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The Relationship between Parents' Attitudes towards Children's Sexual Education and Their Sexual Communication and Affecting Factors

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ABSTRACT

Objective: The objective of this study was to determine the relationship between parents' attitudes towards their children's sexual education and their sexual communication and to determine the influencing factors. **Materials and Methods:** The research was conducted with 305 parents who met the inclusion criteria using a cross-sectional-correlational research design between June and December 2022. Data were collected using the "Demographic Information Form", "Attitude Towards Sexual Education Scale" and "Sexual Communication Scale for Parents". Data were analyzed using SPSS for Windows 25.0 program. Descriptive statistics, independent samples t test and ANOVA were used in the analysis of the data. Correlation and logistic regression analyzes were performed. **Results:** The mean age of the children was 10.03±5.39 and 52.1% were girls. The strongest predictors of parental characteristics associated with attitudes towards sexual education were the mother's education level and employment status ($p<0.05$). Among the predictors of sexual communication related to parental attitudes, the content and skill sub-dimensions in managing the communication process were positively correlated ($p<0.05$). At the same time, the anxiety sub-dimension showed a negative correlation ($p<0.05$). **Conclusion:** The study determined that parental sexual communication was associated with attitudes towards sexual education. These findings may guide researchers in developing parent-child sexual education programs and health professionals in providing care and services to parents and children.

Keywords: Sexual Education, Sexual Communication, Children, Parents, Attitudes.

Ebeveynlerin Çocuklarının Cinsel Eğitime Yönelik Tutumları ile Cinsel İletişimleri Arasındaki İlişki ve Etkileyen Faktörler

ÖZ

Amaç: Ebeveynlerin çocuklarının cinsel eğitime yönelik tutumları ile cinsel iletişimleri arasındaki ilişkiyi ve etkileyen faktörleri belirlemektir. **Gereç ve Yöntem:** Araştırma Haziran- Aralık 2022 tarihleri arasında kesitsel-korelasyonel araştırma deseni kullanılarak dahil etme kriterlerini karşılayan 305 ebeveynle yürütülmüştür. Veriler "Demografik Bilgi Formu", "Cinsel Eğitime Yönelik Tutum Ölçeği" ve "Ebeveynler İçin Cinsel İletişim Ölçeği" ile toplanmıştır. Veriler SPSS for Windows 25.0 programı kullanılarak analiz edilmiştir. Verilerin analizinde tanımlayıcı istatistikler, bağımsız örneklem t testi ve ANOVA kullanılmıştır. Korelasyon ve lojistik regresyon analizleri yapılmıştır. **Bulgular:** Çocukların yaş ortalaması 10.03±5.39 olup %52.1'i kızdır. Ebeveynler 18-55 yaş arasındadır. Ebeveyn özelliklerinin cinsel eğitime yönelik tutumlarla ilişkili en güçlü yordayıcılarının annenin eğitim düzeyi ve çalışma durumu olduğu bulundu ($p<0.05$). Ebeveyn tutumlarıyla ilişkili cinsel iletişimin yordayıcıları arasında, iletişim sürecini yönetmedeki içerik ve beceri alt boyutları pozitif ilişkiliydi ($p<0.05$). Aynı zamanda, kaygı alt boyutu negatif bir ilişki gösterdi ($p<0.05$). **Sonuç:** Çalışmada, ebeveyn cinsel iletişiminin cinsel eğitime yönelik tutumlarla ilişkili olduğu belirlendi. Bu bulgular, araştırmacılara ebeveyn-çocuk cinsel eğitim programları geliştirmede ve sağlık profesyonellerine ebeveynlere ve çocuklara bakım ve hizmet sunmada yol gösterebilir.

Anahtar Kelimeler: Cinsel Eğitim, Cinsel İletişim, Çocuklar, Ebeveynler, Tutumlar.

