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The influence of humor and amusement on mother-adolescent sexual communication

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Abstract: This study examines the impact of a humorous intervention designed to increase mothers’ intentions to talk to their child about sex (N = 442). Mother-adolescent sexual communication has been linked to positive sexual health outcomes for the child, but little is known about how to motivate mothers to engage in this communication. Using the Theory of Planned Behavior, the experiment tests the impact of humor and amusement on attitudes, norms, self-efficacy, and likelihood of future sexual communication. Results reveal that mere exposure to humor can have a negative effect on participants, unless they report being highly amused, in which case their communication attitudes, norms, and intentions are increased. Results are discussed in light of implications for understanding the persuasive effect of humor and amusement on future mother-adolescent sexual communication.

Keywords: communication, amusement, family, intention, sexual health

1 Introduction

The physical and emotional sexual well-being of young people is an important indicator of a society’s well-being. Rates of unplanned pregnancies, sexually transmitted infections (STIs) and other potentially negative outcomes vary greatly between nations, but in all places, there is room for improvement. Each year one in twenty young people get a curable STI (Dehne and Riedner 2005). Young people also account for 42% of new HIV infections for people aged fifteen and older (United Nations 2012). Unplanned teen pregnancy is also common worldwide (United Nations 2010). Moreover, many teens, especially young women, also report feelings of regret and *Corresponding author: Katrina L. Pariera, Department of Organizational Sciences and Communication, The George Washington University, 600 21st Street NW, Washington, D.C. 20052, USA, E-mail: klp@gwu.edu

Author’s note: The results of this study were part of a larger study on mother-adolescent sexual communication. Researchers considering including this publication in a meta-analysis should contact the author for details.
One thing that has been shown to improve these negative outcomes is parent-adolescent sexual communication. Adolescents whose parents talk to them about sex are more likely to initiate sex at a later age, more likely to use contraception when they do have sex, and have more positive feelings about sexuality (Aspy et al. 2007; Hadley et al. 2008; Malcolm et al. 2013; Riggio et al. 2014). Despite these positive outcomes, parent-adolescent sexual communication is often a missed opportunity.

Parents tend to avoid in-depth or frequent sexual communication with their offspring (SIECUS 2011) and instead view this as an unwanted and highly uncomfortable exchange (Elliott 2012). Few studies have examined effective ways to motivate parents to initiate these conversations. Since these conversations are often seen as so uncomfortable, interventions using humor appeals to encourage communication should be tested because humor has been found to increase positive emotions, and even increase communication about taboo subjects (Szabo 2003; Campo et al. 2013; Chatterjee et al. 2009). The effect of humorous appeals on parents’ emotional responses and how this affects their communicative behaviors has yet to be examined. This study tests the effect of a humorous and non-humorous intervention on mothers’ motivation to initiate a potentially embarrassing conversation with their child.

1.1 Mother-adolescent sexual communication

While parent-adolescent sexual communication from mothers and fathers has proven to be beneficial to the child’s well-being, it is mostly mothers who do the talking. Several studies have found that mothers talk more to their children about sex than fathers do (Atienzo et al. 2009; Byers et al. 2008; Guzmán et al. 2003; Heisler 2005; Kirkman et al. 2002). Byers et al. (2008) study found that mothers not only talked more than fathers but also reported higher satisfaction with this communication than fathers did. Research has found that youth whose mothers talk to them about sex are less likely to be sexually active (Aspy et al. 2007; Guzmán et al. 2003), more likely to delay sex (Karofsky et al. 2001; Lehr et al. 2000), use birth control and condoms (Aspy et al. 2007; Atienzo et al. 2009; Hadley et al. 2008), utilize sexual and reproductive health care services (Hall et al. 2012), and have higher sexual self-esteem (Riggio et al. 2014). Although much of this research is with samples from the United States, one meta-analysis of 52 studies from around the world concluded that mother-adolescent sexual communication plays a key role in safer sex practices among youth (Widman et al. 2015).
Despite these positive associations, sexual communication between parents and children has decreased over the last few decades, at least in the United States (Robert and Sonenstein 2010). When these conversations do happen it tends to be after the child is already sexually active, (Atienzo et al. 2009) and some topics, particularly contraception and STIs, are avoided altogether (Robert and Sonenstein 2010; Center for Latino Adolescent and Family Health 2011). Discomfort and anxiety are commonly reported by mothers as barriers to more frequent sexual communication, and mothers may be unaware of the important role they can play (Pariera 2016; Elliott 2012; Miller et al. 2007). To reap the full benefits of mother-adolescent sexual communication these conversations must take place more often, earlier, and cover a range of topics (Atienzo et al. 2009; Hutchinson 2002; Wilson and Donenberg 2004).

