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Parental Influence on Their Adult Children's Sexual Values: A Multi-National Comparison Between the United States, Spain, Costa Rica, and Peru

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Abstract We examined the influence of perceived parental sexual values, religiosity, and family environment on young adults' sexual values from the United States ($n = 218$), Spain ($n = 240$), Costa Rica ($n = 172$), and Peru ($n = 105$). On average, and across the four national groups, the messages young adults received from their parents about broad domains of sexual behaviors (masturbation, non-intercourse types of heterosexual sexual activity, premarital sex, same-sex activity, and cohabiting) were unequivocally restrictive. By contrast, across the four groups, young adults on average held rather permissive sexual values and their values differed significantly from those of their parents. Moreover, the nature of perceived parental sexual values (restrictive vs. permissive) was not associated significantly with young adults' sexual values, age of sexual debut, or number of sexual partners. Comparatively, Spanish young adults held the most permissive sexual values, whereas US young adults held the most restrictive sexual values. Religiosity was the strongest predictor of young adults' sexual values, followed by perceived parental sexual values and influence. In conclusion, it appears that despite having perceived restrictive parental messages about sex, these young adults currently hold permissive sexual attitudes, thus calling into question the influence parents actually have on their adult children's sexual values.

Keywords Parent–child communications · Sexual values · Sexual behavior · Parental influence

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Introduction

Social learning theory and other socialization perspectives suggest that parents are influential on their children's attitudes and behaviors (Arnett, 2000; Bandura & Walters, 1963; Maccoby, 1992; Ream & Savin-Williams, 2005). Indeed, across broad and substantive domains, the influence of parental values appears to extend well into adulthood. For example, most young adults' political and religious affiliations correspond generally with those of their parents (Glass, Bengston, & Dunham, 1986; Hoge, Petrillo, & Smith, 1982; Kroh & Selb, 2009; Westholm, 1999). It also is believed that parents' sexual values shape, in various degrees, their children's beliefs about sex and sexuality (Ansuini, Fiddler-Woite, & Woite, 1996; Katchadourian, 1990; O'Sullivan, Meyer-Bahlburg, & Watkins, 2001). It bears noting that such broad-base parental influences may even have biological or genetic origins (Kandler & Reimann, 2013).

A rather large number of studies on parent–child communication about sex has emerged in the last several decades, with the preponderance of those studies having focused on the prevention of child sexual abuse (e.g., Burgess & Wurtele, 1998; Geasler, Dannison, & Edlund, 1995; Thomas, Flaherty, & Binns, 2004), unintended pregnancies (e.g., Driscoll, Biggs, Brindis, & Yankah, 2001; Holcombe, Carrier, Manlove, & Ryan, 2008; Hull, Hennessy, Bleakley, Fishbein, & Jordan, 2011), and sexually transmitted infections (STIs), particularly HIV/AIDS (e.g., Eisenberg, Sieving, Bearinger, Swain, & Resnick, 2006;

Lefkowitz, Romo, Corona, Au, & Sigman, 2000; Stulhofer, Soh, Jelaska, Bacak, & Landripet, 2011).

The underlying assumption inherent to most parent–child communication studies about sex is that adolescents ought to abstain or significantly delay sexual activity. As examples, Jaccard and Dittus (1991) found that 80 % of parents in their sample believed adolescent sex was unacceptable. Raffaelli, Bogenschneider, and Flood (1998) and Raffaelli, Smart, Van Horn, Hohbein, and Kline (1999) found over 53 and 60 % of parents in their respective samples disapproved of adolescent and/or premarital sex. As Fingerson (2005) reported, "Parents want to control their children's sexual behavior as well as protect them from the dangers of sex such as health and emotional risks" (p. 947). With such focus on the negative consequences of unprotected sex and the virtue of abstinence, in all likelihood some parents inadvertently or intentionally instill fear and reinforce negative attitudes about sex and sexuality in the minds of young people. We acknowledge that unintended pregnancies, STIs, and engaging in sexual activity earlier than when one is ready are problematic and worthy of attention. However, the reality is that approximately half of all adolescents in the US and elsewhere are sexually active (Chandra, Mosher, Copen, & Sionean, 2011; Darroch, Singh, & Frost, 2001). As such, we contend that youth are better served when the adults in their lives acknowledge the fact that sex is a natural part of life (Klein, 2006). Parent–child discussions that convey favorable and healthy attitudes about sex and are based on medically accurate information likely afford adolescents and young adults the liberty to explore appropriately their sexuality (Bruckner & Bearman, 2005; Velezmoro, Negy, & Livia, 2012). That notwithstanding, like most pleasurable human activities (e.g., eating, driving a car, etc.), adolescents must be taught that sex ought to be undertaken with caution. Sex can have adverse consequences when individuals are not equipped with accurate knowledge to help reduce potential consequences (Santelli, 2008; Trenholm et al., 2007).

Aside from being taught to avoid unintended pregnancies and STIs, largely missing from parent–child sexual communication studies is what parents actually communicate to their offspring about various forms of sexual activity. As stated by Regnerus (2005), "Although many parents claim to be talking to their adolescent children about sex and birth control, what exactly parents are communicating is less clear" (p. 102). Moreover, researchers who have examined what parents communicate to their adolescent children about sex typically have focused on pre-marital intercourse exclusively; they also have measured the communications in a dichotomous fashion, whereby parents are asked to indicate if they approve or disapprove of pre-marital sex (see Fingerson, 2005; Jaccard & Dittus, 1993, 2000; Raffaelli et al., 1998, 1999).

