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Applying the Theory of Planned Behavior in Sexuality Education: Educators' Behavioral Intentions toward Sexuality Issues

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Abstract

Grounded on Ajzen's theory of planned behavior (1991), the current project in two studies ($N = 402$) examined Greek and Spanish pre-service early childhood educators' behavioral intentions (i.e., approach and avoidance intentions) toward young children's sexual curiosities. Specifically, the current research project aimed to examine whether Greek and Spanish pre-service early childhood educators' views on sexuality education were linked to their behavioral intentions toward children's sexual curiosities. The current research also examined whether conservative ideology (religiosity and right-wing political orientation) moderates the link between educators' views and their behavioral intentions. This study's findings showed that educators' views influence their behavioral intentions toward children's curiosity about sexual issues. In addition, moderation analysis showed religiosity's underlying role in avoidance intention. This result provides evidence that there are theoretical and empirical grounds to assume that conservative worldviews (i.e., religiosity) significantly influence behavioral intentions concerning sexuality education. The theory of planned behavior not only represents the factors influencing intention but also provides an opportunity to comprehend the impacts of contextual and individual background elements that may be relevant to a particular behavior.

Keywords: Theory of planned behavior, sexuality education, conservative ideology, early childhood educators.

Introduction

Sexual and reproductive health (SRH), particularly the availability of thorough and high-quality sexuality education, is a contentious issue and one of the most important public health issues (UNESCO, 2018; Yeo & Lee, 2023). Due to its inclusion in the school curriculum, which reflects systemic racial and socioeconomic inequality, sexuality education is widely criticized. As such, unlike other academic subjects, it has a unique political life and has long been a favorite concern of conservatives (Bialystok et al., 2020; Fields, 2008). In addition, as there is more consensus on the subject's place in the curriculum, cultural politics are now important in defining specific policies regarding sexuality education

(Bialystok et al., 2020).

Since the 1980s, conservatives and liberals have engaged in culture wars over topics like abortion, the rights of sexual and gender minorities, and the role of religion in public life. Conflicts over sexuality education in the U.S. and other Western nations exemplify this (Irvine, 2002; Luker, 2007). When choosing how they feel about particular laws or circumstances, people generally look to civic and political groups, especially those with the same identity or ideas. People may, therefore, hold strongly held ideas about sexuality as a result of their political or religious principles (Mauro & Joffe, 2007). Accordingly, established views could influence the information and methods used to teach children about sexuality in the classroom (Irvine, 2002; Zimmerman, 2015). Children begin to express interest in sexuality in their early years (Christmas & Couchenour, 2002). However, some early childhood educators are not prepared psychologically or formally to discuss sexuality with young children (Balter et al., 2016). Past research on the factors affecting educators' implementation of sexuality education examined scarcely the importance of different internal factors.

The current study, using Ajzen's theory (1991), aimed to examine the influence of Greek and Spanish pre-service early childhood educators' various perceptions of sexuality education- including perceived benefits of sexuality education, embarrassment of discussing sexuality, and confidence in teaching about sexuality—on their behavioral intentions (i.e., approach and avoidance behavior) toward young children's sexual curiosities. This study also provides new perspectives concerning the factors influencing pre-service early childhood educators' behavioral intentions toward young children's sexual curiosities. Thus, it examines how context-related ideological factors influence pre-service early childhood educators' behavioral intentions toward young children's sexuality education. Agocha et al. (2014, p. 183) contend that culture offers a substantial foundation for understanding sexuality, despite not being well-researched for cross-cultural comparisons.

Grounded on Ajzen's theory (1991), the current study addresses a need for sexuality education attitudinal research and expands empirical data in the field. Specifically, this study adopts the TPB (attitudes, subjective norms, and self-efficacy combined to predict intention) to examine Greek and Spanish pre-service early childhood educators' behavioral intentions toward young children's sexual curiosities. This study also examines whether conservative ideology (conceptualized as religiosity and right-wing political positioning) moderates the relationship between TPB possible predictors and behavioral intentions.

Why Pre-Service Early Childhood Educators' Attitudes Matter

Educators can be role models for students, helping develop their moral character and important characteristics like honesty, justice, and respect (Lumpkin, 2008). Since early childhood educators' role in implementing sexuality education is essential, it is of critical importance to examine pre-service early childhood educators' behavioral intentions toward young children's sexuality education (Cheung et al., 2020). Children, for example, may lack social skills and be unable to distinguish between appropriate and improper touches if educators avoid discussing sexuality in the classroom and fail to implement sexuality education (Early Childhood Sexuality Education Task Force, 1998). Empirical research demonstrates that educators respond differently to children's sexuality interests. According to Larsson & Svedin (2002) and Surtees

(2005) studies, some educators exhibit approach reactions (i.e., talking freely about sexuality with children) while others avoid responses (i.e., disregarding children's sexuality questions and behaviors).

In a study of Greek nursery school teachers, Kakavoulis (1998) showed that nearly half of the respondents were occasionally unable to seize the chance to discuss sexuality with the students during regular class. Larsson & Svedin (2002) report that educators in their Swedish sample seldom began conversations with kids regarding sexuality but instead provided information when kids inquired about it. These questions included the definitions of terms with sexual connotations, how infants are born, and the differences between the sexes. Surtees (2005) discovered that the New Zealand early childhood educators who participated in the study did not openly discuss sexuality with the students, which reduced the students' opportunity to learn about the subject.

Balter et al. (2016) show that early childhood educators were more motivated to have open conversations with children about sexuality when they received support from school administrators. On the other hand, their desire to do so was decreased by a lack of training and the possibility of negative responses from parents and the community. Furthermore, a study conducted by Davies et al. (2000) on preschool personnel in a British sample found that they were more inclined to restrict children's sexual play and behaviors than to inform them of such behaviors. Additionally, the likelihood that they would disregard sexual behaviors increased with their frequency (Davies et al., 2000).

One's intentions and beliefs toward a specific behavior are related (Ajzen, 1991). Knowing what people believe about a certain behavior might reveal information about their purpose in engaging in that behavior (Ajzen, 1991). In light of the various reactions of early childhood educators described above, the current study examines the associations of teachers' negative and positive behavioral responses to children's sexual curiosity. Future preschool educators may find it easier to respond to young children's sexual interests if they are aware of these links. This will help the children develop appropriate sexuality-related information, behaviors, and attitudes. In addition, the current study assesses the usefulness of the TPB in understanding pre-service early childhood educators' behavioral intentions concerning sexuality education.

Theoretical Background

Ajzen's Theory of Planned Behavior (TPB;1991)

Intentions determine whether or not a person will carry out a specific behavior (Sheeran, 2002). Ajzen's Theory of Planned Behavior (TPB; 1991) was used in this study as it helps foster a broad knowledge of people's intentions concerning a particular behavior. As Fishbein and Ajzen (1975) argue, TPB constitutes an extension of the Theory of Reasoned Action (RPA), which defines intention as the outcome of two interrelated beliefs: normative and behavioral. Whereas normative beliefs are related to peer pressure that might influence a person's choice to participate in an activity, behavioral beliefs describe how individuals see a specific behavior (Fishbein & Ajzen, 1975). According to Ajzen (1991), intention is also significantly influenced by perceived behavioral control, defined as an individual's belief in their capacity to carry out a behavior. According to Ajzen (1991), three related beliefs—behavioral, normative, and control—combine to explain intention. It was suggested that control beliefs directly predict behavior, whereas normative and behavioral beliefs

mediate through intention to act.

Consequently, behavioral intention is influenced by three distinct types of perception, which include (1) attitude toward the behavior (i.e., the extent to which participating in the behavior is desirable; in this study, pre-service early childhood educators' perceptions of the benefits of sexuality education); (2) subjective norm (i.e., how much societal pressure there is to behave in a certain way; pre-service early childhood educators' embarrassment in talking about sexuality); and (3) perceived behavioral control (the degree to which engaging in the behavior is simple; pre-service early childhood educators' confidence in teaching about sexuality; Ajzen, 1991).

While TPB is often employed to assess the motivations of human action, it has faced criticism when applied to specific activities (such as reproduction) and when considering preceding behaviors. Morgan and Bachrach (2011) criticized TPB's failure to predict behaviors that result from careful thought over a long period. However, TPB remains a helpful framework to assess intentions toward a specific behavior. Understanding how well efforts to introduce and maintain practices work depends on what educators in classes intend to do in the future. This supports using TPB to comprehend educators' intentions for implementing sexuality education. The majority of research that has used TPB has validated its predictive value. Previous studies on inclusive education have found that a combination of self-efficacy, subjective norms, and attitude predicts instructors' intentions (Ahmed et al., 2014; Yan & Sin, 2014). Given the necessity to build context-specific knowledge of sexuality education, it is crucial to investigate if the TPB factors would combine to predict educators' behavioral intentions toward young children's sexual curiosities and assess TPB's usefulness in applying sexuality education.

This study examined how pre-service early childhood educators perceived the benefits of sexuality education (concerning their attitude toward the behavior), felt embarrassed discussing sexuality (concerning their subjective norm) and felt confident in their ability to teach about sexuality (concerning their perception of behavioral control) to how they planned to respond to their children's sexual curiosity.

Conservative Worldviews

This study's final issue is whether conservative worldviews mediate the relationship between TPB factors and behavioral intentions.

Religiosity

Religion is a significant institution that provides people the basis for their moral convictions, worldviews, attitudes, and impressions of other people (Berger, 1973). The majority of religious beliefs preserve strict gender roles and attitudes as mandated by a higher power, such as a god, via the use of sacred texts and traditions. Thus, religions provide a framework of divinely sanctioned explanation and interpretation for the world (Glick et al., 2002; Pennycook et al., 2020). Moreover, highly religious persons may reject scientific methods, especially if scientific discoveries contradict their religious beliefs (Rutjens et al., 2018). In particular, Chappell et al. (2010) state that religiosity influences attitudes toward sexuality education, whereas Bialystok et al. (2020) show that religion opposes the implementation of sexuality education.