There have been relatively few interventions aimed at increasing sexual communication between parents and children. One review found only 12 intervention studies over the last 20 years (Akers et al. 2011). A more recent meta-analysis looked at 28 studies aimed at increasing parent-child sexual communication and found that almost all of them were effective at increasing communication, usually by increasing parents’ comfort and decreasing their anxiety associated with these conversations (Santa Maria et al. 2015). However, most interventions were educational, time-intensive programs, taking an average of seven hours for parents to complete. There is evidence that even exposure to brief interventions, such as public service announcements (PSAs), can improve sexual communication. Some studies have shown that brief media interventions can increase sexual communication between partners and peers (Chatterjee et al. 2009) by increasing positive mood and attitudes, but little is known about what kinds of messages can increase mothers’ sexual communication with their children. The general scarcity of these types of interventions is surprising as evidence mounts that mothers can positively impact their child’s sexual health. This study tests two types of public service announcements on mothers’ attitudes and intentions to engage in mother-adolescent sexual communication (MASC).

1.2 Humor, emotion, and amusement

1.2.1 The effect of humorous stimuli

To create a message that will persuade an audience to change their attitudes and behaviors, humor can be a key tactic (Cline and Kellaris 1999; Conway and Laurette 2002). People tend to like humorous messages, and thus pay more attention to them (Eisend 2009; Nabi et al. 2007). A humorous stimulus can
function as a persuasive device by increasing the audience’s liking of, interest in, and attention to the message (Eisend 2009; Berk and Nanda 2006; Matarazzo et al. 2010; Eisend 2011; Strick et al. 2009). Moreover, humorous stimuli can have important effects on one’s state of mind, and in turn one’s behaviors. Seeing or hearing something humorous can impact one’s emotional state by decreasing anxiety and increasing positive mood (Ford et al. 2012; Eisend 2011; Szabo et al. 2005; Szabo 2003; Berk and Nanda 2006; Conway and Laurette 2002). In the realm of communication, exposure to humorous stimuli can reduce negative emotions, thus increase willingness to talk about difficult or taboo subjects (Yang et al. 2010; Conway and Laurette 2002; Campo et al. 2013; Chatterjee et al. 2009). For example, Campo and colleagues (2013) found that exposure to a humorous campaign increased participants’ willingness to talk to their friends about unintended pregnancy. Chatterjee and colleagues (2009) found that exposure to a humorous message lead to increased interpersonal communication about condoms, and increased HIV prevention behaviors.

However, the positive feelings that might result from exposure to humorous stimuli can be accompanied by unintended negative effects. People tend to judge humorous messages as less credible (Eisend 2009). Humorous messages may lead to decreased perceptions of the seriousness of health issues (Moyer-Gusé et al. 2011), and increased dismissal by audiences (Nabi et al. 2007). Under what conditions, and to what extent humor plays a persuasive role in motivating MASC is entirely unknown. Because humorous messages can have both positive (e.g. increased liking) and negative (e.g. decreased credibility) repercussions it is necessary to understand how humorous messages affect the credibility and likability of messages intended to persuade mothers to engage in communication with their adolescent children, and whether that impacts their intentions to communicate.