Our study represents an effort to address these shortcomings in the literature. We wanted to know what young adults recall that their parents had communicated to them as adolescents about the acceptability of diverse types of sexual activity and provide participants a broader range of response options in order to add clarity to these questions. In addition to inquiring about communication related to sexual health and education, we specifically sought to assess—again, based on young adults' retrospective perceptions of the messages they received from parents as adolescents—whether parents had conveyed if broad domains of sexual activity were acceptable or not and the degrees of acceptability. The domains were masturbation, heterosexual non-intercourse types of sexual behavior, premarital sexual intercourse, same-sex sexual activity, and cohabitation.

Information from this study may be useful for illuminating contemporary parental sexual values as perceived by their children who have emerged into either late adolescence or early adulthood. Knowing with more specificity the sexual values young adults perceive to have been communicated to them by their parents allows us to determine the extent to which parental sexual values have any impact on young adults' sexual values and behavior. We examined our research questions from data collected in four countries on distinct continents. Specifically, data were obtained from the United States, Spain, Costa Rica, and Peru. Cross-national studies of this nature provide a broader perspective on the diversity, or universality, of both parental communication of sexual values and young adults' sexual values (Velezmoro et al., 2012).

This study was both descriptive and exploratory; thus, no formal hypotheses were made. Among other questions, our research questions were: (1) Based on young adults' retrospectively recalled perceptions, what specifically did parents communicate to them when they were adolescents about the acceptability of broad domains of sexual activity? (2) Do the young adults consider their parents to have been influential on their own sexual values today? (3) What are young adults' current attitudes about those same domains of sexual activity? (4) Did parents communicate to them about matters related to contraceptives and sexually transmitted infections? (5) Are young adults' current sexual values different significantly than the values they perceive to be held by their parents? (6) Is the nature of parents' sexual values (restrictive vs. permissive) associated with an effect on young adults current sexual values? (7) Do parents' perceived communication about sexual activity, health, and education, as well as young adults' sexual attitudes vary by country and gender? and (8) Would an array of variables, such as parental communications and influence about sex, religiosity, childhood family environments, and having taken a course in human sexuality predict young adults' sexual values?

We elected to include two extra-study variables in the questionnaires in order to assess their potential influence to young adults' sexual values. They were religiosity and family environment. Religiosity has been linked fairly extensively with people's sexual values (Meier, 2003; Velezmoro et al.,

2012; Wallace & Williams, 1997). More specifically, although adherents vary in their interpretations and practices, Christianity generally promulgates restrictive views of most forms of sex occurring outside of heterosexual marriage (Herdt & Polen-Petit, 2014; Meier, 2003; Regnerus, 2005); Christianity is the prevailing religion of the four countries of focus in this study. Also, supportive family environments and open parent–child communication have been linked with less sexual activity among adolescents and even college students (Goldstein, Davis-Kean, & Eccles, 2005; Wetherill, Neal, & Fromme, 2010). Given that some parents' goal is to delay adolescents' commission of any form of sexual activity through fear-based messages about unintended pregnancies and STIs, we anticipated that increases in religiosity and family supportiveness (as measured by increased family cohesion and less conflict) would be associated with more restrictive sexual values among young adults.

Method

Participants

This convenience sample consisted of undergraduate students ($N = 735$) who were recruited from universities in the southeastern part of the United States ($n = 218$), the eastern region of Spain ($n = 240$), the central region of Costa Rica ($n = 172$), and the western coast of Peru ($n = 105$). The four universities were public institutions located in urban areas of their respective countries. Among US participants, 53.2 % self-identified as non-Hispanic White, 21.4 % Hispanic/Latino/a, 11.4 % African American/Black, 8.6 % Asian American, and 5.5 % "Other." Among Spanish participants, 96.7 % self-identified as White, 2.5 % Latino/a, and .4 % "Other." Participants in Costa Rica and Peru self-identified as Costa Ricans and Peruvians, respectively. Among the entire sample, 92.7 % identified as heterosexual (2.4 % as gay or lesbian; 4.1 % as bisexual; .1 % as transgendered). The majority (95 %) of participants were single (2.3 % married; 1.4 % divorced). Table 1 shows additional descriptive sociodemographic information about the participants by country and gender.

Measures

Consistent with the Brislin (1970, 1993) technique for translating questionnaires into a new language, a team of two bilingual (English–Spanish), bicultural researchers initially translated all questionnaires into Spanish. An independent team of two bilingual, bicultural researchers translated the Spanish version of the questionnaires back into English. Afterwards, all four researchers met to examine and compare the English and Spanish versions in order to resolve inconsistencies in translations, known as "decentering" (Brislin, 1993). Also, prior to commencement of data collection, a professional residing in each country where data collection took place reviewed the Spanish version of the questionnaires to ensure its accessibility to local residents.

Sociodemographic and Sexually-Related Information

Participants were asked to report myriad sociodemographic information and to respond to questions related to their sexual experiences and history. Questions included, but were not limited to, age, gender, civil and relationship status, sexual orientation identity, age of sexual debut, history of sexual abuse (yes/no), and whether they had completed a course in human sexuality (yes/no).

Parental Communication of Sexual Values (PCSV)

To assess parents' sexual values as perceived by the young adults, including whether sexual behaviors were communicated to be acceptable or not, we created five items that corresponded to broad domains of sexual behavior (masturbation, non-intercourse types of heterosexual sexual behavior, premarital sexual intercourse, same-sex sexual activity, and cohabitation). Participants responded to items by indicating the statement that best reflected the message they had received from each parent for a given behavior. The following instructions prefaced the items: Parents often communicate their values and expectations related to sexual behavior and activity to their children as they are growing up. Please indicate the overall message each of your parents—separately—communicated to you as you were growing up about the following behaviors (circle the number next to the statement that best reflects your answer).