The Catholic Church is a powerful institution that considerably influences moral and sexual issues and family values (Griera, 2007). In addition, the Greek Orthodox Church is a significant institution profoundly affecting moral and sexual issues and family values (Grigoropoulos et al., 2024, 2023a, c, 2022a, c), while at the same time, it promotes traditional gender and family roles (Grigoropoulos, 2023b, d 2022b, d). As a result, it would appear justified to include religiosity (i.e., the significance of religion in a person's life and their participation in religious activities; Norona et al., 2016) - while examining pre-service early childhood educators' behavioral intentions regarding sexuality education.

Conservative Political Attitudes

There is no one description for “conservative ideology”; rather, it encompasses a wide range of ideas that are all grounded in a dedication to custom and accepted methods of doing things, both personally and collectively (Altemeyer, 1988; Osborne et al., 2023; Pratto et al., 1994). Therefore, to conservatives, the world is a predictable place where people's outcomes are predetermined by the organizations they associate with, the degree to which they follow social norms, and the extent to which they strive for the “right” route in life. Accordingly, conservative ideology is founded on intolerance for the unknown and reflects a constrained view of the world as a comfortable, predictable place (Osborne et al., 2023; Whitley & Lee, 2000).

It turns out that politically conservative circles support antiscientific sentiments (Azevedo & Jost, 2021; Hornsey et al., 2016; Lazer et al., 2018; Pennycook et al., 2020). Graham et al. (2009) claim that political conservatism and attitudes toward regulating sexuality are related, with conservatives more likely than liberals to moralize and condemn threats to purity (Haidt & Hersh, 2001).

Given the research showing the link between religion and conservatism and that many religions strongly emphasize traditionalism and maintaining social norms (Jost et al., 2014), the association between religiosity and conservative ideology is evident (Yuchtman-Yaar & Alkalay, 2007). Thus, we reasoned that right-wing conservatism would significantly moderate the relationship between TPB factors and behavioral intentions toward young children's sexual curiosities.

Overview of the current study

Implementing the curriculum in early childhood settings may be hampered by the traditional sociocultural views on sexuality education that pre-service early childhood educators may have. Thus, the current research project in two studies aimed to determine whether Greek and Spanish pre-service early childhood educators' views on sexuality education—including their perceptions of its advantages, their embarrassment over discussing it, and their confidence in teaching about it—were linked to their behavioral intentions toward children's sexual curiosities, including their intentions to display approach responses, such as responding to children's questions about the origin of life openly, and avoidance behaviors, such as ignoring young children's inquiries about their private body parts. The approach and avoidance intentions were viewed as two distinct variables rather than the two extremes of the continuum (see Cheung et al., 2020). Using convenience samples, we collected data from two different cultural settings, considered at the periphery of the dominant

Anglo-American paradigm: those of Greece and Spain. The use of convenience samples was appropriate and did not negatively influence the findings since the study's main aim was not to estimate demographic parameters.

Based on Ajzen's (1991) TPB framework, we hypothesized that the three perceptual factors significantly influenced the approach and avoidance intentions toward children's sexuality interests. Additionally, we hypothesized that the approach intention was more strongly influenced by the perceived benefits of sexuality education and the confidence in teaching about sexuality than by feelings of embarrassment when discussing sexuality issues. Contrarily, we expected the avoidance intention to be more strongly correlated with the embarrassment of discussing sexuality than with the other two perception factors.

This study's primary objective was to examine the factors influencing pre-service early childhood educators' intentions to practice sexuality education. The following questions were answered: Were there any associations between early childhood educators' approach and avoidance intentions and the predictor factors taken from the TPB model (i.e., attitudes, subjective norms, and self-efficacy)? Do attitudes, subjective norms, and self-efficacy jointly predict pre-service early childhood educators' approach and avoidance intentions toward young children's sexual curiosities? Do conservative worldviews (i.e., religiosity and right-wing conservatism) moderate the link between the TPB predictor factors (i.e., attitudes, subjective norms, and self-efficacy) and pre-service educators' approach and avoidance intentions?

Study 1

Method

Study Participants

Students from the early childhood education and care department of a public University in Northern Greece participated in the first study (N = 217). The participants' mean age was 21.5 years (SD = 1.52; 208 women). The majority of participants, 94% (204) self-identified as heterosexual, followed by 4.1 (9) for lesbian/gay and 1.8% (4) for bisexual. Participants' gender distribution mirrors the typical gender split among early childhood educators. Early childhood and primary schools are reported to employ more than 80% female instructors (UNESCO, 2020).

The current online study (Google Forms) used a "snowball" technique with the help of students enrolled in early childhood education classes. The survey's open window was 30 days, from June 2 to July 2, 2022. Ethics approval was given by the Ethics Review Board of the researcher's institution before data collection since the current work followed all ethical rules and directions of Greece's psychological association, along with the Helsinki Declaration on Principles of Ethical Conduct in the Use of Human Subjects in Medicine.

After reading the research description, which showed that the replies would remain anonymous, participants gave their free and informed permission. Only undergraduate students majoring in early childhood education participated in this study. Using an online calculator (Soper, 2020), the minimum necessary size was 184 participants with a desired

probability of 0.05, an estimated effect size of 0.30 (recommended for SEM research), and a statistical power level of 0.95.

Instruments

The participants completed the demographic form, which asked about their age, gender, sexual orientation, political affiliation (left, center-left, center, right, and center-right parties), and religiosity (i.e., how often they attended religious services and prayed; 1 = *never* to 5 = *always*). The two items were adapted from the "Duke Religion Index" (DUREL; Koenig & Bussing, 2010). There was a substantial correlation between the two items measuring religiosity ($r = .676$, $p < .001$). Accordingly, they were combined into one measure of religiosity. It should be noted that for one-item self-placement assessments of political orientation, prior research has shown sufficient consistency and validity (see Jost, 2006).

Views on Sexuality Education

Benefits of Sexuality Education. After reviewing previous studies, a three-item scale was employed (Cheung et al., 2020). Participants indicated how much they agreed or disagreed with each benefit of sexuality education (e.g., sexuality education can help kids develop a good personality) on a 7-point Likert scale. A composite benefit perception score was calculated by averaging the results for each item. Higher scores indicate more satisfaction with the advantages of sexuality education. The scale's Cronbach's alpha was $\alpha = .94$.

Embarrassment of Talking about Sexuality. A three-item scale was used (Cheung et al., 2020; sample item "Talking to young children about sexuality makes me feel uncomfortable."). Participants expressed how strongly they agreed or disagreed with each item on a 7-point Likert scale. The scores of all items were averaged to get a composite score of sexual discussion embarrassment. The amount of embarrassment associated with discussing sexuality increases with the score. The scale's Cronbach's alpha was $\alpha = .79$.

Confidence in Teaching about Sexuality. A nine-item scale was employed (Cheung et al., 2020; sample item, "The correct names and functions of the genitals of the two sexes.") Participants estimated their confidence in teaching sexuality topics in each item on a 7-point Likert scale (1 = *very little* to 7 = *very big*). All items' scores were summed to provide a composite score for confidence in teaching about sexuality. Higher scores reflected more confident responses. The scale's Cronbach's alpha was $\alpha = .97$.

Behavioral Intentions toward Children's Curiosity about Sexuality. We assessed the approach intention utilizing three items (Cheung et al., 2020; sample item: When young children raise questions about sexuality, educators should respond openly). Another three avoidance intention assessment items were also used (Cheung et al., 2020; sample item: When young children show curiosity about sexuality, teachers should ignore the behavior"). A Likert scale was used for each item (1 = *strongly disagree* to 7 = *strongly agree*). Scores from items on each scale were averaged. Increased scores indicate a greater approach intention or avoidance intention. The two scales' respective Cronbach's alpha values were .90 and .71.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) Version 21 was used to analyze the data. First, according to Pallant's (2016) recommendations, we assessed whether the assumptions of normality, linearity, multicollinearity, and homoscedasticity were violated. No assumptions were violated. We used an alpha value of .05. The correlation coefficients were calculated using Pearson product-moment correlation to answer the first question. Hierarchical linear regression was used to find the intention determinants to answer the second study question. Thus, we tested whether attitudes, subjective norms, and self-efficacy predict intention. TPB gave the theoretical justification for this test (Ajzen, 2011). The three predictors were initially inserted into the model in Step 1. There was a significant association between religiosity and intention. In light of this, religiosity was included in the model step 2 to examine whether it would contribute differently to the dependent variable. The third question was addressed using the Hayes' Process software (Field, 2013). The association between TPB predictors (i.e., attitudes, subjective norms, and self-efficacy) and intention was examined with religiosity and political positioning as moderators.

Results

Determinants of Intention and its Associations

There was a significant negative association between approach intentions and subjective norms and a substantial positive link between attitudes and approach intentions. However, the association between self-efficacy and intention was not significant. A positive link existed between subjective norm, self-efficacy, and avoidance intention. In addition, there was a negative association between attitude and avoidance behavior (Table 1).

Table 1. Descriptive Statistics and Correlation Matrix for Study Variables (n = 217)

	Mean	SD	1	2	3	4	5	6	7
Variables									
1. Benefits of Sexuality Education			___						
2. Embarrassment of talking about Sexuality			-.255**	___					
3. Confidence in Teaching about Sexuality			-.033	.411**	___				
4. Approach Intention			.505**	-.384**	-.084	___			
5. Avoidance Intention			-.346	.473**	.316**	-.355**	___		
6. Political Positioning			-.085	.052	-.004	-.118	.034	___	
7. Religiosity			-.118	.027	-.121	-.168*	-.100	-.280**	___

Note. * $p < .05$, ** $p < .01$

Predictors of Intentions

While controlling for religion, the ability of the benefits of sexuality education (i.e., attitudes) and embarrassment of talking about sexuality (i.e., subjective norms) to predict approach intention were assessed using hierarchical regression. Since

there was no relationship between self-efficacy and approach intention, it was excluded from the model. Table 2 displays a summary of the hierarchical regression. In the first phase, we entered attitudes and subjective norms in the model. The two predictors significantly explained 32.7 % of the variance in approach intentions, $F(3, 213) = 34.431, p < .001$. In the first model, attitudes ($\beta = .431, p < .001$) and subjective norms ($\beta = -.295, p < .001$) were significant predictors of approach intention. Religiosity was added in step 2. The total variance explained by the model was 33.8%. Religiosity explained 1.1 % of the variance intention, $F(4, 212) = 26.997, p < .001$. In the second model, while the attitudes ($\beta = .420, p < .001$) and subjective norms ($\beta = -.289, p < .001$) predicted approach intention, religiosity did not significantly contribute to intention. In both models, attitudes were the most robust indicator of approach intention.