1.2.2 Incongruity humor

To understand how and why humor works it is crucial to understand the underlying mechanisms of humor. The function of humor is often explained by one of three major humor theories: superiority theory, relief theory and incongruity theory (see Lynch 2002; Meyer 2000; for overviews). Superiority theory is based on perceiving a situation as proof that oneself is superior to others in some way (more mature, knowledgeable, and etc.). Relief theory suggests humor provides tension release. Incongruity theory posits that humor is a reflection of the capacity to notice changes to patterns, or reflect surprise at the unexpected. Some scholars propose that the three theories are not mutually exclusive, but that taken together, they can explain humor’s function in a given situation (Lynch 2002; Meyer 2000).
incongruity humor, the type of humor attempted in the stimuli for the present study, “does not exclude the superiority or relief motivations of humor, but suggests that laughter is ... based on a psychological desire for consistency ... It is dependent on the individual’s perception of the event, individual, or symbol in comparison of what is considered typical.” (Lynch 2002: 428). When humor involves a discrepancy, or something unexpected, the audience is aroused and in a state of expectation. Resolving the incongruity relieves the audience from this state, which leads to a pleasurable feeling. Some researchers suggest that the audience might not so much react to incongruity, as create incongruities to aid in constructing a humorous interpretation (Veale 2005). While it is still in question exactly how incongruity and humor function together, it is clear that incongruity is a key element of many, if not most, humorous messages. Incongruity humor is the most commonly used type in advertising, and has been found to have a persuasive effect on audiences (Spotts et al. 1997). Thus this study tests the effects of a message that uses incongruity humor to attempt to persuade mothers to engage in sexual communication with their children.

While amusement is the expected emotional response from humorous stimuli, being exposed to a humorous stimulus does not necessarily result in an amused response. Researchers occasionally conflate humor and amusement or outcomes are measured based only on exposure to humor, rather than reaction to it (whether the participant is actually amused). It is more semantically accurate to say that humor describes the attributes of stimulus while amusement describes the (desired) response, or “humor is a message sent by an individual or group with psychological motivations, but this humor message is also dependent on the interpretation by another individual or group” (Lynch 2002: 430). While humor and amusement are presumably correlated, there is a possibility for greater precision in our understanding of these concepts by examining findings by stimulus and response. Subsequently, the hypotheses and research questions in this study are examined by stimulus (humorous versus non-humorous), then within the humorous condition they are examined by participant reports of being amused. This study examines the roles of humor and amusement on mothers’ intentions to talk to their children about sex.

1.3 The theory of planned behavior

This study tests the effect of humor and amusement on mothers’ intentions to talk to their child about sex using the Theory of Planned Behavior. The Theory of Planned Behavior (TPB) (Ajzen 1991) provides proven guidelines for predicting these behavioral intentions. The theory posits that behavior is directly related to intention to perform that specific behavior. The stronger the intention to perform
a behavior, the more likely the person is to perform that behavior. The TPB has been shown to predict a variety of intentions and behaviors (Sutton 1998). For example, meta-analyses have found that the TPB consistently predicts individuals’ safer-sex communication, quitting smoking, alcohol consumption, healthy eating, and eco-friendly consumer behaviors to name a few (Noar et al. 2006; Wang et al. 2014; Gao et al. 2016; Topa and Moriano 2010; McDermott et al. 2015; Cooke et al. 2016).

There are three major predictors of behavioral intentions, the first being attitudes. Parental attitudes about sexual communication seem to be mixed. Embarrassment, fear, and discomfort are commonly reported (Elliott 2012; Jerman and Constantine 2010), but some studies have found that parents also have positive attitudes about this communication (Byers et al. 2008; Heisler 2005). This study takes both negative and positive attitudes into account for predicting communicative intentions.

Subjective norms, or the extent to which people think a behavior should be performed, are the second predictor of behavioral intentions (Borsari and Carey 2003). Subjective norms reflect perceptions of social approval, or “do others approve of me doing this?”. Understanding mothers’ norm perceptions about MASC is a critical area of research. It is not yet known how subjective norms affect mothers’ communication with their children, nor is it known how humor affects mothers’ norm perceptions. The third behavioral predictor is perceived behavioral control, or self-efficacy. Parents with high self-efficacy are more likely to talk to their children about sex (DiLorio et al. 2000; Pluhar et al. 2008). Mothers’ confidence in talking to their children about sex was one of the biggest predictors of sexual communication in a study of 1,066 African-American dyads (Miller et al. 2007), even controlling for education and income.

Ajzen (1991) emphasizes that in some cases only one predictor of intention will have a significant impact, while in other cases a combination of perceived behavioral control, attitudes, and injunctive norms can impact intentions. In designing interventions it is critical to understand how these three factors predict intentions, so that future studies can focus on manipulating the factors that have the most influence. Because this model has not been run on mother-adolescent sexual communication it is not clear if and how these predictors should be targeted in interventions aimed at increasing mothers’ intentions to talk to their children about sex. Moreover, it is also crucial to understand how these variables can be affected by emotional appeals. The effect of humor and amusement on the TPB predictor variables is underexplored, but existing research suggests emotional responses play a role in affecting behavioral predictors. Murphy and colleagues (2011) conclude that knowledge, attitudes and behaviors are strongly influenced by heightened emotional responses. Keer et al.
(2012) found that emotion mediated the influence of attitudes and self-efficacy in a study of 20 different health behaviors. There has been little research on the role humor and amusement play in mothers’ attitudes, self-efficacy and norm perceptions. This research will address this gap by analyzing the effect humor and amusement have on mothers’ norms, attitudes, and self-efficacy.