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INTRODUCTION

Sexuality, a significant component of the human experience, commences at birth and persists throughout life (Erenoglu and Bayraktar 2017). Humans are inherently sexual beings, and their sexuality constitutes a substantial aspect of their personality (Astle et al. 2022). In addition to its role in personality, sexuality is a critical element of human health, well-being, and contentment (Astle et al., 2022). The biopsychosocial model posits that sexuality encompasses an individual's self-perception, body image, gender identity, style of dress, movement, speech, behavior toward others, and perceptions of others (Öz and Kısa 2023). According to the World Health Organization (2006), sexual health is defined as "a state of physical, emotional, mental, and social well-being regarding sexuality, not merely the absence of disease or dysfunction." The preservation and promotion of sexual health is contingent upon respecting and safeguarding the sexual rights of all individuals. An individual's perception and attitudes toward sexuality are intertwined with their importance given to it, and positive levels of sexuality perception and attitudes can be achieved through sexual education (Ganji et al. 2017).

Attitudes toward sexuality are not spontaneous phenomena; rather, they are shaped by individual characteristics, as well as sociocultural and environmental factors. Determining the current attitudes of individuals on health-related issues is a fundamental component of health education outcomes (Yalçın, Erkoç, and Şişman 2023). The attitudes and thoughts of individuals towards sexuality are influenced by various factors, including family, society, culture, media, religion, socio-economic status, family structures, and parental sexual education levels and attitudes (Pop and Rusu 2015). Determining these attitudes is crucial, particularly to understand the communication between parents and their children (Uzkul and Öğretir Özçelik 2024).

The foundational elements of sexual education, encompassing attitudes, beliefs, behaviors, and values, are established during early childhood, predominantly through family engagement (Uzkul and Öğretir Özçelik 2024). Parents are assumed to be the predominant role in the education of their children's sexuality, yet despite their awareness of the importance of their function in this regard, many parents find themselves lacking adequate preparation to engage in discussions about sexuality (Ganji et al. 2017). In many societies, discussions concerning sexuality are regarded as a taboo, which can hinder children's ability to seek guidance from their parents on sexual matters (Goldschmidt-Gjerløw 2019; Mohd. Tohit and Haque 2024). This can result in children facing difficulties in approaching their parents for guidance, and even when they do, they may not receive adequate responses (Ganji et al.

2017). This can potentially result in children seeking information from alternative sources, which may contain misinformation. Research indicates that children who can communicate with their parents about sexuality and acquire accurate information exhibit higher levels of safe sexual behaviors and lower levels of risky sexual behaviors (Evans et al. 2020). However, studies also indicate an insufficient understanding of how the cycle of parental and child sexual education and communication is sustained (Astle et al. 2022; Flores and Barroso 2017).

This study aims to address a significant gap in the field by examining the relationship between parents' attitudes toward their children's sexual education and their sexual communication. While numerous studies have been conducted on parents' attitudes toward sexual education, research on how these attitudes are reflected in their sexual communication with their children and which factors influence these attitudes is limited (Apaydin Cirik, Aksoy, and Bulut 2023; Aral and Deleş 2024; Çevik Güner and Aktaş 2022; Kandemir, Albayrak, and Karaaziz 2023). This study aims to address this lacuna by evaluating the impact of cultural, socio-economic, and individual characteristics of parents on their attitudes toward sexual education. It comprehensively addresses how these factors are reflected in sexual communication processes. In this respect, the study makes an original contribution to literature by providing scientific and practical suggestions to increase the effectiveness of sexual education in the context of parent-child relationships.

Research questions:

- Is there a relationship between parents' attitudes towards sexual education and sexual communication attitudes?
- Are parents' attitudes towards sex education affected by promotional features?

MATERIALS AND METHODS

Design and participants

The present study employed cross-sectional-correlational research design, and the number of admissions to the children's ward in the institution where the research was conducted was approximately 3,800 in a single year. When the margin of error was calculated at 5% and the confidence interval was established at 95% from the known universe sample, it was sufficient for 289 parents to participate in the research. The purposive sampling method was employed in the research. The sample population encompassed patients admitted to a gynecology and children's diseases hospital for various reasons, including examination, hospitalization, companionship, and so on, during the specified period of June to December 2022. Parents who came for specific purposes and met the inclusion criteria were included in the study. The inclusion criteria encompassed having a child aged 0-18, seeking medical attention at a Children's

Hospital in the northwest of Turkey between June and December 2022 for reasons such as illness, diagnosis, treatment, or accompaniment, completely filling out the survey, lacking any impediment to communication, and consenting to participate in the research. The exclusion criteria of the study included data collection forms that were incompletely filled out and participants wanting to withdraw from the study. During the data collection process, no participants met the research exclusion criteria. The study was completed with 305 parents.