Table 2. Standardized and unstandardized regression coefficients for the study's variables predicting approach intention

	Predictors	B	SE b	β	R ²	95%CI	VIF
Step1	Benefits of Sexuality Education	.437	.058	.435***	.327	.322,.552	1.06
	Embarrassment of talking about sexuality	-.297	.063	-.273***		-.421, -.172	1.06
Step2	Benefits of Sexuality Education	.422	.059	.420***	.338	.306,.537	1.08
	Embarrassment of talking about sexuality	-.314	.069	-.289***		-.450, -.177	1.07
	Religiosity	-.137	.073	-.106		-.282,.020	0.008

Note: *** $p < .001$

Next, we used multiple regression analysis to assess the embarrassment of talking about sexuality (i.e., subjective norms) and confidence in teaching about sexuality (i.e., self-efficacy) capacity to predict avoidance intention while controlling for political positioning and religiosity. Since there was no relationship between the benefits of sexuality education (i.e., attitudes) and avoidance intention, it was excluded from the model. The two predictors significantly explained 24.2 % of the variance in approach intention, $F(2, 214) = 34.167, p < .001$. Subjective norms ($\beta = .413, p < .001$) and self-efficacy ($\beta = .147, p < .05$) were significant predictors of avoidance intention (Table 3).

Table 3. Standardized and unstandardized regression coefficients for the study's variables predicting avoidance intention

Predictors	B	SE b	β	95%CI	VIF
Embarrassment of talking about Sexuality	.323	.051	.413**	.222,.423	1.20
Confidence in Teaching about Sexuality	.085	.038	.147*	.010,.160	1.21

Note: ** $p < .001$, * $p < .05$

Interaction Effects

Next, we examined the potential influence of political positioning and religiosity on the strength of the relationship between

predictor variables (benefits of sexuality education, embarrassment of talking about sexuality, confidence in teaching about sexuality) and approach intention. For this purpose, a series of moderation models in AMOS-21 were performed.

The findings of this study show that political positioning has a substantial negative moderating influence on the link between attitudes (benefits of sexuality education) and approach intention ($b = -0.153$, $t = -1.988$, $p = .047$; Figure 1). As shown in Figure 2, the influence of political stance dampens the positive link between the benefits of sexuality education and approach intention. Thus, for those who expressed a stronger left-wing tendency the link between attitudes (benefits of sexuality education) and approach intention was stronger ($b = .63$, $S.E. = .09$, $95\%CI [.45, .81]$, $p < .001$) when compared to the center or right-wing leaning ($b = .51$, $S.E. = .05$, $95\%CI [.39, .6222]$, $p < .001$; $b = .38$, $S.E. = .08$, $95\%CI [.22, .55]$, $p < .001$, respectively).

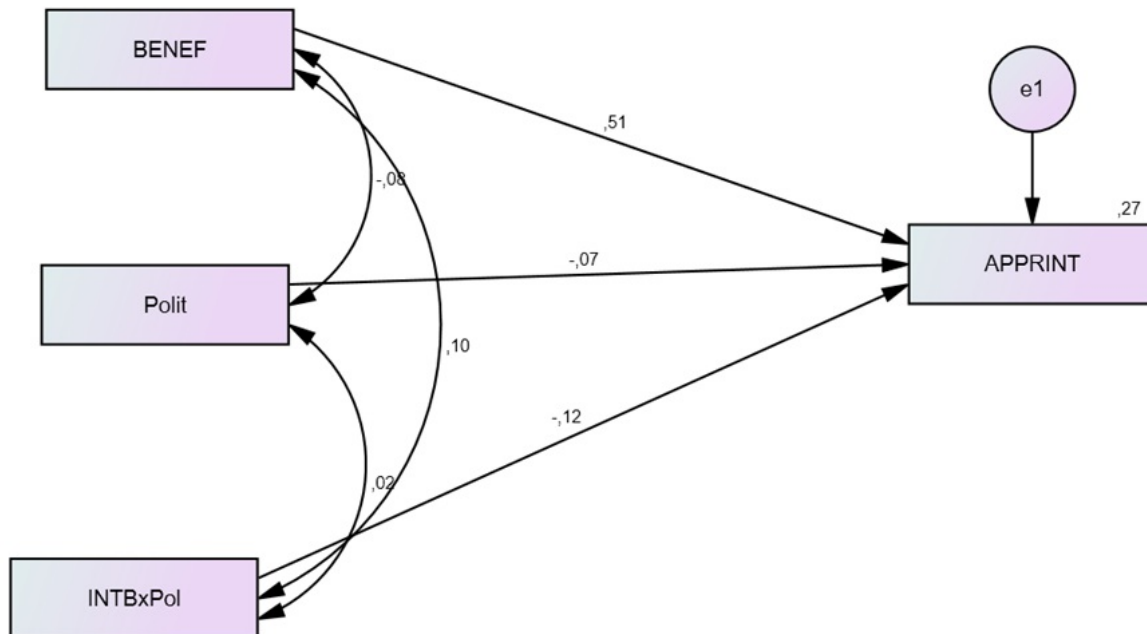


Figure 1. Moderation Effect of Political Positioning on Study Variables

Note: BENEf = Benefits of Sexuality Education, Polit = Political Positioning, INTBxPol = Interaction between Benefits of Sexuality Education and Political Positioning.

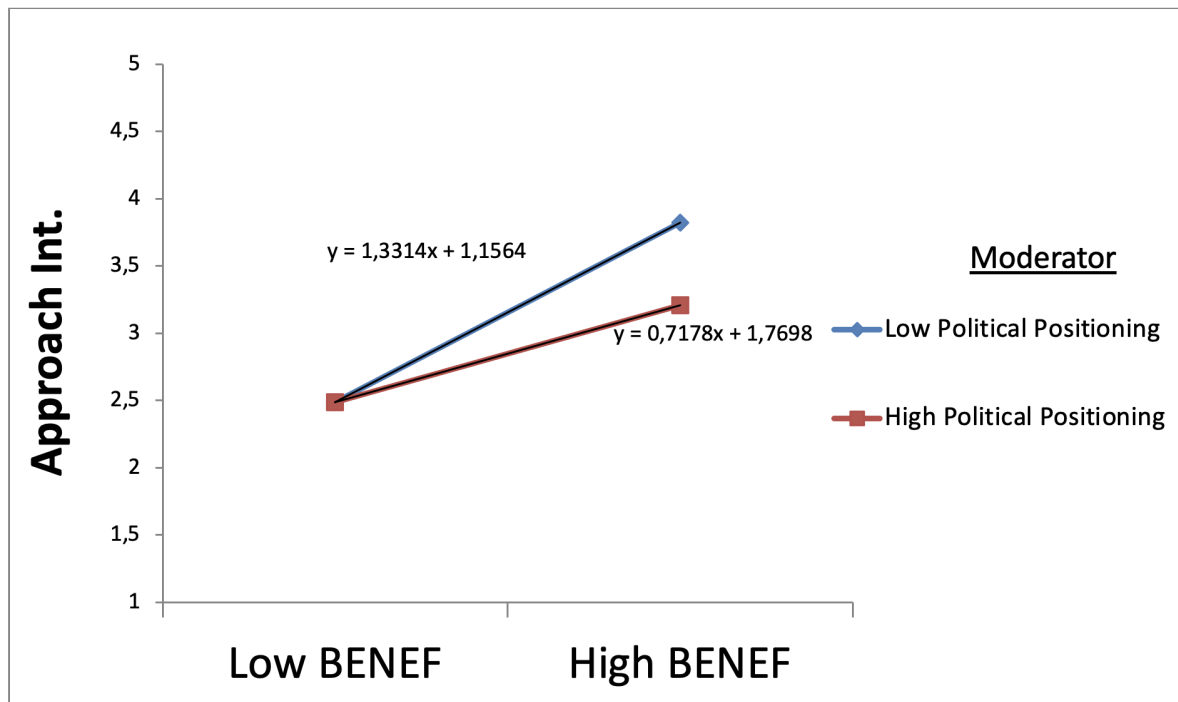


Figure 2. Moderation effect: The relationship between Benefits of Sexuality Education and Approach Intention at lower (-1 SD) and higher (+1 SD) levels of Political Positioning

The findings of this study also demonstrate a significant moderating effect of political stance on the link between subjective norms (embarrassment of talking about sexuality) and approach intention (such as the shame of discussing sexuality; $b = 0.244$, $t = 3.067$, $p = .0024$; Figure 3). As shown in Figure 4, the influence of political stance dampens the negative link between the embarrassment of talking about sexuality and approach intention. Thus, for participants who reported more left-wing leaning, the negative relationship between the embarrassment of talking about sexuality and approach intention was weaker ($b = -.55$, S.E. = .08, 95%CI [-.71, -.39], $p < .001$) when compared to center or right-wing leaning ($b = -.39$, S.E. = .06, 95%CI [-.49, -.22], $p < .001$; $b = -.16$, S.E. = .10, 95%CI [-.37, .04], $p < .001$, respectively).