Based on the extant literature reviewed here, this study posits four hypotheses and four research questions. First, it is hypothesized that participants in the current study will report liking a humorous PSA more than a non-humorous PSA (H1), but participants will perceive a humorous PSA as less credible than participants who view a non-humorous PSA (H2). It is also proposed that among mothers who view a humorous PSA, amusement will be positively associated with liking the PSA (H3), but negatively associated with the perceived credibility of the PSA (H4). Whether a humorous or non-humorous PSA predicts greater intentions to talk to one’s child about sex will also be explored (RQ1) as will whether amusement is associated with greater intentions to talk with one’s child about sex (RQ2). This research will also analyze the effect humor has on norms, attitudes, and self-efficacy with regard to MASC (RQ3) and the role of amusement on norms, attitudes, and self-efficacy (RQ4).

2 Method

2.1 Sampling and procedures

A convenience sample of 475 mothers in the United States were recruited by Qualtrics, an online survey administrator. Qualtrics recruits participants through social media advertisements, and participants opt in to be on a survey panel. The sample was limited to Caucasians in the United States because humor is often culturally bound (Hatzithomas et al. 2011; Lee and Lim 2008) and this allows for a reduction of cultural variation within the sample (using nationality and ethnicity as proxies for culture). Similarly, only women were included to further limit variability, as there is evidence that men respond differently to humor than women (Soscia et al. 2012). Because onset of puberty is usually the time when parents start talking to their children about sex, only mothers of children 11–16 years old were included in the study (based on puberty guidelines (National Institutes of Health n.d.) Participants were compensated $2 USD to participate in the survey, which took an average of seven minutes to complete. Participants were informed that the study was about health, to minimize participation bias. Thirty-three participants were eliminated for not having watched the entire PSA, or for evidence of yea-saying on their survey answers, resulting
in a final sample of 442 participants. After agreeing to participate they were randomly assigned to one of two conditions: humorous PSA or non-humorous PSA. After viewing the PSA, participants completed the same questionnaire. They were asked to give their child’s first name, which was piped into the remainder of the study, allowing the survey to be tailored to each participant (e.g., “How important is it to you to talk to Evan about sex?”).

2.2 Stimulus materials and piloting

For this study two different PSAs designed to encourage MASC were created, one with a humorous tone and one with a non-humorous tone. The concept of the PSAs was to show what happens when you do not talk to your children about sex. Both PSAs were 35 seconds long and featured a montage of six short clips of young adults making incorrect statements about sexual health, with statements written to be either humorous or not, depending on condition (see Figure 1 for sample screenshots of the PSAs).

The statements in the humor condition were written with the help of a professional humor writer experienced in the application of incongruity humor. Several parents of adolescents were conferred with throughout the process. Both PSAs begin with a text-only clip, with the words “The following adults had parents who never talked to them about sex” followed by six clips of young adults revealing misconceptions they have about sex, including condoms, pregnancy, abstinence, birth control, and STDs. In the humorous condition some of the statements are “Why would I need condoms? I don’t know how to make balloon animals,” and “I could never be abstinent. That means not eating bacon, right?” In the non-humorous condition, the statements match the topics, but lack humorous overtones. For example, “I’m not sure why I would need to use condoms,” and “I never realized abstinence was an option for guys.” The final two clips in the PSAs read “Don’t let your child grow up to be like them,” then “Talk to your kids about sex. Early and often.”

The PSAs and survey were piloted on a sample of 38 participants recruited from Qualtrics, with the same socio-demographic characteristics of the final sample. The results from these 38 participants were analyzed to test that participants perceived the humorous PSA as funny, and the non-humorous PSA as not funny. Analyses were also conducted to ensure that unintended reactions to the PSAs (feeling confused, afraid, angry, or disgusted by either PSA) were avoided. Participants in the humorous condition gave the PSA a mean humor score of 6.00 (SD = 2.81) on a 10-point scale measuring how funny the PSA was. Participants in the non-humorous condition gave the PSA a mean humor score of 1.78 (SD = 1.93) (t(38) = –3.76, p < 0.001). For both conditions, participants reported that the extent to which they were
confused, angry, afraid or disgusted were all below 2.0 on the 10-point scale. Based on the results from the pilot study, no changes were made to the final questionnaire or PSA.