Research variables

Dependent variable: Attitude towards sexual education

Independent variable: Attitude towards sexual communication and descriptive characteristics of parents

Data collection tools

Demographic Information Form: This form, a document developed by researchers in accordance with extant literature, is comprised of 18 inquiries addressing various demographic variables. These include, but are not limited to, the child's gender, age, mother's age, father's age, parental employment status, parental education level, number of children in the family, family type, and parents' thoughts and behaviors regarding sexuality.

Scale of Attitudes Towards Sex Education (SATSE): The scale developed by Artan, Ceylan, and Kurnaz Adibatmaz (2020) was designed to assess parents' attitudes toward sex education. The scale consists of four sub-dimensions and 39 items. The scale encompasses items concerning professional support and respect for differences (items 1-8), parental role (items 9-16), belief in necessity (items 17-28), and avoidance (items 29-39). Respondents utilize a four-point Likert scale ranging from "Strongly Disagree-1" to "Strongly Agree-4." The total score is determined by adding the scores from each scale item, with a minimum of 39 points and a maximum of 156 points. Higher total scores indicate a more positive attitude toward sex education. The internal consistency coefficient for the overall scale was calculated to be 0.90 (Artan, Ceylan and Kurnaz Adibatmaz 2020), and among the current sample, it was 0.93.

Sexual Communication Scale for Parents (SCSP): The scale developed by Artan, Ceylan, and Kurnaz Adibatmaz (2020) comprises five sub-dimensions and 23 items. The sub-dimensions include content (items 1-7), body language (items 8-12), process management (items 13-19), and anxiety (items 20-23). Respondents utilize a four-point Likert scale ranging from "Not Suitable for Me at All-1" to "Completely Suitable for Me-4." It is noteworthy that the anxiety sub-dimension items are reverse-scored. High scores on all sub-dimensions signify that parents' sexual communication style is deemed

appropriate. The scale demonstrated a reliability score of 0.80 (Artan, Ceylan, and Adibatmaz 2020), and among the current sample, it exhibited a reliability score of 0.90.

Data collection

The data for the study were collected from parents who met the inclusion criteria and sought appointments, examinations, or check-ups at a children's hospital in northwest Turkey between June 2022 and December 2022. Information about the research was provided to parents in face-to-face meetings, and the surveys were administered using a self-reporting technique, taking approximately 15 minutes to complete.

Data analysis

The data were analyzed using SPSS (Statistical Package for Social Sciences) for Windows 25.0 software. Descriptive statistics were used to evaluate the data, and it was determined that the kurtosis and skewness values were normally distributed (Blanca et al., 2013). To make meaningful comparisons between the groups, statistical tools such as independent sample t-test and one-way analysis of variance (ANOVA) were employed. To identify the statistical significance of the differences in mean scores, the Bonferroni test was implemented. To explore the interrelationships among the scales, a correlation analysis was conducted. To assess the impact of various independent variables and parents' attitudes on their children's sexual education, logistic regression models were utilized.

Ethical approval

The institutional ethical committee with which the researchers were affiliated provided its approval (Protocol no: 2021-SBB-0310, Date: 14.09.2021). Additionally, the institutional committee at the location where the research was conducted provided its approval. The use of the scales was permitted through email correspondence with the authors. The participants were informed about the study, and both verbal and written consent were obtained.

RESULTS

The mean age of the children was 10.03 years (± 5.39), and 52.1% of them were female. The results of the study indicated that 29.22% of the children were between the ages of 10 and 14 (Table 1). The parents included in the study were predominantly female, with 64.8% of them being mothers and 35.2% being fathers. The age range of the parents was between 18 and 55 years, with the average age of mothers being 36.26 ± 6.95 .

Table 1. Relationship between parent and child characteristics and SATSE (n=305).