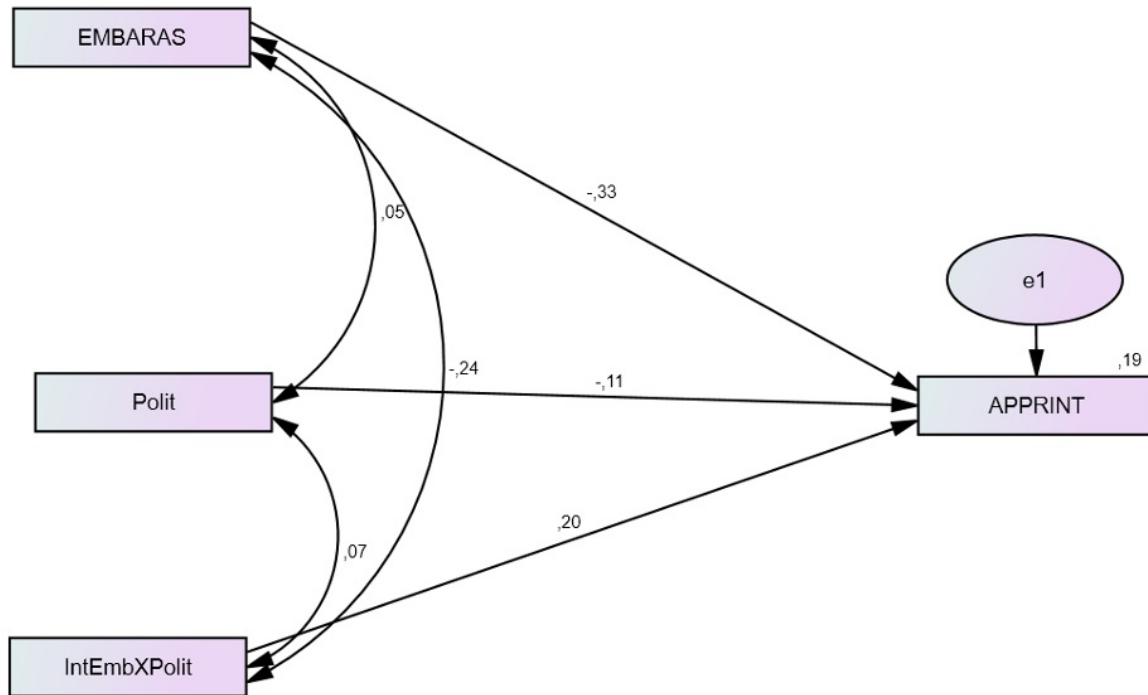


Figure 3. Moderation Effect of Political Positioning on Study Variables

Note: EMBARAS = Embarrassment of Talking about Sexuality, Polit = Political Positioning, INTBxPol = Interaction between Embarrassment of Talking about Sexuality and Political Positioning.

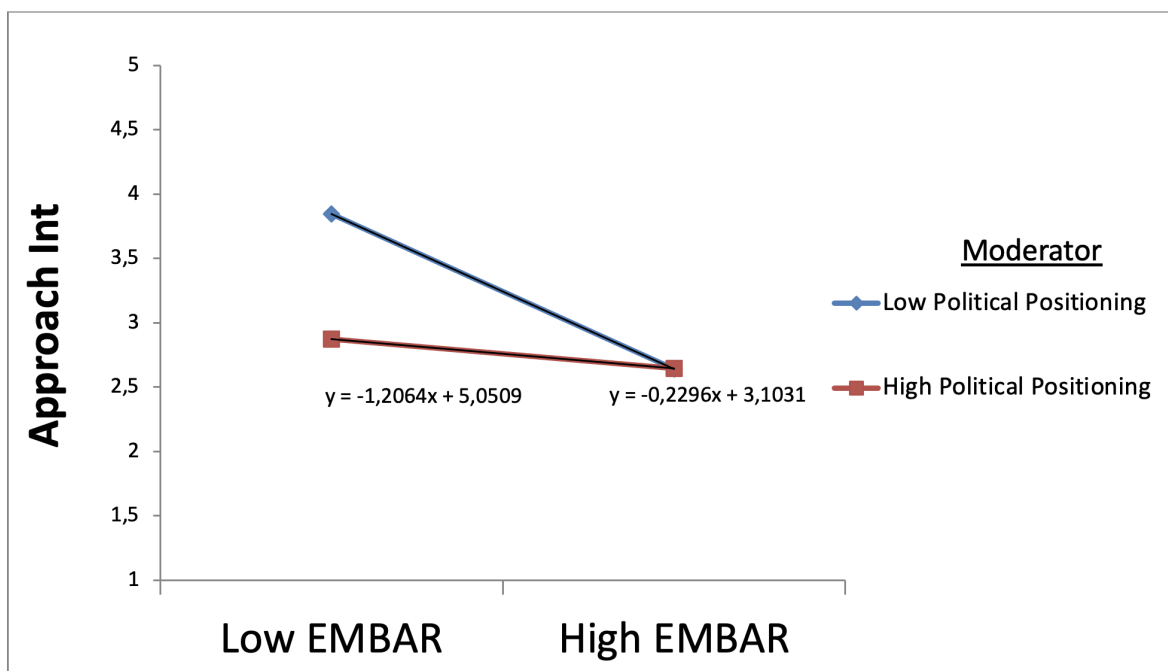


Figure 4. Moderation effect: The relationship between Embarrassment of Talking about Sexuality and Approach Intention at

lower (-1 SD) and higher (+1 SD) levels of Political Positioning

The moderating influence of religiosity on the link between benefits of sexuality education, embarrassment of talking about sexuality, and approach intention was not significant ($b = .044$, $t = 1.044$, $p = .297$; $b = -0.043$, $t = -0.880$, $p = .379$ respectively).

We also examined whether political stance and religiosity influence the strength of the link between predictor variables and avoidance intention. Once more, a series of moderation models in AMOS-21 were performed. The moderating influence of political stance on the link between benefits of sexuality education, embarrassment of talking about sexuality, and avoidance intention was insignificant ($b = .015$, $t = 0.246$, $p = 0.805$; $b = -0.077$, $t = -1.385$, $p = .167$ respectively). However, political stance negatively moderated the link between self-efficacy (confidence in teaching about sexuality) and avoidance intention ($b = -0.100$, $t = -2.202$, $p = .028$; Figure 5).

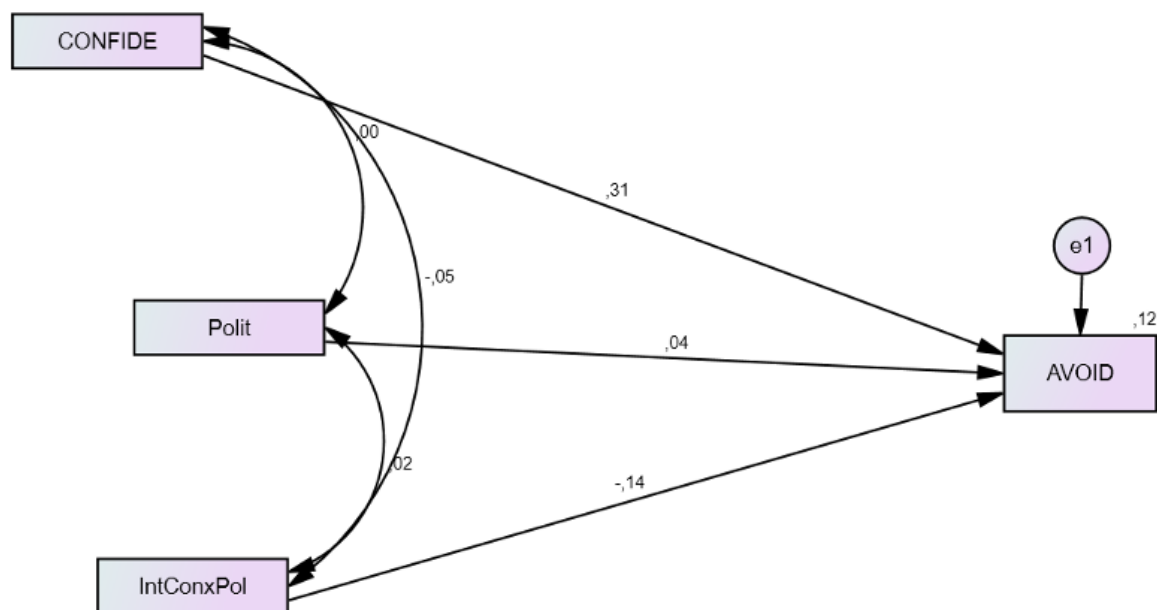


Figure 5. Moderation Effect of Political Positioning on Study Variables

Note: CONFIDE = Confidence in Teaching about Sexuality, Polit = Political Positioning, IntConxPol = Interaction between Confidence in Teaching about Sexuality and Political Positioning

As shown in Figure 6, the influence of political stance dampens the positive link between confidence in teaching about

sexuality and avoidance intention. Thus, for those who reported more left-wing leaning, the positive link between confidence in teaching about sexuality and avoidance intention was weaker ($b = .26$, $S.E. = .05$, $95\%CI [.10, .25]$, $p < .001$) when compared to center or right-wing leaning ($b = .17$, $S.E. = .03$, $95\%CI [-.49, -.22]$, $p < .001$; $b = .80$, $S.E. = .09$, $95\%CI [-.06, .20]$, $p = .06$, respectively).