2.3 Participants

The average age of participants was 38 years old ($SD = 9.55$). Ten percent had less than a high school diploma, 29% had a high school diploma or GED, 28% had some college experience, and 33% had a Bachelor’s degree or higher. These
numbers are close to national averages for Caucasi ans in the United States, (U.S. Census Bureau n.d.). Because some participants may have multiple children in the 11–16 age range, they were asked to answer questions only about their oldest child in that age range. Slightly over half of participants answered questions about their son (50.5%, \(n = 223\)). The average age of the child participants answered questions about was 13.72 (SD = 1.69).

2.4 Measures, reliability, and validity

After viewing the PSA, mothers were asked how funny they thought it was, on a scale from one, (“Not At All Funny”) to ten (“Extremely Funny”). They were also asked the extent to which the PSA made them feel confused, surprised, angry, afraid, amused and disgusted on a 10-point scale where one implied “Not At All” and ten implied “Extremely.” The two items “How Funny” and “How Amused” were highly correlated (\(r (442) = 0.78, p < 0.001\)) and averaged together to create an Amusement variable. To measure liking, participants were asked “To what extent did you …” “like the PSA,” “find the PSA interesting,” and “pay attention to the PSA,” on a scale from “Not At All” (one) to “Extremely” (ten). Reliability was high for the three items (Cronbach’s \(\alpha = 0.90\)). Credibility was assessed with three statements such as “I think the general message of this PSA is believable,” indicating their agreement on a scale from one (“Strongly Disagree”) to ten (“Strongly Agree”). Reliability was also high for these three items (Cronbach’s \(\alpha = 0.92\)).

2.4.1 Subjective norms

Subjective norms were measured by asking “How much do you think other mothers would approve of you talking to [child’s name] about the following?” followed by a list of eight sexual topics (including birth control, STDs, abstinence, anatomy, relationships, and etc.). This scale ranged from one (“Not At All”) to ten (“Extremely”). This scale was developed based on a review of TPB research and reliability for the scale was high (Cronbach’s \(\alpha = 0.93\)).

2.4.2 Self-efficacy

To measure self-efficacy participants were asked to indicate their agreement with six statements on a scale from one (“Strongly Disagree”) to five (“Strongly Agree”). Items included “I can talk to my child about any sexual issue,” “I can answer any sex-related questions my child asks me,” “I know how
to handle difficult conversations with my child,” “If I want to have a talk with my child about sex, it’s easy for me to do so,” “I can remain calm if my child seems anxious or nervous about talking about sex,” and “I am comfortable talking to my child about sex.” These items were developed based on a review of self-efficacy and TPB literature and reviewed with a panel of experts familiar with such measures (Cronbach’s $\alpha = 0.92$).

### 2.4.3 Attitudes

To assess attitudes toward MASC, participants were given six attitude statements and asked to indicate their agreement on a 10-point scale. The scale included the phrase “Talking with [child] about sex ...” followed by the phrases “... is embarrassing,” “... brings us closer,” “... is a positive experience,” “... makes me nervous,” “... is something I look forward to,” and “... is uncomfortable.” The items “is embarrassing,” “makes me nervous,” and “is uncomfortable” were reverse coded. These items were developed based on a review of the literature and reviewed with a panel of experts familiar with health and sexual communication research. Because some items on the scale reflected positive attitudes and some reflected negative attitudes (albeit reverse coded), a principal component analysis was done. This revealed two components with eigenvalues greater than one, which explained 48% and 25% of the total variance respectively, and these two components were retained. The two-component solution explained 73% of the total variance. A promax (oblique) rotation was employed to aid interpretability. The rotated solution was interpreted as a positive attitude factor, and negative attitude factor. The first component, Positive Attitudes, consisted of the “brings us closer,” “is a positive experience,” and “is something I look forward to” items. The second component, Negative Attitudes, consisted of the remaining items. These items were combined into two separate scales. Cronbach’s $\alpha$ for Positive Attitudes was 0.69, and the Cronbach’s $\alpha$ for Negative Attitudes was 0.88.

