

Knowledge and attitude and practice of parents in response to their children's sexual behavior

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Abstract

Context: Parents' competence has the most important role in the education of healthy sexual behavior to children under age 12 years.

Aims: This study was conducted to evaluate the knowledge and competence of parents in response to their children's sexual behavior.

Setting and Design: This population-based survey was conducted in Mazandaran Province, the province in the northern region of Iran, from October to January 2015.

Materials and Methods: In this cross-sectional study, 600 parents were selected by a cluster random sampling technique. To assess parents' sexual knowledge and competence, the "Children's Sexual Behavior Questionnaire (CSBQ)" was used to collect data. Mothers and fathers completed the questionnaire separately.

Statistical Analysis Used: Descriptive statistics and multiple linear regressions were used for data analysis.

Results: Of the total 600 participants (mothers or fathers), 41.3% were fathers. The mean age of fathers and mothers was 34.12 ± 6.32 and 32.24 ± 8.5 , respectively. The majority of the parents (66.7%) had an average level of knowledge in response to their children's sexual behavior, whereas only 5% of the parents had appropriate competence in response to sexual behavior of their children. There was a positive association between parents' competence in response to children's sexual behavior and their education ($P < 0.001$, $\beta = 0.13$), and a significant inverse association was observed between parents' competence and their economic status ($P = 0.02$, $\beta = -0.18$).

Conclusion: In groups with low education, skill-building training courses are essential. Furthermore, appropriate interventions should be designed for groups with high economic status who do not have a high competence.

Keywords: Children, Competency, Iran, Nurturing, parents, Sex education, Sexual behavior, Sexuality education

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INTRODUCTION

Nurturing and sexuality education is one of the most difficult and sensitive types of education. Meanwhile, parents' knowledge, attitudes, and competence have the most important role in the education of healthy sexual behavior to children. Sexual behaviors are developmentally normative and common among children.^[1,2] By the end of school-aged children (approximately 7–12 years), most children show different types of sexual behaviors.^[3-7] Sexual behaviors of children are manifested mainly by showing private parts to others, trying to touch mother's or other women's breasts, exploring private parts with children their own age (such as "playing doctor" and "I'll show you mine if you show me yours"), looking at pictures of naked or partially naked people, and playing games with children their own age that involve sexual behavior (such as "truth or dare," "playing family," or "boyfriend/girlfriend"). The type and frequency of these behaviors and child's sexual knowledge are influenced by cultural and religious beliefs concerning sexuality, children's age, and sexual behaviors of family and friends.^[3,8]

Due to these reasons, parents have an important role in sexuality education, and therefore, families have the main responsibility for this matter. Parents should be involved in their children's sexuality as the first-line educators.^[4] Some researchers believe that parents play the main role in sex education for their children before they go to school, and school and community should have only a supporting role.^[5] Parental knowledge of the sexual development of children and empowering them to manage and distinguish between abnormal and normal sexual behaviors lead to proper approach family to deal with child's sexual behavior problems.^[8,9] If parents can talk with their children about sexual issues at an earlier age and prepare an atmosphere of discussion, this will have a significant impact on increasing parent-child communication and helping children in experiencing healthy sexual life.^[10-13] If parents do not have enough knowledge and skills in this respect, they will not be able to react to their children's sexual behavior and will encounter difficulties in management, monitoring, and principled control of children's sexual behavior.^[11,12] Researchers have argued that parents' misconceptions and negative attitudes about children's sexual behavior can prevent them from gaining adequate and useful knowledge as well as proper reaction to their children's sexual behavior.^[1,2,13] In some contexts, parents seem not to be competent enough to nurture or to implement sexuality education for children and Iranian parents are not exception.^[5] In the Iranian culture, home-based sexuality education programs about sexuality-related issues are

rarely carried out.^[10] In addition, children do not receive formal sexuality education at schools.^[14] "Modesty and shyness" lack of awareness about the time and content of proper sexual education, lack of communication skills (such as mothers and their daughters' perspectives on the relationship between them), and competence and ability in relation to children's sexuality in the family and the educational system make dealing with sexual issues postponed to later ages.^[3,4,10]

For effective designing and implementation of training programs and skill-building for parents, every society needs to identify the needs of parents in terms of their levels of knowledge, attitude, and competence regarding their children's sexual behavior.^[1,5] We are not aware of the status and needs of Mazandaran Province parents in the field of children's sexuality education. For this purpose, this study was conducted to evaluate the knowledge and attitude and competence of parents in response to their children's sexual behavior.