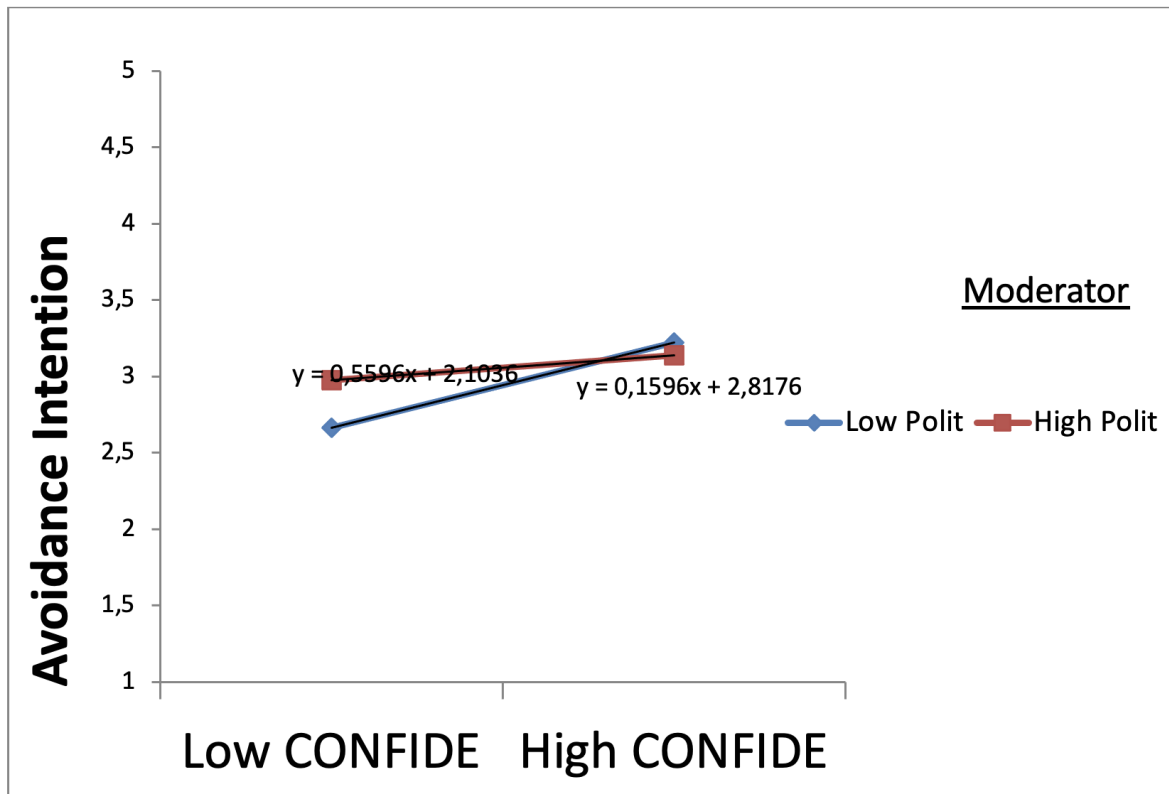


Figure 6. Moderation effect: The relationship between Confidence in Teaching about Sexuality and Avoidance Intention at lower (-1 SD) and higher (+1 SD) levels of Political Positioning

In addition, the moderating effect of religiosity on the link between the benefits of sexuality education, embarrassment of talking about sexuality, and avoidance intention was significant ($b = -.084$, $t = -2.574$, $p = 0.01$; $b = -0.112$, $t = -3.408$, $p = .0008$ respectively). The moderating effect of religiosity on the link between confidence in teaching about sexuality and avoidance intention was insignificant ($b = -.022$, $t = 0.0798$, $p = 0.01$).

Specifically, the influence of religiosity strengthens the negative link between attitudes (the benefits of sexuality education) and avoidance intention (Figure 7). Thus, lower levels of religiosity strengthen the negative link between the benefits of sexuality education and avoidance intention more ($b = -.36$, $S.E. = .06$, $95\%CI [-.48, -.24]$, $p < .001$) when compared to average or higher levels of religiosity ($b = -.25$, $S.E. = .04$, $95\%CI [-.34, -.16]$, $p < .001$; $b = -.14$, $S.E. = .06$, $95\%CI [-.27, -.01]$, $p = .02$, respectively; Figure 8).

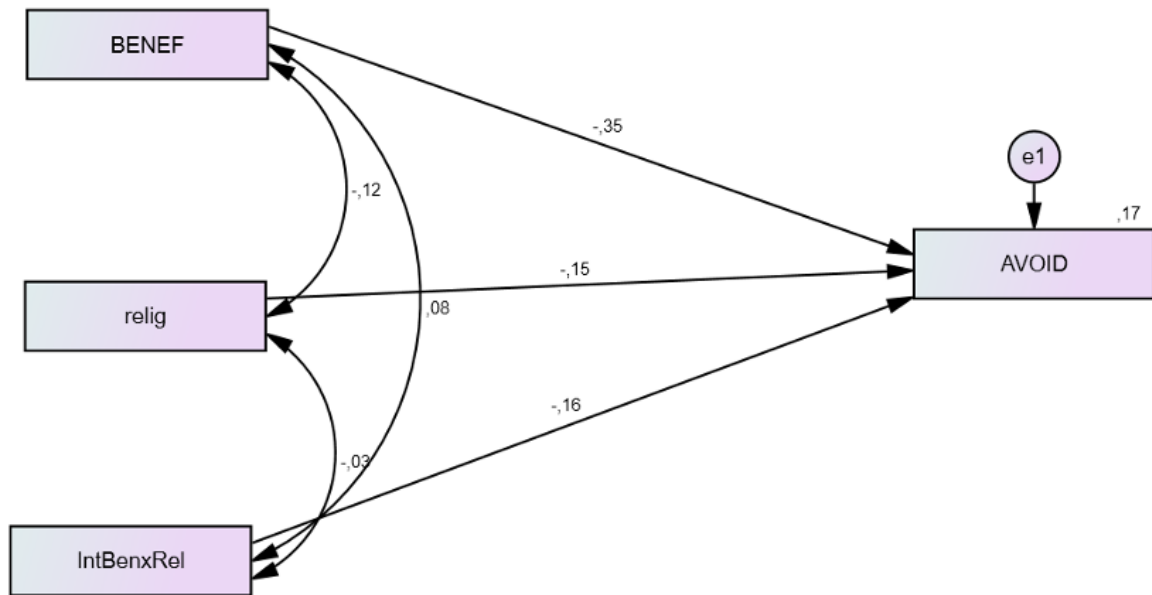


Figure 7. Moderation Effect of Religiosity on Study Variables

Note: BENEf = *Benefits of Sexuality Education*, Relig = *Religiosity*, IntBenxRel = *Interaction between Benefits of Sexuality Education and Religiosity*

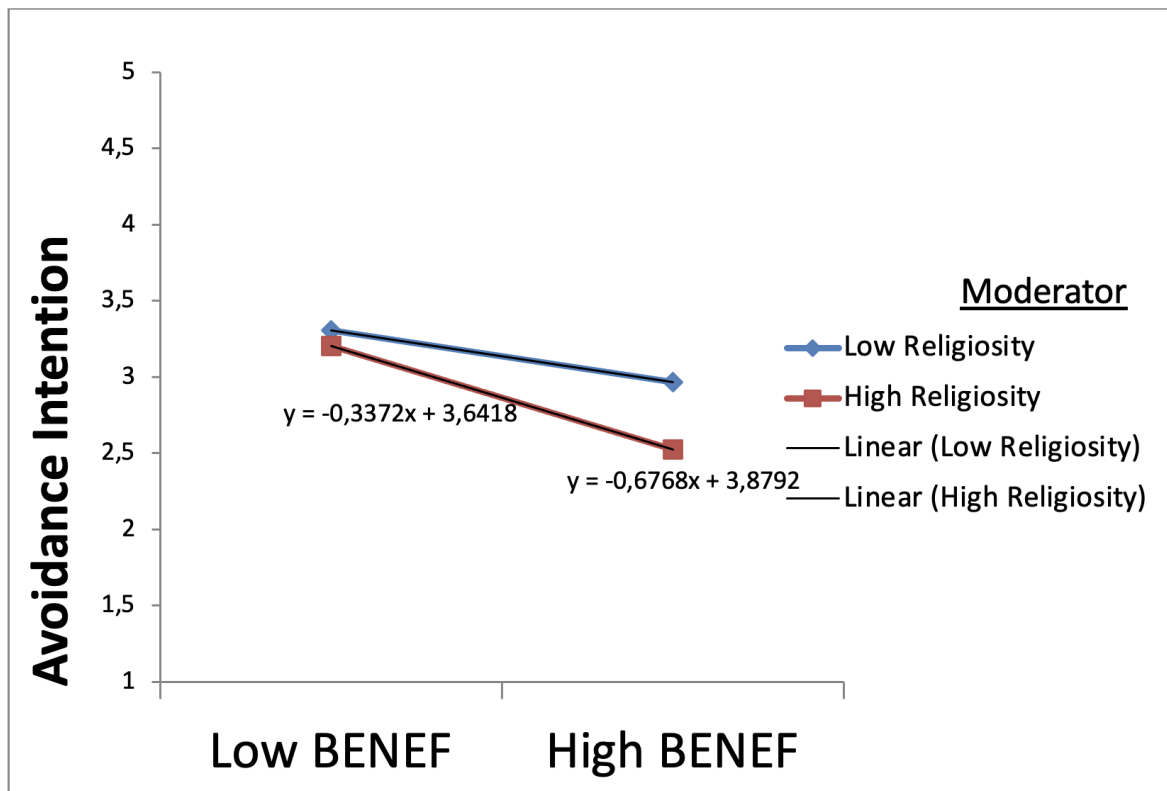


Figure 8. Moderation effect: The relationship between Benefits of Sexuality Education and Avoidance Intention at lower (-1 SD) and higher (+1 SD) levels of Religiosity

Last, the influence of religiosity dampens the positive relationship between subjective norms (embarrassment of talking about sexuality) and avoidance intention (Figure 9). Thus, lower levels of religiosity weaken the positive relationship between the embarrassment of talking about sexuality and avoidance intention more ($b = .51$, S.E. $= .06$, 95%CI $[.39, .64]$, $p < .001$) when compared to average or higher levels of religiosity ($b = .37$, S.E. $= .04$, 95%CI $[.28, .45]$, $p < .001$; $b = .22$, S.E. $= .06$, 95%CI $[.09, .34]$, $p < .001$, respectively; Figure 10).