Items were first posed in reference to respondents' mothers' values that were communicated, followed by the same item in reference to their fathers' values. An example item was "Mother's message when I was an adolescent about *non-intercourse types of sexual activity* (not full intercourse) with opposite sex *before* marriage was: (0) No communication about this behavior; (1) Completely unacceptable; (2) For the most part, unacceptable or should be avoided; (3) For the most part, acceptable under some circumstances; and (4) Completely acceptable and natural under appropriate circumstances." Although some research (e.g., Fingerson, 2005; Raffaelli et al., 1999) indicates mothers are the parent who often impart sexual values to children, our primary interest was global parental messages about the acceptability of sex as perceived and recalled by young adults; thus, we combined their mothers' and fathers' scores to each item to create a "parental

Table 1 Descriptive characteristics of participants by country and gender

	United States			Spain			Costa Rica			Peru		
	Women ($n = 141$)	Men ($n = 77$)	Total ($n = 218$)	Women ($n = 178$)	Men ($n = 57$)	Total ($n = 240$)	Women ($n = 92$)	Men ($n = 80$)	Total ($n = 172$)	Women ($n = 65$)	Men ($n = 40$)	Total ($n = 105$)
Age[a]	18.65	18.71	18.67	22.36	20.65	22.07	22.28	22.98	22.60	20.20	22.53	21.09
M (SD)	(1.62)	(2.21)	(1.84)	(7.99)	(3.20)	(7.24)	(3.22)	(3.26)	(3.25)	(3.86)	(5.26)	(4.57)
Age of sexual debut[b,c]	15.87	15.98	15.93	14.37	14.27	14.43	17.58	15.84	16.80	14.68	15.88	15.19
M (SD)	(2.20)	(1.98)	(2.12)	(5.08)	(4.59)	(5.00)	(3.10)	(3.22)	(3.26)	(7.18)	(5.09)	(6.36)
Have engaged in coitus[d] (%)	60.3	51.9	57.7	83.1	82.5	82.5	78.3	76.3	77.3	49.2	80.0	61.0
History of sexual abuse[e,f] (%)	7.8	1.3	5.5	4.5	1.8	3.8	12.0	5.0	8.7	13.8	5.0	10.5
Number of lifetime partners[g]	2.11	2.53	2.67	3.12	5.07	3.58	3.15	5.07	4.02	2.45	2.87	2.61
M (SD)	(2.40)	(2.76)	(2.53)	(3.62)	(10.93)	(6.21)	(3.19)	(5.10)	(4.26)	(5.20)	(3.21)	(4.51)
Currently in relationship[h] (%)	44.0	31.2	39.5	66.9	47.4	62.1	52.2	40.0	46.5	49.2	47.5	48.6
Have taken human sexuality course[i] (%)	14.9	19.5	16.4	65.7	75.4	67.1	56.5	50.0	53.5	70.8	67.5	69.5

[a] Regarding age, US participants were significantly younger than Spanish, Costa Rican, and Peruvian participants (all $ps < .01$)

[b] Any form of sexual activity

[c] Regarding age of sexual debut, Spaniards were significantly younger than US ($p < .01$) and Costa Rican ($p < .001$) participants. Peruvians were significantly younger than Costa Ricans ($p < .05$)

[d] Regarding having engaged in coitus, US percentage significantly lower than Spanish and Costa Rican percentages ($ps < .001$). Peruvian percentage significantly lower than Spanish and Costa Rican percentages ($ps < .001$)

[e] Any form of abuse

[f] Regarding history of sexual abuse, Spanish percentage significantly lower than Costa Rican and Peruvian percentages ($ps < .05$)

[g] Regarding number of lifetime partners, US and Peru significantly lower than Costa Rica ($ps < .05$)

[h] Regarding percent currently in relationship, US ($p < .001$), Costa Rica ($p < .05$) and Peru ($p < .05$) percentages significantly lower than Spanish percentage

[i] Regarding percent taken human sexuality course, US percent significantly lower than Spanish, Costa Rican, and Peruvian percentages ($ps < .001$). Costa Rican percent significantly lower than Spanish and Peruvian percentages ($ps < .01$)

Table 2 Cronbach alpha values for study scales by country

Scales	United States ($n = 218$)	Spain ($n = 240$)	Costa Rica ($n = 172$)	Peru ($n = 105$)
PCSV	.77	.74	.69	.74
PCSHE	.85	.89	.90	.87
YASV	.83	.74	.83	.66
Religiosity[a]	.74	.79	.81	.74
Family cohesion[b]	.80	.76	.82	.50
Family conflict[b]	.79	.77	.80	.52

PCSV parental communication of sexual values, *PCSHE* parental communication of sexual health and education, *YASV* young adults' sexual values

[a] Religiosity measured by Religiosity Scale (Batson et al., 1993)

[b] Family cohesion and conflict measured by the Family Environment Scale (Moos & Moos, 1994)

score" for analytic purposes (by adding their responses to each item then dividing by two).[1] These combined scores were averaged and ranged from 0 to 4, with higher scores reflecting more permissive parental sexual values that were communicated to the young adults. Table 2 shows the Cronbach alpha reliability coefficients on all study instruments by country.

Parental Communication of Sexual Health and Education (PCSHE)

To assess the extent to which parents communicated with participants as children/adolescents about matters related to sexual health and education, we created five items that corresponded to broad domains of sexual health (birth [how babies are formed], contraceptives, sexually transmitted infections [STIs], HIV/AIDS, and sexual orientation). Participants responded to items by indicating the statement that best reflected the extent to which parents had discussed the topic with them. The instructions that prefaced the parental sexual value items served as instructions for these items.

