo this finding. While Padon and colleagues (2016) recommend interventions designed to enhance peer pressure resistance, it is possible that an intervention should also be designed to enable and enhance parent-adult child communication, with peer pressure resistance as a possible side effect of the intervention. With improved parent-adult child communication beginning at an earlier age, healthier alcohol-related norms may be better established, thereby mitigating potential negative influences.

As Romo and colleagues (2017) note, communication about alcohol usage by young adults has ramifications in many contexts, including "legal, professional, and relational" (p. 184), which makes this study particularly important. This study therefore extends the scope of Communication Privacy Management Theory, which has been previously utilized to examine alcohol usage and social norms individually. Specifically, studies have examined how young adults in college manage privacy boundaries of alcohol content on their social media (Romo et al., 2017) and how adults manage the social norms of communicating about miscarriages (Bute, Brann, & Hernandez, 2019). Understanding the expectations and social norms surrounding young adults, particularly regarding alcohol usage in an alcohol-heavy context (e.g., college) and how they manage their subsequent communication is important for scholars attempting to better

understand why and how young college students make health decisions, such as alcohol consumption.

Limitations and Future Directions

While there were some limitations in this study, these open the doors for future research. First, this study was of cross-sectional design, which limits any claims of causality. Future research should examine the longitudinal effects of familial communicative environment's impact on college students' social norms about drinking. Specifically, a study following a cohort through all four years of college, with participants reporting social norms about alcohol each semester as well as perceptions of family communication patterns and privacy variables, would allow for clearer conclusions. Second, the study sample was composed of predominantly Caucasian females. Research shows that males are much more likely to use (and abuse) alcohol than females; therefore, a more representative sample should be utilized as the social norms may perhaps differ by gender (Wechsler et al., 2002). Finally, the conceptualization of conformity should be continued to be examined in a variety of contexts (Kranstuber Horstman et al., 2018; Hesse et al., 2017), as current research has mixed findings regarding the various available measures.

Conclusion

Overall, however, this study does provide an extension into the current understanding of family communicative environment, privacy rules, and social norms regarding alcohol usage in young adults. Specifically, it examines more closely *how* families communicate about alcohol within the family by examining whether families promoting openness and conversation or focusing on creating similar familial beliefs across family members, may impact how an individual understands and uses alcohol in the future, specifically in college.

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Table 1

Summary of Regression Analysis for H1

Conversation Orientation

Variable	*B*	SE *B*	β	t
Descriptive Social Norms				
Participant Year in School	-.15	.07	-.11*	-2.24
Conversation Orientation	.08	.05	.07	1.51
Injunctive Social Norms				
Participant Year in School	-.21	.06	-.16**	-3.35
Conversation Orientation	.10	.05	.10*	2.12

*Notes. *p* < .05, **p* < .01, ***p* < .001

Table 2

Summary of Regression Analysis for H2

Conformity Orientation

Variable	*B*	SE *B*	β	t
Descriptive Social Norms				
Participant Year in School	-.15	.07	-.11*	-2.24
Conformity Orientation	-.03	.06	-.02	-.49
Injunctive Social Norms				
Participant Year in School	-.21	.06	-.16**	-3.35
Conformity Orientation	.04	.06	0.03	.64

*Notes. *p* < .05, **p* < .01, ***p* < .001

Table 3

Summary of Regression Analysis for H3

Cold Conformity Orientation

Variable	*B*	SE *B*	β	t
Descriptive Social Norms				
Participant Year in School	-.15	.07	-.11*	-2.24
Cold Conf. Orientation	.06	.05	.05	1.09
Injunctive Social Norms				
Participant Year in School	-.21	.06	-.16**	-3.35
Cold Conf. Orientation	.12	.05	.12*	2.51

Notes. *$p < .05$, **$p < .01$, ***$p < .001$

Table 4

Summary of Regression Analysis for H4

Warm Conformity Orientation

Variable	*B*	SE *B*	β	t
Descriptive Social Norms				
Participant Year in School	-.15	.07	-.11*	-2.24
Warm Conf. Orientation	-.004	.06	-.003	-.07
Injunctive Social Norms				
Participant Year in School	-.21	.06	-.16**	-3.35
Warm Conf. Orientation	.18	.06	.15**	3.28

Notes. *$p < .05$, **$p < .01$, ***$p < .001$

Table 5 Regression Results for Main Effect and Mediation Effect with Conversation Orientation as the Predictor

Variables	B	SE	t
Direct and Total Effects			
CO to IPR	.25***	.05	5.41
IPR to ISN	.20***	.05	3.94
CO to ISN	.05	.05	1.08
CO to ISN, controlling for IPR	.10*	.05	2.10
Bootstrapping results for indirect effects	Estimate	SE	95% CI
CO to IPR to ISN	.05	.02	[.0192 .0807]

Note. N = 150. CO = conversation orientation; IPR = implicit privacy rules; ISN = injunctive social norms; CI = confidence interval. Bootstrap sample size = 10,000. *** = *p* < .001; ** = *p* < .01; * = *p* < .05.

Table 6 Regression Results for Main Effect and Mediation Effect with Conformity Orientation as the Predictor

Variables	B	SE	t
Direct and Total Effects			
CfO to IPR	-.05	.05	-.97
IPR to ISN	.21***	.05	4.38
CfO to ISN	.05	.06	.98
CfO to ISN, controlling for IPR	.04	.06	.76
Bootstrapping results for indirect effects	Estimate	SE	95% CI
CfO to IPR to ISN	-.01	.01	[-.0327, .0103]

Note. N = 150. CfO = conformity orientation; IPR = implicit privacy rules; ISN = injunctive social norms; CI = confidence interval. Bootstrap sample size = 10,000. *** = *p* < .001; ** = *p* < .01; * = *p* < .05.

Table 7 Regression Results for Main Effect and Mediation Effect with Warm Conformity Orientation as the Predictor

Variables	B	SE	t
Direct and Total Effects			
WCO to IPR	.21***	.05	3.81
IPR to ISN	.19***	.05	3.84
WCO to ISN	.15***	.06	2.59
WCO to ISN, controlling for IPR	.19**	.06	3.28
Bootstrapping results for indirect effects	Estimate	SE	95% CI
WCO to IPR to ISN	.03	.02	[.0106, .0582]

Note. N = 150. WCO = warm conformity orientation; IPR = implicit privacy rules; ISN = injunctive social norms; CI = confidence interval. Bootstrap sample size = 10,000. *** = *p* < .001; ** = *p* < .01; * = *p* < .05.

Table 8 Regression Results for Main Effect and Mediation Effect with Cold Conformity Orientation as the Predictor

Variables	B	SE	t
Direct and Total Effects			
CCO to IPR	-.06	.05	-1.26
IPR to ISN	.22***	.05	4.53
CCO to ISN	.13**	.05	2.76
CCO to ISN, controlling for IPR	.12*	.05	2.44
Bootstrapping results for indirect effects	Estimate	SE	95% CI
CCO to IPR to ISN	-.02	.01	[-.0362, .0076]

Note. N = 150. CCO = cold conformity orientation; IPR = implicit privacy rules; ISN = injunctive social norms; CI = confidence interval. Bootstrap sample size = 10,000. *** = *p* < .001; ** = *p* < .01; * = *p* < .05.