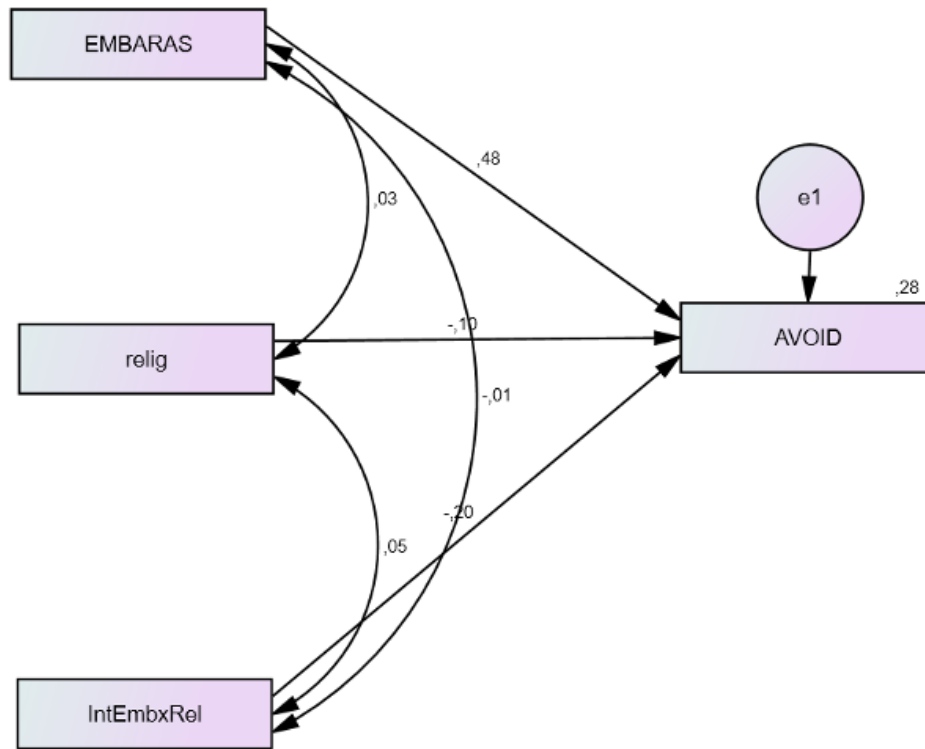


Figure 9. Moderation Effect of Religiosity on Study Variables

Note: EMBARAS = Embarrassment of Talking about Sexuality, Relig = Religiosity, IntEmbRel = Interaction between Embarrassment of Talking about Sexuality and Religiosity

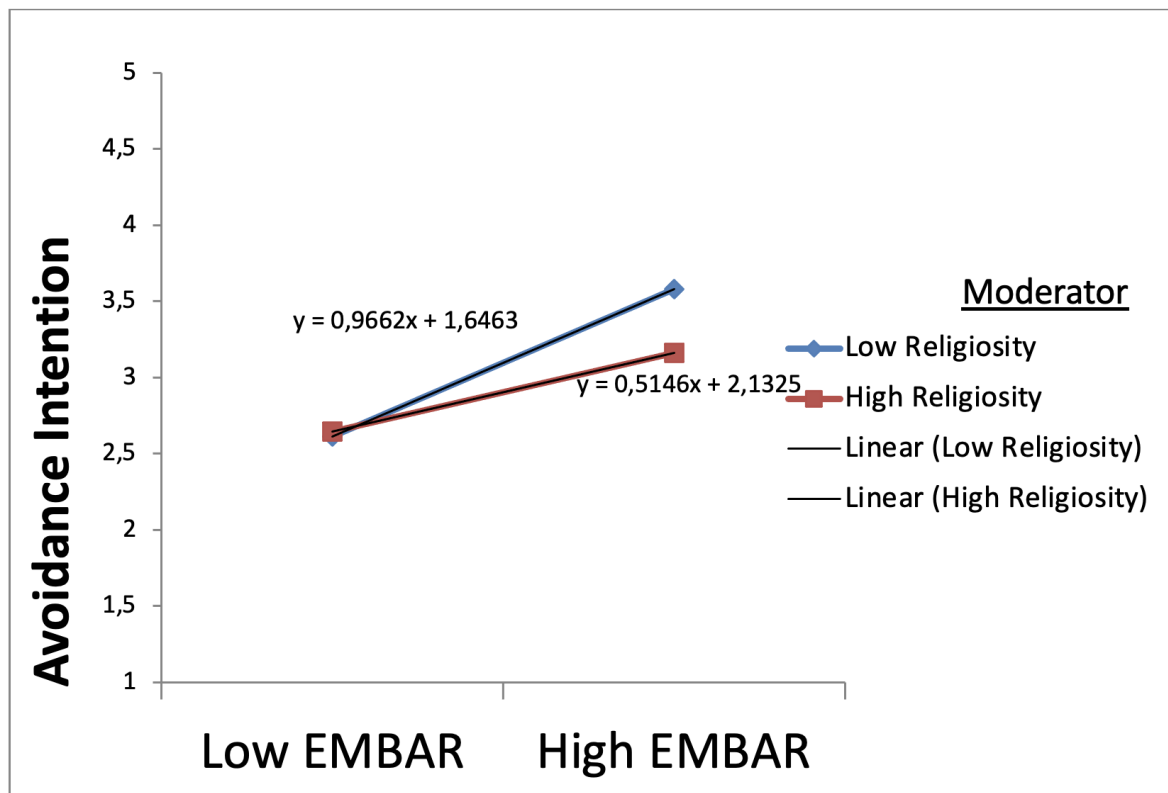


Figure 10. Moderation effect: The relationship between Embarrassment of Talking about Sexuality and Avoidance Intention at lower (-1 SD) and higher (+1 SD) levels of Religiosity.

Discussion

This study examined early childhood teachers' behavioral intentions regarding children's sexual curiosity using the Theory of Planned Behavior (TPB). Bivariate correlation and regression analysis did not verify that all three predictor variables under examination were significantly correlated with the two behavioral intentions.

For the approach intention, only the attitudes (early childhood educators' perceived benefits of sexuality education) remained to be a crucial positive correlate, whereas subjective norms (embarrassment of talking about sexuality) remained to be an important negative correlate. As regards the avoidance intention, subjective norms and self-efficacy were substantial positive correlates. In this study, Ajzen's (1991) two determinants (embarrassment of talking about sexuality, and confidence in teaching about sexuality) predicted avoidance intention. In addition, only the benefits of sexuality education, and the embarrassment of talking about sexuality predicted approach intention, contrary to Ajzen's (1991) theoretical model.

According to the interaction results, conservative worldviews (political right and religiosity) lowered participants' approach intentions (and increased avoidance intentions) toward young children's sexual curiosities. Participants who exhibit traits encouraging social conservatism and conformity (i.e., political right and religiosity) are more inclined to value stability, order, and structure, which influences their approach and avoidance intentions towards young children's sexual curiosities. As a social group, conservatives are more inclined than others to have an opposing stance toward sexuality education (Tesler, 2018).

Study 2

Considering the findings of Study 1, subjective norms and self-efficacy were crucial predictors of avoidance intention. In addition, the attitudes and subjective norms were linked to approach intention. We deemed it essential to replicate Study 1 results using a different sample. In particular, Study 2 sought to extend the scope of the initial study using Spanish pre-service early childhood educators—a country where Christianity is the majority's predominant religious denomination.

Participants and Procedure

A non-probabilistic (convenience) sample of 185 Spanish pre-service early childhood educators (age range: 19-25 years, $M_{age} = 21.30$, $SD = 1.36$; 170 female respondents) participated in the current online study. Once again, we recruited participants through a snowball-like technique. The survey was open for 30 days (from March 2 to April 2, 2023). The participants checked the anonymous online survey's consent option to confirm their participation approval. Most of the participants identified as heterosexual, 90.8% (168), 4.3% (8) as lesbian/gay, 3.8% (7) as bisexual, and 1.1% (2) as pansexual. The methods applied in the second study were the same as those in study 1.

Measures

Respondents completed the same demographics form as in Study 1.

- *Religiosity.* We employed the same measure for religiosity as in Study 1. The two items had again a high correlation ($r_{(185)} = .854$, $p < .001$). Thus, they were combined into a single measure of religiosity ($\alpha = .92$).
- *Political Positioning.* The same measure we applied in Study 1 was used.
- *Perceived Benefits of Sexuality Education.* The same measure we applied in Study 1 ($\alpha = .90$) was used.
- *Embarrassment of Talking about Sexuality.* We used the same instrument as in Study 1 ($\alpha = .96$).
- *Confidence in Teaching about Sexuality.* Again, the same instrument as in Study 1 was used ($\alpha = .97$).
- *Approach and Avoidance Intentions.* The same scales as in Study 1 were used ($\alpha = .85$ and $\alpha = .94$, respectively).

Data Analysis

We examined each item's skewness and kurtosis values to assess if the data were normal. If skewness and kurtosis values are less than 2.0 and 7.0, respectively, we consider the data to have a normal distribution (Byrne, 2016; Curran et al., 1996). The relationships between the significant variables were examined using bivariate correlation. To identify the factors that influence intention, we employed hierarchical linear regression. Last, the link between TPB predictors (attitudes, subjective norms, and self-efficacy) and behavioral intentions was tested with conservative worldviews (conceptualized as religiosity and right-wing political conservatism) as moderators. We examined our hypotheses using Hayes' (2013) PROCESS macro for SPSS (Hayes, 2013; Model 1). The alpha level was set at 0.05.

Results

Relations Between Determinants of Intention

Approach intention, attitudes, and self-efficacy showed a strong positive association. However, the association between subjective norms and approach intention was insignificant. Also, a negative relationship existed between religiosity, political positioning, and approach intention. A positive correlation existed between subjective norms and avoidance intention (Table 4).