Items were first posed in reference to respondents' mothers' level of communication, followed by the same item in reference to their fathers' level of communication. An example item was "As an adolescent, the extent my mother discussed sexually transmitted infections (STIs) with me was: (0) No communication; (1) Rarely discussed; (2) Occasionally discussed; (3) Discussed a fair amount; and (4) Discussed extensively and completely." We combined their mothers' and fathers' scores to each item to create a "sex education communication score" for analytic purposes (by adding their responses to each item then dividing by two). These combined scores were averaged and ranged from 0 to 4, with higher scores reflecting more parent–child communication about sexual health and education.

Young Adults' Sexual Values (YASV)

To assess participants' currently held sexual values as young adults, we created five companion items that corresponded with the items that assessed their parents' sexual values and communication (i.e., attitudes toward masturbation, non-intercourse types of heterosexual sexual behavior, premarital sexual intercourse, same-sex sexual activity, and cohabitation). Participants responded to items by indicating the statement that best reflected their views. The following instructions prefaced the items: Please indicate what your *current, personal views* are on the following (circle the number next to the statement that best reflects your answer).

An example item was "In general, engaging in non-intercourse types of sexual activity (not full intercourse) with the opposite sex *before* marriage is: (1) Completely unacceptable; (2) For the most part, unacceptable or should be avoided; (3) For the most part, acceptable under some circumstances; and (4) Completely acceptable and natural under appropriate circumstances." These scores were averaged and ranged from 1 to 4, with higher scores reflecting more permissive sexual values.

Perceived Parental Communication Comfort and Influence (PPCC; PPI)

To assess participants' perceived level of comfort of each parent in discussing sexual matters with them, and the extent to which participants perceived that their parents had influenced their own sexual views and behaviors, they responded

[1] We note that for the overall sample, perceived maternal and paternal communication about sex correlated significantly with each other, $r(733) = .51, p < .001$. Moreover, perceived maternal communications about sex did not differ significantly between female and male young adults ($Ms = 1.36$ vs. 1.29, respectively, $t = 1.13$). Perceived paternal communications about sex differed significantly between female and male young adults ($Ms = .82$ vs. 1.17, respectively, $t = 23.16, p < .001$), but in absolute terms, differed minimally (.35 on a 5-point scale), with a partial eta effect size of .03.

to one item statements about comfort and influence for each parent. Response options to the comfort statements ranged from 1 (very uncomfortable) to 5 (very uncomfortable). Response options to the influence statements ranged from 1 (Strongly disagree) to 5 (Strongly agree). We combined their mothers' and fathers' scores to each item to create a "perceived parental communication comfort score" for analytic purposes (by adding their responses to each item then dividing by two). These scores ranged from 1 to 5, with higher scores reflective of higher perceived parental comfort and influence, respectively.

Participants also were asked which figure discussed sex and sexuality with them the most while growing up. Response options were: mother, father, brother, sister, and other.

Religiosity

To measure religiosity, participants responded to the nine items forming the Intrinsic subscale of the Religiosity scale created by Batson (1976; Batson, Schoenrade, & Ventis, 1993). The original scale measured three constructs related to believing in and practicing a religion. They were labeled Intrinsic (believing in a religion in order to obtain meaning and purpose in life), Extrinsic (using religion for self-serving goals, such as social purposes or a diversion), and Quest (viewing religion as an ongoing process of questioning the tenets of life). We administered only items forming the intrinsic scale because, as suggested by Batson, they measure individuals' commitment and internal reasons for believing in a religion. Participants indicated their level of agreement with statements using a 5-point Likert-type scale, with response options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Scores were averaged and ranged from 1 to 5, with higher scores reflecting more commitment to a religion.

Family Cohesion and Conflict

To measure participants' perceived cohesion and conflict within their childhood family, they completed the Cohesion and Conflict subscales of the Family Environment Scale (FES) (Moos, 1974; Moos & Moos, 1994). The Cohesion and Conflict subscales are from the Relationship dimension of the FES. The nine-item Cohesion subscale assesses the degree of commitment and help family members provide to each other. The nine-item Conflict subscale assesses the degree of conflict within the family. For each subscale, response options were True-False. Scores were added and ranged from 0 to 9, with higher scores reflecting more perceived family cohesion and conflict, respectively. For this study, items were written in reference to participants' families of origin, thereby requiring participants to rate their family environment retrospectively. Negy and Snyder (2006) have garnered evidence for the psychometric appropriateness of the FES when used in this manner.

Procedure

Prior to the administration of the questionnaires, one of the researchers provided a brief explanation to students in each participating class about the general nature of the study (i.e., that the study was about attitudes toward sex and sexuality). The questionnaire packets were distributed to students enrolled in a wide-range of Psychology classes at the respective institutions. All students who were present in class agreed to participate. The attending researcher was present during administration to answer relevant questions participants may have had about the study or questionnaires. All questionnaires were completed during class time and took about 45 min to complete. Students received extra credit in their respective courses for participation. This study was reviewed and approved by an ethics board at each participating university prior to data collection.

Results

Descriptive Analyses of Study Variables in Absolute Terms

Table 3 shows the means and SD of study variables by country and gender. In absolute terms, the mean Parental Communication of Sexual Values scores for all four national groups tended to hover around the response anchor of "Completely unacceptable" (*M*s ranged from 1.08 to 1.38). In absolute terms, the mean Parental Communication of Sexual Health and Education scores for all national groups tended to hover around the response anchor of "Rarely discussed" (*M*s ranged from 1.02 to 1.27). By contrast, in absolute terms, the mean Young Adults' Sexual Values for all national groups hovered between the response anchors of "For the most part, acceptable under some circumstances" and "Completely acceptable under appropriate circumstances" (*M*s ranged from 3.09 to 3.70).