Parent and child characteristics			SATSE	
	$\bar{X} \pm SD$			r, p
Child age	10.03±5.39			r=-0.142, p=0.013
Mother's age	36.26±6.95			r=-0.240, p<0.001
Father's age	38.57±7.63			r=-0.271, p<0.001
Number of Children in the Family	1.95±0.94			r=-0.213, p<0.001
	n	%	$\bar{X} \pm SD$	t or F, p
Child age group				F=3.419, p=0.018
1-4 age group (1)	53	18,9		Post hoc 1>2 (p=0.033) 1>4 (p=0.027)
5-9 age group (2)	79	28,1		
10-14 age group (3)	82	29,2		
15-18 age group (4)	67	23,8		
Child gender				
Girl	159	52.1	139.13±13.85	t=-0.478, p=0.633
Boy	146	47.9	139.89±13.63	
Mother's education level				
Basic education (primary and high school)	213	69.8	138.52±14.08	t=-1.981, p<0.001
Higher education (bachelor's and postgraduate)	92	30.2	141.76±12.66	
Mother's employment status				
Employed	179	58.7	142.20±11.98	t=4.053, p<0.001
Unemployed	126	41.3	135.65±15.11	
Father's education level				
Basic education (primary and high school)	214	70.2	139.40±13.82	t=-0.644, p=0.521
Higher education (bachelor's and postgraduate)	91	29.8	140.9±14.19	
Father's employment status				
Employed	265	86.9	140.28±13.23	t=1.738, p=0.102
Unemployed	16	5.2	131.00±21.11	
Family type				
Nuclear	256	83.9	139.81±13.62	t=0.896, p=0.374
Extended	49	16.1	137.83±14.27	

Table 2. Relationship between SATSE scores according to parents' previous sexual education and communication experiences with their children (n=305).

Variables	n	%	SATSE	t or F, p
			$\bar{X} \pm SD$	
Previous sexual education experience				
Yes	136	44.6	140.10 \pm 13.44	t=0.692, p=0.489
No	169	55.4	139.01 \pm 13.97	
Sexual education source*				
Family	50	23.9	138.63 \pm 12.56	F=1.325, p=0.133
School	39	18.7	138.12 \pm 12.32	
Course	9	4.3	139.91 \pm 12.13	
Tv/internet	47	22.5	140.97 \pm 11.07	
Healthcare professional	64	30.6	138.52 \pm 13.48	
Previous communication experience about sexuality with their children				
Yes	174	57.0	140.36 \pm 12.65	t=1.237, p=0.127
No	131	43.0	138.35 \pm 15.01	
Sexual communication topics*				
Gender and Body Differences	109	26.5	139.95 \pm 15.97	F=0.529, p=0.147
Pregnancy	25	6.1	137.57 \pm 13.96	
Reproduction	29	7.0	136.33 \pm 15.01	
Masturbation	20	4.9	137.39 \pm 11.05	
Sexual abuse	73	17.7	138.88 \pm 15.21	
Sexual Curiosity and Play	7	1.7	139.75 \pm 15.49	
Sexually transmitted diseases	14	3.4	139.40 \pm 15.61	
Personal hygiene	135	32.8	138.71 \pm 12.12	

*Multiple options selected.

A significant proportion of the mothers, 69.8%, had a basic education level, and 58.7% of them were employed. The mean age of fathers was 38.57 years (SD = 7.63 years), 70.2% had a basic education level, and 86.9% were employed. The mean number of children in the family was 1.95 (SD = 0.94), and 83.9% had a nuclear family type. A significant relationship was, with higher levels of education corresponding to higher scores ($F=7.169$, $p=0.001$). Furthermore, employed mothers exhibited higher SATSE total mean scores compared to their non-employed counterparts (142.20 ± 11.98 , 135.65 ± 15.11 ; $t=4.053$, $p<0.001$). Subsequent analyses revealed no statistically significant disparities in SATSE total mean scores based on child gender, father's education level, found between the age groups of the children and SATSE ($p<0.005$) (Table 1). A statistically significant discrepancy was observed in the mean scores on the Attitudes Towards Sex Education (ATSE) scale, contingent on various participant characteristics (Table 1). A positive correlation was observed between maternal education level and SATSE total mean score employment status, or family type ($p>0.05$). However, a negative correlation was observed between the child's age and the SATSE total mean score ($r=-0.142$, $p=0.013$), as well as between the mother's age and the SATSE total mean score ($r=-0.240$, $p<0.001$). A similar correlation was found between the father's age and the SATSE total mean score ($r=-0.271$, $p<0.001$). Finally, a negative correlation was identified between the number of children in the family and the SATSE total mean score ($r=-0.213$, $p<0.001$) (Table 1).