### 2.4.4 Communication

Participants were asked about their past and intended sexual communication with their child. Past communication was assessed by asking “In the previous 12 months, how often have you talked to [child’s name] about the following issues?” The same eight items from the norms scale were used, and mothers indicated the frequency of these conversations on a 10-point scale from “Never” to “All The Time.” Cronbach’s $\alpha$ was high at 0.95. Future MASC was assessed in
the short and long-term. One short-term item asked “How likely is it that you will talk to [child’s name] about sex in the next 7 days?” on a 10-point scale from “Not At All Likely” to “Extremely Likely.” The long-term scale asked “How likely is it that you will talk to [child’s name] about [the same eight items from the subjective norms and past communication scales] in the next 12 months?” on a 10-point scale from “Not At All Likely” to “Extremely Likely.” The one 7-day item and the eight 12-month items were highly correlated (Cronbach’s α = 0.94), so one scale for MASC intentions was created.

3 Results

Means and standard deviations for all major variables are presented in Table 1.

Participants viewing the humorous PSA were more amused (M = 5.98, SD = 2.90) than participants viewing the non-humorous PSA (M = 1.67, SD = 1.68). An independent samples t-test was conducted to see whether reactions varied significantly between groups. As would be expected, amusement was significantly lower in the non-humorous conditions (t(440) = −17.01, p < 0.001). The extent to which participants in either condition reported that the PSA made them feel confused, angry, afraid, or disgusted (all of which were unintended) were below 3 on the 10-point scale.

Table 1: Means and standard deviations for variables of interest.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective Norms</td>
<td>6.51</td>
<td>0.05</td>
</tr>
<tr>
<td>Self-Efficacy (5-pt scale)</td>
<td>4.13</td>
<td>0.75</td>
</tr>
<tr>
<td>Negative Attitudes</td>
<td>6.19</td>
<td>2.70</td>
</tr>
<tr>
<td>Positive Attitudes</td>
<td>7.47</td>
<td>1.84</td>
</tr>
<tr>
<td>Past MASC</td>
<td>5.56</td>
<td>2.70</td>
</tr>
<tr>
<td>Future MASC</td>
<td>5.98</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Note: (N = 442). All variables measured on a 10-point scale, except where noted.

In keeping with past research on the use of humor in media, it was hypothesized that participants in the humor condition would like the PSA more (H1), and perceive it as less credible (H2). An independent t-test revealed that participants in the non-humorous condition liked the PSA more (t(440) = 4.12, p < 0.001). Hypothesis one was not supported, and in fact, the reverse was found. Credibility was significantly higher in the non-humorous condition (t(440) = 6.66, p < 0.001), supporting hypothesis two. It was also hypothesized that amusement, like humor, would be positively
associated with liking the PSA (H3), and negatively associated with credibility (H4). Within the humor condition, two ANCOVAs were run (instead of Pearson’s correlations, which are more likely to result in a Type I error) with amusement as the covariate and likability and credibility, as the dependent variables. Amusement was significantly and positively associated with liking the PSA, $F(224) = 143.05, p<0.001$, supporting hypothesis three. Amusement was positively associated with credibility, $F(224) = 43.02, p<0.001$, meaning hypothesis four was not supported, and the reverse was found.

The first research question (RQ1) asked if a humorous or non-humorous PSA predicts greater intentions to talk to one’s child about sex. For all regressions in this study there were no serious violations of multicollinearity, homogeneity of error variances, normality of residuals, and linearity. Regression analysis revealed that, controlling for the child’s gender and past MASC, condition did not significantly predict intentions to talk to one’s child about sex ($p = 0.136$). Because the research attempts to disentangle humor and amusement, a similar model was run on the participants in the humorous condition, with amusement as the predictor (RQ2). In this case, being amused by the PSA did significantly predict intentions to talk to one’s child about sex (see Table 2).

**Table 2**: Summary of multiple regression analysis for amusement as predictor of PCSC intentions (Humor condition only).