In absolute terms, the mean Perceived Parental Communication of Comfort scores for all national groups hovered between the response anchors of "Somewhat uncomfortable" and "Part comfortable, part uncomfortable" (*M*s ranged from 2.44 to 2.70). In absolute terms, the mean Perceived Parental Influence scores for all national groups hovered between the response anchors of "Disagree" and "Uncertain" (*M*s ranged from 2.36 to 3.14). For US young adults, the primary figure with whom they discussed sex was their mother (45.9 %); for Spaniards, Costa Ricans, and Peruvians, the primary figure was Other (52.5, 54.7, and 57.1 %, respectively).

Table 3 Means and standard deviations of study variables by country and gender

	United States			Spain			Costa Rica			Peru		
	Women ($n = 141$)	Men ($n = 77$)	Total ($n = 218$)	Women ($n = 178$)	Men ($n = 57$)	Total ($n = 240$)	Women ($n = 92$)	Men ($n = 80$)	Total ($n = 172$)	Women ($n = 65$)	Men ($n = 40$)	Total ($n = 105$)
PCSV	.92	1.39	1.08	1.21	1.20	1.21	1.20	1.10	1.15	1.21	1.58	1.38
M (SD)	(.67)	(1.04)	(.83)	(.86)	(1.09)	(.91)	(.61)	(.72)	(.67)	(.73)	(.96)	(.86)
PCSHE	.96	1.16	1.02	1.28	1.22	1.27	1.24	1.05	1.15	1.	1.45	1.27
	(.82)	(.95)	(.87)	(.89)	(.97)	(.91)	(.86)	(.81)	(.84)	(.76)	(1.05)	(.92)
YASV[a]	3.14	3.00	3.09	3.75	3.55	3.70	3.30	3.39	3.34	3.13	3.06	3.10
	(.72)	(.79)	(.74)	(.39)	(.53)	(.44)	(.75)	(.33)	(.69)	(.56)	(.75)	(.65)
PPCC	2.53	3.07	2.70	2.41	2.55	2.44	2.65	2.32	2.50	2.31	2.90	2.59
	(1.14)	(1.22)	(1.18)	(1.22)	(1.45)	(1.28)	(1.15)	(1.24)	(1.20)	(1.08)	(1.29)	(1.21)
PPI[b]	3.09	3.25	3.14	2.44	2.12	2.36	3.11	2.97	3.05	2.73	2.79	2.76
	(1.18)	(1.28)	(1.21)	(1.15)	(1.10)	(1.14)	(1.19)	(1.31)	(1.24)	(1.23)	(1.22)	(1.22)
Religiosity[c,d]	3.33	3.13	3.26	2.20	2.23	2.21	3.27	3.00	3.14	3.00	2.50	2.76
	(1.45)	(1.04)	(1.33)	(.78)	(.80)	(.78)	(.79)	(.89)	(.85)	(.80)	(.73)	(.80)
Family cohesion[e,f]	6.41	6.88	6.56	6.76	6.87	6.79	6.47	5.57	6.05	6.54	6.21	6.38
	(2.57)	(1.94)	(2.39)	(2.24)	(1.91)	(2.17)	(2.31)	(2.71)	(2.53)	(2.47)	(2.55)	(2.49)
Family conflict[e,g]	3.99	4.15	4.04	2.80	2.50	2.73	3.56	4.19	3.85	3.27	3.08	3.18
	(2.83)	(2.42)	(2.69)	(2.36)	(1.88)	(2.25)	(2.67)	(2.70)	(2.69)	(2.15)	(2.54)	(2.32)

PCSV parental communication of sexual values, *PCSHE* parental communication of sexual health and education, *YASV* young adults' sexual values, *PPCC* perceived parental communication comfort, *PPI* perceived parental influence

[a] Regarding YASV, Spaniards were more permissive in attitudes than US, Costa Rican, and Peruvian participants (all $ps < .001$)

[b] Regarding PPI, US participants perceived more parental influence than Spanish participants ($p < .05$). Spanish participants perceived less parental influence than Costa Rican and Peruvian participants ($ps < .05$)

[c] Religiosity measured by Religiosity Scale (Batson et al., 1993)

[d] Regarding religiosity, US participants were more religious than Spaniard ($p < .001$), Costa Rican ($p < .05$), and Peruvian participants ($p < .01$). Spaniards were less religious than Costa Rican ($p < .001$) and Peruvian participants ($p < .01$)

[e] Family cohesion and conflict measured by the Family Environment Scale (Moos & Moos, 1994)

[f] Regarding family cohesion, Costa Ricans had lower family cohesion than US) ($p < .05$), Spanish ($p < .01$), and Peruvian participants ($p < .05$)

[g] Regarding family conflict, Spaniards had less family conflict than US ($p < .001$), Costa Rican ($p < .001$), and Peruvian participants ($p < .05$)

Comparing Parental and Young Adults' Sexual Values by Country

Perceived parental sexual values correlated significantly with young adults' sexual values for the US and Spain, *r*s(216 and 238) = .29 and .20, *p*s < .001, respectively, but not for Costa Rica and Peru, *r*s(170 and 103) = .00 and .09, respectively. For all four national samples, young adults held significantly more permissive sexual values than their parents (using Wilks' Lambda and a Bonferroni corrected alpha of .006, *F*s ranged from 19.84 to 40.99, *p*s < .001).