A significant proportion of the parents, 55.4%, reported having no prior experience with sexual education. Among those with such experience,

healthcare professionals (30.6%), family (23.9%), TV/internet (22.5%), and school (18.7%) served as the primary sources. Furthermore, 43.0% of parents acknowledged a lack of previous communication with their children regarding sexual topics. The thematic content of sexual communication with their children primarily encompassed personal hygiene (32.8%), gender and body differences (26.5%), and sexual abuse (17.7%) (Table 2).

A discrepancy in SATSE scores is observed, contingent on participants' prior encounters with sexual education and discourse on sexuality with their progeny, as gauged by the SCSP. A non-significant divergence in total SATSE scores is evident, contingent on parents' prior experiences with sexual education, the medium through which sexual education was imparted, prior communication experiences on sexuality with their children, and the subject matter of sexual communication ($p > 0.05$) (Table 2)

Table 3 elucidates the intercorrelations among variables. As illustrated, all subscales of the SCSP demonstrated a significant association with all subscales of the SATSE.

Table 4 presents the outcomes of logistic regression analyses investigating parental characteristics associated with attitudes toward sexual education. The model was affected by the mother's education level ($\beta=-0.355$, $SE=0.420$, $OR=1.426$; $p=0.005$), the mother's employment status ($\beta=-0.803$, $SE=0.268$, $OR=0.448$; $p=0.003$) and the number of children in the family ($\beta=-0.243$, $SE=0.847$, $OR=0.548$; $p<0.001$). Notably, variables such as child's age, mother's age, father's age did not demonstrate a significant impact on parents' attitudes toward their children's sexual education ($p>0.05$).

Table 3. Correlations between SCSP and SATSE total and sub-scales scores (n=305).

	1	2	3	4	5	6	7	8	9	10
SCSP										
Total (1)	1									
Content (2)	0.834**	1								
Body language (3)	0.811**	0.627**	1							
Process management (4)	0.825**	0.643**	0.534**	1						
Anxiety (5)	0.627**	0.355**	0.336**	0.310**	1					
SATSE										
Total (6)	0.649**	0.535**	0.507**	0.481**	-0.502**	1				
Avoidance (7)	0.468**	0.320**	0.372**	0.305**	0.468**	0.837**	1			
Belief in necessity (8)	0.611**	0.565**	0.442**	0.491**	-0.407**	0.827**	0.500**	1		
Professional support and respect for differences (9)	0.509**	0.511**	0.364**	0.384**	-0.340**	0.693**	0.403**	0.625**	1	
Parental role (10)	0.501**	0.398**	0.439**	0.400**	-0.312**	0.753**	0.437**	0.605**	0.401**	1

SCSP: Sexual Communication Scale for Parents, SATSE: Scale of Attitudes Towards Sex Education

Table 4. Logistic regression model identifying parental characteristic predictors for SATSE (n=305).

Effect	β	SE	p	OR	95% CI	
					LL	UL
Child's age	-0.012	0.032	0.715	1.012	0.951	1.076
Mother's age	-0.041	0.058	0.482	0.960	0.857	1.076
Father's age	-0.023	0.054	0.676	0.978	0.880	1.087
Mother's education level	-0.355	0.420	0.005	1.426	0.626	3.246
Mother's employment status	0.803	0.268	0.003	0.448	0.265	0.758
Number of children in the family	-0.243	0.847	<0.001	0.548	-5,206	-1,886
Categorical variable= Adequate attitude towards education -2LL=159.15; Nagelkerke $R^2=0.39$; $X^2=8.616^{**}$; $df=8^{**}$ $p<0.01$						

Table 5 presents the results of the logistic regression analysis for predictors of sexual communication related to parents' attitudes toward sexual education. The findings from this model suggest that two factors emerged as significant predictors of parents' attitudes toward sexual education: "content" ($\beta=0.348$, $SE=0.120$, $OR=1.416$; $p=0.043$) and "process management" ($\beta=0.147$, $SE=0.0608$, $OR=1.159$;

$p=0.014$). Conversely, "anxiety" ($\beta=-0.277$, $SE=0.060$, $OR=1.319$; $p=0.000$) was negatively associated with parents' attitudes towards sexual education. The impact of parents' prior experience with sexual education and their communication experience with their children regarding sexuality on their children's sexual education was not significant ($p>0.05$).