Table 4. Descriptive Statistics and Correlation Matrix for Study Variables ($n = 185$)

	Mean	SD	1	2	3	4	5	6	7
Variables									
1. Political Positioning	2.68	1.33	___						
2. Religiosity	2.28	1.15	.493**	___					
3. Benefits of Sexuality Education	5.78	1.39	-.309**	-.196**	___				
4. Embarrassment of talking about Sexuality	3.55	2.09	.116	.029	-.015	___			
5. Confidence in Teaching about Sexuality	5.33	1.63	-.258**	-.197**	.665**	-.086	___		
6. Approach Intention	5.38	1.33	-.300**	-.175*	.762**	.105	.535**	___	
7. Avoidance Intention	3.11	2.01	-.001	.022	-.001	.781**	-.004	.103	___

Note. * $p < .05$, ** $p < .01$

Predictors of Behavioral Intentions

After adjusting for political positioning and religiosity, attitudes and self-efficacy's capacity to predict approach intention were assessed using hierarchical regression analysis. Subjective norms were removed from the model since there was no correlation with approach intention. Table 5 displays a summary of the hierarchical regression. In the first phase, we entered attitudes and self-efficacy into the model. Attitudes and self-efficacy significantly explained 58.2 % of the variance in approach intention, $F(2, 182) = 126.609$, $p < .001$. Only attitudes ($\beta = .728$, $p < .001$) were significant predictors of approach intention in the first phase. Political positioning and religiosity were added in phase 2. The total variance explained by the model was 58.6%. Political positioning and religiosity explained 0.4% of the variance intention, $F(4, 180) = 60.749$, $p < .001$. Only the attitudes ($\beta = .711$, $p < .001$) predicted approach intention in the second phase. None of the other variables significantly contributed to approach intention. In both phases, attitudes were the most reliable indicator of intention.

Table 5. Standardized and unstandardized regression coefficients for the study's variables predicting approach intention

	Predictors	B	S.E. b	β	R ²	95%CI	VIF
Step1	Benefits of Sexuality Education	.685	.061	.728*	.582	.574, .816	1.79
	Confidence in Teaching about Sexuality	.042	.052	.051		-.061, .146	1.78
Step2	Benefits of Sexuality Education	.678	.062	.711*	.586	.555, .802	1.86
	Confidence in Teaching about Sexuality	.037	.053	.046		-.067, .141	1.81
	Political Positioning	-.074	.057	-.074		-.186, .038	1.41
	Religiosity	.012	.064	.010		-.114, .138	1.33

Note: * $p < .001$

Next, regression analysis assessed the subjective norm's capacity to predict avoidance intention. Subjective norms significantly explained 61 % of the variance in avoidance intention, $F(1, 183) = 285.775, p < .001$ (Table 6).

Table 6. Standardized and unstandardized regression coefficients for the embarrassment of talking about sexuality predicting approach intention

Predictor	B	S.E. b	β	R ²	95%CI	VIF
Embarrassment of talking about sexuality	.753	.045	.781**	.610	.665, .840	1.000

Note: * $p < .05$, ** $p < .001$

Interaction Effects

Next, we examined whether political stance and religiosity influence the strength of the link between attitudes (benefits of sexuality education) and approach intention. The moderating influence of political positioning and religiosity on the relationship between attitudes (benefits of sexuality education) and approach intention was insignificant ($b = .013, t = -0.425, p = .671$; $b = -.063, t = -1.752, p = .081$ respectively). Additionally, there was no significant moderating influence of political positioning or religion on the link between self-efficacy (confidence in teaching about sexuality) and approach intention ($b = -.000, t = -0.008, p = .9933$; $b = -.031, t = -0.837, p = .4034$ respectively). The link between the subjective norms (embarrassment of talking about sexuality) and approach intention was not significantly affected by the moderating effects of political positioning and religiosity ($b = .017, t = 0.495, p = .6209$; $b = .021, t = 0.5736, p = .5669$ respectively).

Finally, we examined how political positioning and religiosity influenced the degree to which subjective norms (embarrassment of talking about sexuality) and avoidance intention were related. Results showed a significant negative moderating influence of religiosity on the link between the embarrassment of talking about sexuality and avoidance intention ($b = -.083, t = -2.346, p = .020$; Figure 11). Specifically, the influence of religiosity dampens the positive relationship between the embarrassment of talking about sexuality and avoidance intention (Figure 1). Thus, lower levels of religiosity weaken the positive relationship between the embarrassment of talking about sexuality and avoidance intention more ($b = .83, S.E. = .05, 95\%CI [.72, .95], p < .001$) when compared to average or higher levels of religiosity (b

=.74, S.E. =.04, 95%CI [.65, .82.], $p < .001$; $b = .64$, S.E. =.06, 95%CI [-.15, .04], $p = .02$, respectively; Figure 12).

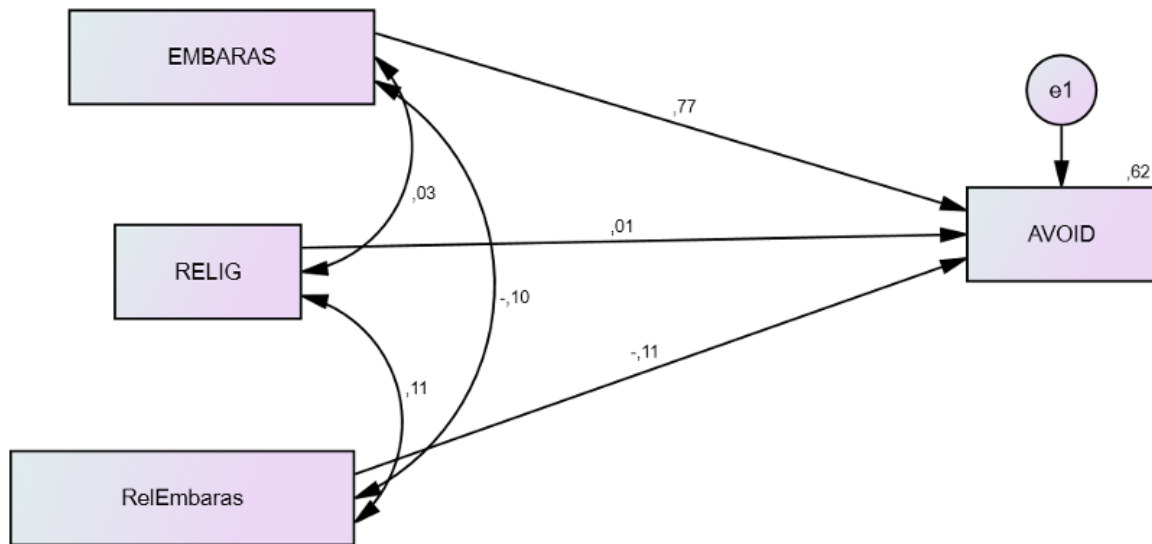


Figure 11. Moderation Effect of Religiosity on Study Variables

Note: EMBARAS = Embarrassment of Talking about Sexuality, Relig = Religiosity, RelEmbaras = Interaction between Embarrassment of Talking about Sexuality and Religiosity

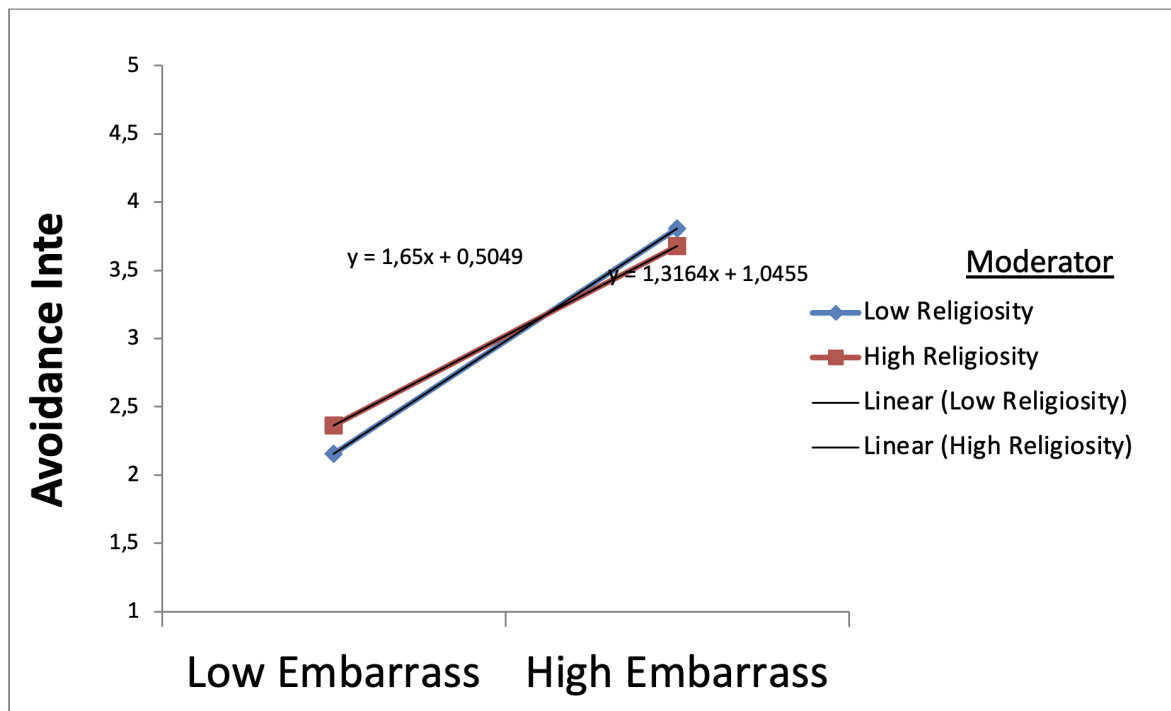


Figure 12. Moderation effect: The relationship between Embarrassment of Talking about Sexuality and Avoidance Intention at lower (-1 SD) and higher (+1 SD) levels of Religiosity

There was no evidence that political positioning moderated the association between the embarrassment of talking about sexuality and avoidance intention ($b = -.064$, $t = -1.910$, $p = .057$). Furthermore, there was no evidence of a moderating influence from political positioning and religiosity on the relationship between attitude (benefits of sexuality education) and avoidance intention ($b = -.017$, $t = -0.237$, $p = .8124$; $b = -.068$, $t = -0.793$, $p = .4284$ respectively). Finally, the link between self-efficacy (confidence in teaching about sexuality) and avoidance intention was not significantly affected by political positioning or religiosity ($b = -.046$, $t = -0.735$, $p = .4631$; $b = -.123$, $t = -1.835$, $p = .0681$ respectively).