Comparing Restrictive Versus Permissive Parents' Sexual Communication on Young Adults' Sexual Values by Country

We recoded responses on PCSV so that values of "2" or less were changed to "0." PCSV response values greater than "2" were recoded to "1." We then performed a multivariate analysis of variance (MANOVA) to determine if the nature of parents' sexual communications (restrictive vs. permissive) would be associated with young adults' sexual values (YASV), age of sexual debut, and number of sexual partners. The independent variable was nature of communication (restrictive vs. permissive). The dependent variables were YASV, age of sexual debut, and number of sexual partners. For all four national groups, nature of parents' sexual communication was not significantly associated with an effect on YASV, age of sexual debut, or number of sexual partners (using a corrected alpha of .002, *F*s ranged from .02 to 1.70).

Comparative Analyses by Country and Gender

Because the four countries differed significantly on select demographic and extra-study variables (age, having taken a course in human sexuality, religiosity, family cohesion, and family conflict; using a corrected alpha of .001, $F(18, 1850.277) = 21.90$, $p < .001$, partial eta square = .17, a multivariate analysis of covariance (MANCOVA) was conducted to compare countries and gender on the primary study variables. Country and gender were the independent variables. Parental communication of sexual values (PCSV), parental communication of sexual health and education (PCSHE), young adults' sexual values (YASV), perceived parental comfort in communication (PPCC), and perceived parental influence (PPI) were the dependent variables. The demographic and extra-study variables were treated as covariates. Country was associated with a significant effect on the dependent variables, $F(15, 1618.089) = 7.73$, $p < .001$, partial eta square = .06. Univariate tests indicated significant differences on YASV, $F(3, 603) = 16.18$, $p < .001$, partial eta square = .08, and PPI $F(3, 603) = 13.86$, $p < .001$, partial eta square = .07. Post-hoc tests (LSD) indicated that Spanish young adults had significantly more permissive sexual values than US, Costa Rican, and Peruvian young adults (*p*s < .001). US and Peruvian young adults had the lease permissive sexual values. US young adults also perceived their parents to be more influential on their sexual values than Spanish young adults; Spanish young adults perceived their parents to be less influential than young adults from the other three countries (*p*s < .001). Countries did not differ significantly on PCSV, PPCC, or PCSHE.

Gender was not associated with a significant effect on the dependent variables, $F(5, 536) = 2.94$.

Predicting Young Adults' Sexual Values by Country

Four multiple regressions were performed for each country separately, to predict young adults' sexual values (YASV) from all relevant study variables (PCSV, PCSHE, PCC, PPI, religiosity, family cohesion, and family conflict, and having taken a course in human sexuality) (see Table 4). For the US sample, multiple $R^2 = .32$, $F(8, 160) = 9.29$, $p < .001$. The individual predictor variables that achieved statistical significance were religiosity ($t = -6.06$, $p < .001$) and PCSV ($t = 2.58$, $p < .05$). For the Spanish sample, multiple $R^2 = .17$, $F(8, 228) = 5.98$, $p < .001$. The individual predictor variables that achieved statistical significance were religiosity ($t = -5.61$, $p < .001$) and PCSV ($t = 2.28$, $p < .05$). For the Costa Rican sample, multiple $R^2 = .36$, $F(8, 112) = 7.73$, $p < .001$. The individual predictor variables that achieved statistical significance were religiosity ($t = -4.73$, $p < .001$) and PCSHE ($t = 2.56$, $p < .05$). For the Peruvian sample, multiple $R^2 = .28$, $F(8, 68) = 3.23$, $p < .01$. The individual predictor variables that achieved statistical significance were religiosity ($t = -3.21$, $p < .01$) and PPI ($t = -2.35$, $p < .05$).

Additional Analyses

Zero-order correlations were examined to determine if PCSV, PCSHE, PPC, and PPI correlated significantly with age of sexual debut and number of lifetime sexual partners by country. Only for Peruvian young adults did PSCV and PCSHE correlate inversely and significantly with number of lifetime sexual partners, *r*s(103) = −.20 and −.21, *p*s < .05, respectively. Also, only for Peruvians did PCSV correlate significantly with age sexual debut, $r(103) = .26$, $p < .05$.

Discussion

In this study, data were obtained from four countries on distinct continents in order to compare young adults' sexual values and behaviors, as well as their perceptions of their parents' sexual values that had been communicated to them while growing up. Across the four national groups, young adults' perceived parental messages about the acceptability of sexual activity