Table 5. Logistic regression model with the best fit of sexual communication predictors for SATSE (n=305).

Effect	β	SE	p	OR	95% CI	
					LL	UL
Previous Sexual Education Experience	-0.237	0.302	0.432	0.789	0.436	1.425
Previous Communication Experience about Sexuality with Their Children	0.464	0.310	0.134	1.590	0.867	2.918
Content	0.348	0.120	0.004	1.416	1.118	1.792
Body Language	0.125	0.065	0.055	1.133	0.997	1.288
Process Management	0.147	0.060	0.014	1.159	1.030	1.304
Anxiety	-0.277	0.060	0.000	1.319	1.172	1.484
Categorical variable= Adequate attitude towards education -2LL=136.07; Nagelkerke $R^2=0.42$; $X^2=5.910^{**}$; $df=8^{**}$ $p<0.01$						

DISCUSSION

Despite the existence of studies that have examined the relationship between parents' attitudes toward their children's sexual education and their sexual communication, there is a paucity of studies that have analyzed the dynamics between these variables in depth (Apaydin Cirik et al. 2023; Aral and Deleş 2024; Çevik Güner and Aktaş 2022; Kandemir et al. 2023). While regression analysis was not identified in the extant literature, this study addresses an important gap by statistically revealing the relationship between the variables. In this respect, the study addresses the factors affecting sexual communication between parents and children from a more comprehensive perspective.

Although child age was found to be negatively correlated with CEYTO in the study, no significant relationship was found in the regression analysis. While Kuborn, Markham, and Astle (2023) suggested the provision of sexual education to children from a young age, there are studies in the literature indicating a positive correlation between

parents' sexual communication with their children and the child's age (Astle et al. 2022). A significant number of parents express reservations about initiating discussions on sexual topics with children under the age of 12, citing concerns that such conversations might potentially disrupt their children's sense of innocence, cause confusion, and result in a lack of clarity regarding how to address their children's sexual curiosity (Kamutambayi et al. 2023). Research from various countries worldwide indicates that attitudes toward sexual education are influenced by parental socio-demographic, geographic, and cultural differences (Adetokunbo S et al. 2022; Apaydin Cirik et al. 2023).

A substantial proportion of the parents in the study reported a lack of prior experience in initiating dialogues with their children concerning sexual matters. This observation is consistent with the extant literature, which suggests that most parents do not engage in discourse with their children on sexual subjects (Astle et al. 2022; Evans et al. 2020). Muslim mothers expressed a lack of perceived

necessity for initiating a conversation about sexuality and indicated their willingness to engage in dialogue when their children indicated a desire to do so (Camellia, Rommes, and Jansen 2021). In a separate study, researchers found that approximately 61% of children did not discuss sexual topics with their parents (Klu et al. 2024). While parents play a pivotal role in their children's sexual health education by imparting information and education to safeguard them from various adverse experiences, the quality and scope of sexual health education provided by parents is often found to be deficient (Schaafsma 2023). The mutual inability of parents and children to communicate about sexuality may be attributed to social and cultural norms or parents' perceived inadequacy in this domain. When parents do not feel prepared to discuss sexual matters with their children, children learn this attitude within the family through social learning, and this situation is transmitted across generations (Klu et al. 2024).

The present study examined the nature of communication between parents and their children regarding sexual topics. The analysis revealed that the predominant subjects of discussion were personal hygiene (32.8%), gender and body differences (26.5%), and sexual abuse (17.7%). Consistent with these findings, extant literature suggests that parents more frequently discuss body parts, body differences, and gender topics with their children but engage in minimal communication about sensitive and important subjects such as sex, masturbation, and orgasm (Astle et al. 2022; Evans et al. 2020). The limited communication on sensitive topics by parents may be attributed to their perception of inadequacy, a lack of sufficient knowledge on how to communicate, or a lack of awareness regarding the importance of sexual education delivered through sexual communication (Schaafsma 2023).