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>SE(B)</th>
<th>$\beta$</th>
<th>t(sig.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child’s Gender</td>
<td>0.56</td>
<td>0.31</td>
<td>0.10</td>
<td>1.82</td>
</tr>
<tr>
<td>Past PCSC</td>
<td>0.56</td>
<td>0.06</td>
<td>0.52</td>
<td>9.44***</td>
</tr>
<tr>
<td>Amusement from PSA</td>
<td>0.23</td>
<td>0.06</td>
<td>0.21</td>
<td>3.90***</td>
</tr>
</tbody>
</table>

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The remaining research questions focused on the TPB. Consistent with the TPB model, mothers’ attitudes, subjective norms, and self-efficacy predicted intentions to talk about sex ($F(4, 376) = 54.30, p<0.001$), explaining 56% of the variance. The third research question asked what effect a humorous and non-humorous tone would have on norms, attitudes, and self-efficacy with regard to MASC. To answer this question a one-way multiple analysis of variance (MANOVA) was run. The test revealed that PSA condition had no effect on any of the dependent variables. The fourth research question asked what effect amusement would have on norms, attitudes, and self-efficacy. There was a significant correlation between amusement and norms ($r(223) = 0.37, p = 0.001$) and between amusement and positive attitudes ($r(223) = 0.39, p < 0.001$), indicating that amusement was positively associated with subjective norms and higher positive attitudes.
4 Discussion

This study explored the role that humor and amusement play in mothers’ attitudes, norms, self-efficacy, and intentions to talk to their child about sex. To do this, an experiment was conducted with mothers viewing either a humorous or non-humorous PSA, followed by a survey about their reactions to the PSA and various attitudes and intentions about MASC. Results indicate that humor did not play an important role in MASC intentions, but amusement did. More specifically, condition (humorous vs. non-humorous) did not predict intentions to talk to one’s child about sex, nor did it predict mothers’ attitudes, norms, or self-efficacy. The extent to which participants reported being amused by a humorous PSA, however, did relate to mothers’ intentions to talk to one child’s about sex, and mothers’ attitudes and norms regarding MASC.

The first two hypotheses were that participants viewing the humorous PSA would like it more, but find it less credible. Contrary to past research on humor, participants reported liking the non-humorous PSA more than the humorous PSA. In keeping with past humor research, credibility reports were lower in the humor condition. On the other hand, the third and fourth hypotheses found that amusement was associated with liking the PSA and finding it more credible. Combined, the results from these four hypotheses suggest several things. First, humor is only associated with liking if the participant is actually amused by the stimulus. This may help explain some of the mixed findings about whether humor leads to liking (see, Eisend 2009), suggesting that humor only leads to liking when the person is effectively amused. Perceived credibility was actually high when mothers were amused by the stimulus. Although most prior research has found humor to hinder credibility perceptions, this finding may be consistent with the research by Skalski and colleagues (2009), which found humor-induced presence to be associated with higher credibility ratings. Again, the humorous stimulus itself may not positively affect credibility perceptions, but amusement might be associated with it. In other words, ineffective humor is actually more detrimental to liking and credibility than a lack of humor, but effective humor is better overall.

The first major research question was whether a humorous or non-humorous PSA would predict stronger intentions to talk to one’s child about sex. Results revealed that neither condition (humorous nor non-humorous) predicted MASC intentions. Within the humor condition, however, the second research question found that amusement was associated with intentions to talk to one’s child about sex. These results add to evidence in past research that positive emotions may encourage interpersonal communication. Mothers appear more likely to plan to talk...
to their child about sex after experiencing amusement. Designing interventions that help generate positive emotional responses for mothers, particularly amusement, may increase interpersonal communication with their children, even about difficult topics such as sex. The results from this analysis also add evidence to the emerging pattern that exposure to humor does not in itself have an effect, but when one is actually amused by the humor a positive relationship emerges.