Table 4 Regression of study variables on YASV by country

Variable	Beta	SE	Beta	*t* test	*p*
United States Sample ($n = 218$)[c]					
PCVA	.21	.08	.24	2.58	<.05
PCSHE	.09	.08	.11	1.09	ns
PPCC	−.02	.06	−.04	−.40	ns
PPI	−.09	.05	−.15	−1.87	ns
Religiosity[a]	−.24	.04	−.41	−6.06	<.001
Family cohesion[b]	−.01	.03	−.03	−.327	ns
Family conflict[b]	−.01	.02	−.03	−.321	ns
Hum. sex course	−.02	.04	−.03	−.478	ns
Spain Sample ($n = 240$)[d]					
PCVA	.21	.08	.24	2.58	<.05
PCSHE	.09	.08	.11	1.09	ns
PPCC	−.02	.06	−.04	−.40	ns
PPI	−.09	.05	−.15	−1.87	ns
Religiosity[a]	−.24	.04	−.41	−6.06	< .001
Family cohesion[b]	−.01	.03	−.03	−.327	ns
Family conflict[b]	−.01	.02	−.03	−.321	ns
Hum. sex course	−.02	.04	−.03	−.478	ns
Costa Rica Sample ($n = 172$)[e]					
PCVA	.21	.08	.24	2.58	<.05
PCSHE	.09	.08	.11	1.09	ns
PPCC	−.02	.06	−.04	−.40	ns
PPI	−.09	.05	−.15	−1.87	ns
Religiosity[a]	−.21	.04	−.41	−6.06	<.001
Family cohesion[b]	−.01	.03	−.03	−.327	ns
Family conflict[b]	−.01	.02	−.03	−.321	ns
Hum. sex course	−.02	.04	−.03	−.478	ns
Peru Sample ($n = 105$)[f]					
PCVA	.21	.08	.24	2.58	<.05
PCSHE	.09	.08	.11	1.09	ns
PPCC	−.02	.06	−.04	−.40	ns
PPI	−.09	.05	−.15	−1.87	ns
Religiosity[a]	−.24	.04	−.41	−6.06	<.001
Family cohesion[b]	−.01	.03	−.03	−.327	ns
Family conflict[b]	−.01	.02	−.03	−.321	ns
Hum. sex course	−.02	.04	−.03	−.478	ns

YASV young adults' sexual values, *PCSV* parental communication of sexual values, *PCSHE* parental communication of sexual health and education, *PPCC* perceived parental communication comfort, *PPI* perceived parental influence

[a] Religiosity measured by Religiosity Scale (Batson et al., 1993)

[b] Family cohesion and conflict measured by the Family Environment Scale (Moos & Moos, 1994)

[c] Multiple $R^2 = .32$, $F(8, 159) = 9.13$, $p < .001$

[d] Multiple $R^2 = .17$, $F(8, 228) = 5.98$, $p < .001$

[e] Multiple $R^2 = .36$, $F(8, 112) = 7.73$, $p < .001$

[f] Multiple $R^2 = .28$, $F(8, 68) = 3.23$, $p < .01$

across broad domains were restrictive in absolute terms, with most messages about sexual activity, on average, conveying the idea that sexual activity outside of marriage was unacceptable. Further, their parents rarely discussed important sexually-related health matters with them such as contraceptives, STIs, and so on. The United States and Spain are considered developed nations, whereas Costa Rica and Peru are considered developing nations. Yet, the relative consistency of negative parental

sexual messages across countries was striking. Although we did not attempt to ascertain the explanations for parents' restrictive sexual values, we speculate that the countries' prevailing religion of Christianity underlies many parents' negative sexual values. As discussed previously, Christianity historically has promulgated restrictive and even punitive beliefs related to sex and sexuality (Herdt & Polen-Petit, 2014). Perhaps we would have obtained diverse findings had we included young adults from relatively liberal countries (e.g., the Netherlands). We also note in reference to our samples that our data do not clarify if the young adults' parents actually hold such negative sexual values for themselves or if their negative values apply exclusively to their expectations about their children's sexual comportment.

By contrast, on average and across countries, young adults reported to have rather permissive sexual values. Moreover, their sexual values were statistically significantly more permissive than their parents' values. Despite that family upbringing tends to influence young adults' attitudes across domains, young adults often hold more liberal values generally than their parents (Pew Research Center, 2011; Rampell, 2012). Nonetheless, our data indicate that the discrepancies between young adults' and parents' sexual values were more substantial than we had anticipated. Young adults' sexual values did not even correlate with their parents' sexual values among Costa Ricans and Peruvians; those correlations were modest for US and Spanish samples. It bears noting that our data do not clarify if the young adults will retain their permissive sexual values as they get older or if their values will regress toward their parents' more restrictive values over the decades, particularly after they have their own children. That question might have been clarified if we had included an older cohort of young adults.

For all four national samples, restrictive sexual messages from parents were not associated with a significant increase in age of sexual debut or a significant decrease in the number of sexual partners. If parents' prohibitions against various forms of sexual activity were to have any effects on their adolescents as other studies report (e.g., Dilorio, Pluhar, & Belcher, 2003; Hull et al., 2011; O'Sullivan et al., 2001), such effects seem to be short-lived and even dissipate completely by the time their children reach young adulthood.

Consistent with parents' restrictive sexual values, young adults perceived their parents to be minimally comfortable in discussing sex with them and generally held the view that their parents had minimal influence on their sexual values—a finding that was confirmed by the observed discrepancy in sexual values between young adults and their parents. A distinction between the four countries appeared on the item asking young adults to indicate the person with whom they had discussed sex the most while growing up. The most common response offered by US young adults was their mothers, whereas for the Spanish, Costa Rican, and Peruvian young adults, a non-family member (i.e., "Other") was their most common response. Previous research suggests that, in Latin American and in Spain, there is a tendency for parents to resist addressing sexual topics openly with their children (Hovell et al., 1994; Marin & Gomez, 1997; Romo, Lefkowitz, Sigman, & Au, 2001). A more common form of conveying restrictive sexual values to children is by parents condemning, in the presence of their children, the behaviors of others for engaging in what the parents consider to be unacceptable sexual behavior (e.g., criticizing teenage girls for being sexually active, etc.). This raises the question, from whom are Spanish and Latin American youth receiving sexual information? We speculate that the answer to that question is from friends, popular media, and possibly from school teachers as our data only clarify that they are minimally discussing sex with parents or family members.