During sexual communication, numerous factors have been identified as influential, including the parent's gender, the sensitivity of the discussed topics, the verbal and non-verbal communication styles of parents, tone of voice, and body language (Flores and Barroso 2017). The present study examined the relationship between the sub-dimensions of the Sexual Communication Scale for Parents (SCSP) and the sub-dimensions of the Scale of Attitudes Towards Sex Education (SATSE). The SCSP sub-dimensions include content, body language, process management, and anxiety, while the SATSE sub-dimensions encompass avoidance, belief in necessity, professional support, and respect for awareness. The findings of this study indicate that the content of parental sexual communication and the efficacy in managing the communication process exert a positive influence on parents' attitudes toward sexual education. Conversely, anxiety related to sexual education has a detrimental effect on parents' attitudes toward sexual education.

The avoidance behavior observed in the sub-dimensions of the SATSE is predominantly characterized by a deficiency in sexual communication knowledge and skills, leading to parents' reluctance to engage in discussions about sexual topics with their children and a concomitant sense of apprehension.

Conversely, parents who can communicate with their children about sexuality exhibit a propensity to share and discuss their knowledge and experiences regarding sexuality with minimal hesitation (Apaydin Cirik et al. 2023). However, parents may also exhibit behaviors that suggest avoidance due to concerns about providing clear messages during these discussions and the potential encouragement of their children's engagement in sexual activity (Flores and Barroso 2017). Concurrent with these findings, a communication style that explicitly articulates expectations and effectively manages the process has been shown to positively influence parent-child relationships by providing clearly stated expectations related to sexuality (Kuborn et al. 2023). In a separate study, an authoritarian communication style was associated with non-acceptance of differences and the cessation of communication on sexual education in non-professional contexts (Heller & Johnson, 2010). The emphasis on the importance of parents' belief in the necessity of their children's sexual education, support for their children, respect for differences, and effective communication is underscored (Astle et al. 2022).

The social status of parents in society, as determined by factors such as education and employment status has been shown to be closely related to children's sexual education (Astle et al., 2022c; Opara et al., 2010). This study observed that mothers with a higher education and working mothers had higher average scores on the SATSE. These findings are consistent with previous research (Uğurlu and Karahan 2022). Additionally, the analysis revealed that there were no statistically significant differences in SATSE total scores based on child gender, paternal education level, paternal employment status, or family type. In societies where mothers are considered the primary caregivers, an increase in mothers' income and education level has been shown to be associated with an increase in their awareness of opportunities for their children's development (Flores and Barroso 2017). This increased awareness has been shown to be associated with higher levels of communication and education about sexuality with their children. A global perspective reveals that mothers engage more frequently in sexual communication with both daughters and sons compared to fathers, demonstrating increased comfort in discussing sexual topics (Astle et al. 2022; Schaafsma 2023). Notably, the study found that a child's gender does not influence parents' attitudes towards sexual education. Pariera's (2016)

research also found no relationship between the child's gender and sexual education. In this context, sexual education is considered not to be gender-based.

Study Limitations and Strengths

This study did not examine the tone of voice parents used during sexual communication with their children. Future research may explore this aspect. The restriction of the research to a single institution introduces limitations to the data. This limitation should be acknowledged, as it may impact on the generalizability of the research findings.

CONCLUSION

The present study examined the impact of parental sexual communication and the efficacy of communication process management on attitudes toward sexual education. The study found that positive attitudes toward sexual education were influenced by the content of parental sexual communication. Conversely, anxiety related to sexual education had a negative impact on attitudes toward sexual education. These results shed light on both researchers' design of parent-child sexual education programs and the care services provided by health professionals to families. The findings of this study indicate that the implementation of programs aimed at addressing the obstacles faced by parents in communicating with their children about sexuality is a potential solution. These programs should include preparation and empowerment for communication. Furthermore, the integration of web-based training and animations that support sexual communication and education for parents and children can enhance the understanding of the importance of the topic.

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Conflict of Interest

The authors declare no competing interests.

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