The third and fourth research questions confirm this pattern, keeping in mind that humor was manipulated, and thus cause and effect can be surmised, while amusement was not manipulated, so only a non-directional relationship can be inferred. Condition had no effect on mothers’ attitudes, norms, or self-efficacy, but amusement was associated with higher subjective norms and higher positive attitudes. One possible explanation is that amusement may serve a normative function, which some research has also suggested (Ford and Ferguson 2004). However, more research is needed to confirm the direction of these results. It could be that because humor is often used to lighten tense situations, it has the added effect of making these situations seem more normal and more positive, or it could be that people who already see MASC as normal and positive are more likely to be amused by such a message. Overall, these results show that participants’ attitudes, norms and self-efficacy were not affected by condition of the PSA, but if they watched the humorous PSA and were indeed amused by it then they also had more positive norm perceptions and attitudes. This argument is confirmed further by the findings from the previous hypotheses, which found that only when people were amused by the humorous PSA did they also find it likeable and credible. Together, these analyses demonstrate that exposure to humor does not necessarily affect attitudes, norms, and intentions, but instead the amused response from the humorous stimulus may. This is not to say that humor has no effect. The results of this study suggest that humorous stimuli may be less effective than non-humorous stimuli when the participant is not amused. It could be that failed humor creates an extra cognitive burden and/or distracts the viewer from the message. This is also consistent with DeSteno et al.’s (2004) finding that a message was more persuasive when the emotional tone matched the emotional state of the viewer, or Wimer and Beins’s research, which found that people found a message funnier when they were expecting a humorous message (2008). Nevertheless, this study demonstrates that when the humor works and a person is amused, credibility and likability are greater, and the persuasive effect may take place. These findings prove a key distinction in the research, in that humor and amusement must not be conflated.

Although humor itself was not highly effective in this study, it should not be ignored for its potential, since amusement was found to have a positive
relationship. The use of humor may be especially beneficial because in the current
digital age people are more likely to share funny videos with one another (Market
Wired 2011; Campo et al. 2013), thus potentially increasing exposure to a humorous
campaign. However, researchers must proceed with caution, as the findings from
this study demonstrate that failed humor may actually be less influential than lack
of humor (see also Bell 2009). Interventionists wishing to use humor must focus
their efforts on creating humorous stimuli that will be found amusing by most of the
target audience, and/or should target humor-seekers in using these kinds of inter-
ventions (Hmielowski, Holbert and Lee 2011).

The findings from these research questions also have implications for the
TPB. Because prior studies have rarely incorporated humor into the TPB, it is not
possible to say whether these findings are consistent with past literature, but it
does suggest that humor and amusement can influence the predictor variables
in the TPB. The Theory of Planned Behavior has been referred to as a rational
model, but the findings from this study add to mounting evidence that research-
ers using the TPB to predict or influence MASC may need to incorporate an
emotional component into their model. The similar Integrative Model (Fishbein
2000) does consider emotion to be a background influence, equal in importance
to exposure to a stimulus, but these results demonstrate that it is more precise to
say that exposure may come before the emotional response. Researchers using
the TPB or Integrative Model must pay special attention to the directional
influence of emotion on key predictor variables and continue to develop frame-
works incorporating emotional components.

4.1 Limitations

This study has many important findings, but there are some limitations to keep
in mind when interpreting the results. One of the primary limitations of this
study is the nature of the sample. The sample did not include fathers, non-white
participants, parents of younger children, or parents outside the United States.
In creating these parameters it was possible to control for parent’s gender, race,
nationality, and child’s age, but these groups should be incorporated into future
studies to test whether the findings differ by these variables. This study was also
limited to the perspective of the mother. Having dyadic information from
mothers and their children is a crucial next step in MASC research (Warren
and Warren Kolind 2015), partly because parents and children’s reports of the
frequency of sexual communication differ, as do their reports of the quality of
this communication (Heisler 2005; Ogle et al. 2008). The study also only exam-
ines incongruity humor. Because other types of humor have other functions,
stimuli using different types of humor may have resulted in different responses from mothers. There is so little research in the specific domain of humor and MASC that more should be done using different humor types and media to further realize the effects of humor and amusement on this communication. Furthermore, the study looks at how humor broadly affects the three behavioral antecedents in the model. More research is needed to see how specific humor messages could be designed and manipulated to affect individual antecedents (see Anderson et al. 2013). Despite the limitations outlined here, this study provides crucial insights into the function of humor and amusement on mother-adolescent sexual communication.

4.2 Conclusion

This study shows that humor and amusement are distinct concepts with different persuasive influence, and that researchers and practitioners must continue to treat them as such. The study found that humor does not have a direct impact on mothers’ beliefs and intentions about talking to their child about sex, but amusement is found to have a positive association. Humor is only successful at increasing norms, attitudes, and communication intentions when participants are highly amused. Developing highly amusing PSAs and targeting humor-seeking parents might be an effective way to increase mothers’ attitudes, norms, and behaviors regarding sexual communication with their children, and in doing so increase positive sexual health outcomes for young people. Researchers must redouble their efforts in understanding how responses to humor affect people’s motivation to tackle difficult conversations.

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References


**Bionote**

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