Compared to the United States, Costa Rica, and Peru, Spanish young adults held the most permissive sexual values. US young adults also believed their parents to have had the most influence on their sexual values, whereas Spanish young adults indicated their parents to have had the least influence (Costa Ricans and Peruvians fell in between the US and Spain on perceived parental influence). These findings were obtained while controlling for extra-study variables that we believed might have accounted for these findings (e.g., age, having taken a course on human sexuality, religiosity, etc.). Nonetheless, we do not wish to overstate the differences among the four national groups given that, in absolute terms and in light of relatively modest to small effect sizes, the differences were modest at best.

Among the array of study variables, religiosity was the strongest predictor of young adults' sexual values for the four national groups. Specifically, increases in religiosity were associated with more restrictive sexual values. Parental sexual values that were communicated to the young adults while growing up secondarily predicted the sexual values of the US and Spanish samples (more restrictive parental messages were associated with more restrictive sexual values among young adults). Parental communication about sexual health and education secondarily predicted Costa Ricans' sexual values, and perceived parental influence secondarily (and inversely) predicted Peruvians' sexual values (the more influence parents had, the more restrictive were the young adults' sexual values). The fact that religiosity contributed to the prediction of young adults' sexual values more than their parents' communicated sexual values is noteworthy. Religion—particularly Christianity, which is the dominant religion of the four countries, generally prohibits sexual activity outside of heterosexual marriage. Further, some sects of Christianity (e.g., Catholicism, Evangelism, etc.) promulgate practices that conflict with sexual health, such as forbidding the use of contraceptives, condoms, and so on (Herdt & Polen-Petit, 2014). The fact that religiosity more strongly predicted young adults' sexual values than parental sexual communications underscores its powerful influence on sexual values

(e.g., Meier, 2003; Regnerus, 2005). Although we did not assess parental religiosity, we speculate that in various degrees parental religious teachings to their children served as the conduit whereby parental sexual values are transmitted to children.

With the exception of Peruvians, neither parental communications about sex or health nor their perceived comfort or influence correlated significantly with age of sexual debut or number of lifetime partners among the young adults of the US, Spain, or Costa Rica. In the case of Peruvians, parental permissive sexual values and increases in communications about sexual health were associated with an increase in age of sexual debut and a decrease in the number of lifetime sexual partners. Taken together, despite concerns over adolescents engaging in sex or being "promiscuous," parental values communicated to their adolescents in either direction (restrictive or permissive) possibly have no bearing on such outcomes, at least not for young adults in our samples.

Limitations

Our findings were not without limitations. Despite that our samples were from diverse countries, university students were our participants and they were recruited out of convenience. Thus, we do not know if our findings generalize to young adults who are not college students; we also do not know if regional characteristics of our study participants reflect those of their peers in other parts of their respective countries given the sociogeographical diversity inherent to each country. Also, the young adults' views of their parents' sexual values were based on retrospective recall and subjective perceptions. The young adults' memories of what their parents had communicated to them may have been altered or distorted over the years and thus may misrepresent their parents' true messages in unknown ways (see Fisher, 1989; Newcomer & Udry, 1985). It is possible that discrepancies exist between what parents' actual sexual values are versus what they had communicated to their adolescents about sex, given that many parents want their adolescents to defer or abstain from sex. There is also evidence that some adolescents either underestimate (Jaccard, Dittus, & Gordon, 1998; Kahn, 1994; Newcomer & Udry, 1985) or overestimate (Fingerson, 2005) their parents' liberalness toward sexuality. Communication styles also can sometime influence how messages are perceived and processed, yet were not assessed in our study. Finally, as our data were correlational, we do not know if any of our variables (e.g., parental communication, religiosity, etc.) actually caused the young adults' sexual values.

Conclusion and Implications

On average, parents' messages to their adolescents—based on young adults' retrospective perceptions—were restrictive in all five domains of sexual activity that were assessed. However, on average, the young adults held rather permissive attitudes toward the same domains of sexual activity. Further, parental messages that unambiguously were restrictive in nature about sexual activity were not associated with young adults' sexual values any differently than parental messages that were unambiguously permissive. If the goal of parents in conveying restrictive messages about sex to their children was to inculcate similar values, our data suggest that parents' efforts were in vain. We believe this conclusion is difficult to ignore in light of the fact that our findings were similar in four countries on distinct continents. Although there were modest correlations between parental sexual values and those of their children, in absolute terms, the sexual values of parents and their adult children were on opposite ends of the continuum of acceptability. The idea that parents' messages to their children about sexual behavior may ultimately fall on deaf ears was further confirmed by the finding that irrespective of the nature of parental messages, it had no bearing on age of sexual debut or on number of lifetime sexual partners among their adult children.

Religiosity unequivocally correlated with young adults' restrictive sexual values. However, if our data were to be any indication of sexual values held by large swaths of young adults, in absolute terms, young adults seem to hold conspicuously more permissive values about sex than what their parents had hoped for. This finding is consistent with surveys in the US, for example, showing that the majority of young adults under age 30 support same-sex marriage, whereas the majority of adults over 30 do not (Pew Research Center, 2013).

We believe our findings affirm the view that, despite the fervor with which social entities such as parents, school districts, churches, and politicians wish adolescents and young adults would "just say 'no'" to sexual activity outside of marriage, those holding such views must be realistic. By the last year of high school in the United States, for example, approximately 50 % of adolescents have engaged in full (heterosexual) intercourse and that percentage increases up to 75 % by the second year of college (American College Health Association, 2006). In light of those statistics, we argue that if adults who want youth to abstain from sex truly had their best interest at heart, adults would offer the best medically accurate information about safer sex, condoms, and other forms of contraceptives to them. This would include encouraging the usage of such practices (i.e., safe sex), condoms, and so on, as well as ensuring easy access to condoms and contraceptives by adolescents and others.

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