General Discussion

TPB (Ajzen, 1991) states that an individual's behavioral intention, or disposition to carry out a behavior, determines whether or not they carry out a specific behavior. Three different categories of perceptual factors influence behavioral intention: (1) attitudes toward the behavior (i.e., the extent to which engaging in the action is seen as beneficial or positive); (2) subjective norms (i.e., the extent to which social pressure influences the behavior); and (3) perceived behavioral control (i.e., the degree to which the behavior can be easily performed) (Ajzen, 1991).

The current research project aimed to examine whether pre-service early childhood educators' approach and avoidance intentions toward children's curiosity about sexual issues were associated a) with their perception of the advantages of sexuality education (which was linked to their attitudes toward the behavior), b) their embarrassment about discussing sexuality (linked to the subjective norms), and c) their confidence in teaching about sexuality (linked to perceived behavioral control).

According to past research data (Cheung et al., 2020), we hypothesized the approach intention to be more strongly linked with attitudes (perceived advantages of sexuality education) and self-efficacy (perceived behavioral control; confidence in teaching about sexuality) than with subjective norm (embarrassment of discussing sexuality). In contrast to the other two prediction factors, the subjective norms were expected to relate more to the avoidance intention.

This study's findings showed that for the approach intention across the two studies, only pre-service early childhood educators' attitudes (perceived benefits of sexuality education) remained a significant positive predictor. In addition, the subjective norms remained a significant positive predictor of avoidance intention across the two studies. These observations only partially support the theory of planned behavior and our assumptions. They propose that the attitudes and subjective norms influence pre-service early childhood educators' behavioral intentions regarding children's curiosity about sexual issues.

A positive attitude toward sexuality education may serve as a motivating factor for pre-service educators to discuss children's curiosity about sexual issues rather than ignore their sexuality-related questions. This is because a positive attitude may help pre-service educators sustain their enthusiasm in discussing children's curiosity about sexual issues, even in the face of challenging circumstances. This study's result coincides with previous studies showing how educators feel about implementing inclusive education. Positive attitudes make educators more equipped to implement inclusive education (De Boer et al., 2011; Sharma & Sokal, 2016).

Conversely, the subjective norm related to discussing children's curiosity about sexual issues may lead pre-service early childhood educators to overlook their students' sexually related questions. This is comparable to the predicament of elementary school teachers that Walker and Milton (2006) described, whose embarrassment prevented them from discussing sexuality with children. However, it should be stressed that a lower level of embarrassment in discussing sexuality did not result in an increased willingness to impart sexuality-related knowledge. This may suggest that the implementation of sexuality education cannot result only from psychological readiness in the absence of motivation. Cohen et al. (2012) and Davies (2016) showed that comfort in discussing sexuality and sexual health did not increase teachers' willingness to implement sexuality education.

Interestingly, only in the first study was a significant association found between confidence in teaching about sexuality (perceived behavioral control) and avoidance intention. In Study 2, there were no significant relationships between confidence in teaching about sexuality and either type of behavioral intention. Put differently, across two studies, positive attitudes toward sexuality education and the perception of social pressure to avoid discussions about sexuality were more significant predictors of how pre-service early childhood educators respond to children's questions about sexuality than self-perceived competence.

Practically speaking, our findings might lead to the following recommendations. Effective implementation of sexuality education in educational settings depends on providing teachers with training on sexuality issues. By participating in educational programs, educators may cultivate positive attitudes and increase their confidence in responding to children's questions about sexuality. Teacher educators can employ a range of activities to help pre-service educators comprehend

the ideals of sexuality education since their attitudes (perceptions of the advantages of sexuality education) significantly impact how they intend to respond to children's questions about sexuality. Case studies, role-plays, and exchanging pertinent empirical data are a few such activities (Oswalt et al., 2015). Teacher educators must support pre-service educators in reflecting on their personal sources of embarrassment (such as their fear of parents' negative comments) and critically weighing the costs of feeling embarrassed, as the embarrassment of discussing sexuality would cause them to avoid children's sexuality-related questions. Additional role-playing exercises may be conducted to help pre-service early childhood educators practice how to have open discussions about sexuality issues with children and their families, which will help them feel more comfortable in implementing sexuality education. Teacher educators should place a higher priority on fostering educators' and society's more favorable attitudes toward the implementation of sexuality education.

Theoretical Implications

The current research project examined early childhood educators' intentions to discuss children's curiosity about sexual issues using Ajzen's (1991) TPB Framework. Across two studies, only attitudes and subjective norms predicted intention, contrary to Ajzen's (1991) TPB framework. In two studies, pre-service early childhood educators who had positive attitudes and felt embarrassed to talk about sexuality were more likely to report high behavioral intentions toward young children's sexual curiosities.

The findings do not support previous research data (e.g., Ahmmed et al., 2014), which supported Ajzen's (1991) theory. However, they also demonstrate that the theory is still being developed as researchers look deeper into the details of the model and suggest new variables to explain the complexity of human behavior (Bosnjak et al., 2020). Interestingly the role of perceived behavioral control (confidence in teaching about sexuality) was not confirmed across the two studies. This can be explained by the fact that when the behavioral task becomes more challenging, one's perception of mastery is in doubt. Thus, circumstances outside the control of educators (e.g., parents' opposition to sexuality education) may dictate an approach or avoidance intention; therefore, perceived behavioral control might not be realistic (Ajzen & Madden, 1986).

It is also important to note that subjective norms show a substantial regression coefficient in the intention prediction compared to previous TPB research (e.g., Mahon et al., 2006; White et al., 2008). Thus, according to the results of this research project, subjective norms are substantial in predicting behavioral intentions in contrast with previous studies. Hence, the current results emphasize the significant impact that subjective norms may have in predicting avoidance intentions toward children's curiosity about sexual issues despite their usually minor main effects. Accordingly, Hill et al. (1996) concluded that the impact of subjective norms may be particularly significant for challenging novel behaviors. The current study concludes that the TPB does not provide a fully reliable conceptual model for comprehending early childhood educators' intentions regarding behavioral intention toward young children's sexual curiosities.

Since attitudes and subjective norms better predict early childhood educators' approach and avoidance intentions, the theory of reasoned action (TRA; Fishbein & Ajzen, 1975) seems to explain early childhood educators' intentions better. According to Fishbein & Ajzen's (1975) theory of reasoned action (TRA), intentions—which indicate a person's readiness

to engage in a particular conduct— influence actual behavior. Intentions are ultimately caused by subjective norms and attitudes (Ajzen & Fishbein, 1975). Overall, the model that is being provided clarifies the significant influence of attitudes that are favorable toward sexuality education and perceived social acceptability.

TPB not only represents the factors influencing intention but also provides an opportunity to comprehend the impacts of contextual and individual background elements that may be relevant to a particular behavior (La Barbera & Ajzen, 2020). Our moderation analysis provided evidence of the underlying importance of religiosity in avoidance intention. This finding shows that there are theoretical and empirical grounds for supposing that conservative worldviews—that is, religiosity— significantly influence behavioral intentions concerning sexuality education. Nevertheless, not much study has been done on how they contribute to explaining behavioral intentions. Using this argument for sexuality education, one would expect those who are strongly affiliated with their religious social group to be more prone than others to follow indications from religious leaders and religious doctrines. For this reason, we would expect educators with higher levels of religiosity to embrace less the implementation of sexuality education. According to Achen and Bartels (2016, p.12), what most individuals perceive to be ideologically driven conduct is a mechanical reflection of what their preferred group and leaders have instructed them to think. Therefore, when it comes to sexuality education, this study's findings support that religiosity should be taken into account when assessing behavioral intentions toward sexuality education. Highly religious pre-service educators may be kept secure inside their comfort zones by the solid religious community they are a member of. Their opposition to sexuality education may remain unchanged until individuals tackle the process of seeing how their views are socially constructed and how they may contribute to privilege and oppression.

Our findings lend credence to the notion that assessing moderating variables might promote a more thorough comprehension of people's intentions and, as a result, can also serve as a foundation for more successful behavior modification.

Limitations

The Greek and Spanish convenience samples might doubt the generalizability of this study's results. However, according to recent research, the current cross-national findings often hold for various demographics and cultural contexts (Klein et al., 2018). However, more research utilizing representative samples from multiple nations is necessary to confirm the external validity of our findings on interaction effects within the framework of TPB.

The study's correlational design makes it difficult to determine the direction of causality. Therefore, conclusions should be evaluated cautiously. Because this study's findings concern participants' self-reported intentions, we should be cautious in interpreting them. This study's primary objective was to examine the determinants of intention rather than the actual teaching behavior. Future research can involve employed early childhood educators as participants to gain a more in-depth understanding of the subject matter. Additionally, classroom observations can be conducted to assess the educators' natural reactions to children's sexuality-related questions instead of relying on their self-reported methods.

Finally, because self-reporting is the basis for this study, it is always prone to social desirability bias. However, self-reporting is still one of the best indicators of future actual behavior (Carnaghi et al., 2007), and the online, anonymous

format of the survey probably lessened the significance of social desirability. Examining how strong these relationships are across cultures and religions is crucial.

Conclusions

Even if our aim is not to infer causation from correlation, educators' positive attitudes and less social pressure may be required to implement sexuality education successfully. This study also shows the influence of religious socialization, examining what occurs when firmly held personal values and beliefs clash with the framework of a course curriculum.

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