MATERIALS AND METHODS

Study setting and design

This population-based survey was conducted in Mazandaran Province, the province in the northern region of Iran, from October to January 2015. The targeted populations were parent or parents who have lived in Qaemshahr city.

Sampling and sample size calculations

The Iran census estimated that there were 204,953 people living in Qaemshahr city in 2015. A random cluster sampling technique was done. For this purpose, the complete list of health-care centers in Qaemshahr city was prepared, and then, the clusters were distributed proportionally to the size of each center. In the next stage, some households were randomly selected as the cluster heads. The main cluster head address was identified by health-care centers. And then, random cluster sampling was conducted with 30 clusters of 20 people (ten households in each cluster). To determine the sample size, the following formula was used:

$$N = \frac{z^2 \times SD^2}{d^2}$$

Considering that in the previous study,^[15] the mean and standard deviation of knowledge, attitude, and practice of parents with a similar questionnaire were 20.40 ± 3.6 , 7.87 ± 1.43 , and 4.29 ± 1.3 , respectively. With an accuracy of 95% and error of 0.5 for knowledge and 0.15 for attitude and competence, the sample size for estimating knowledge, attitude, and competence is estimated at 200, 350, and 288 people, respectively. Obviously, the number should be 350.

According to the cluster sampling method, considering the design effect, 1.7, it was estimated that 600 people could represent the targeted population.

Data collection tools

The data included demographic characteristics and management of children's sexual behavior that were asked from parents and were collected on the form (questionnaire). To assess parents' sexual knowledge, attitudes, and practices, the Children's Sexual Behavior Questionnaire (CSBQ) was used. Concepts assessed by this tool are parental competency in management and nurturing their children sexually.

The questionnaire was designed by Merghati-Khoei *et al.*^[15] The Iranian version of CSBQ (CSBQ-IR) was developed and completed by 386 mothers and 101 fathers who participated in a community-based sexuality education program in Tehran, capital of Iran.

CSBQ is a self-report instrument which consists of 18 three-point Likert scale (yes, no, and I don't know) questions categorized into three main domains: parents' knowledge, attitude, and practice in managing their children's sexual behavior. The minimum score for knowledge was considered below and equal to 4, whereas the maximum was considered as 12. With respect to attitude, the minimum was 9 and the maximum was 27, and with respect to practice, the minimum was 5 and the maximum 15. The knowledge score ≤ 25 is considered as poor knowledge, between 25 and 75 as moderate knowledge, and > 75 as good knowledge. Furthermore, the attitude score ≤ 25 is assumed as negative attitude, between 25 and 75 as intermediate, and > 75 as positive attitude. The practice score ≤ 25 is assumed as poor practice, between 25 and 75 as moderate, and score > 75 as good practice. Reliability was assessed by Kuder–Richardson reliability coefficient and split half. CSBQ-IR was evaluated for its construct, inclusiveness, and content validity by principal component analysis. The Kuder–Richardson reliability coefficient and split-half reliability were found to be 0.425 and 0.457, respectively, that was on acceptable range. Meaning, grammar, wording, and item allocation of the questionnaire were found to be appropriate with a content validity ratio of 0.99 and content validity index of 0.8, respectively.^[15]

To recognize the economic status of participants, similar to the method proposed by the World Bank,^[16] home assets including ownership of TV, fridge, dishwasher, washing machine, laptop, microwave, internet at home, and personal car were collected in the questionnaire as binary variables.

Then, a new variable was generated by principal component analysis. Finally, based on this variable, the participants were divided into different economic groups (low, medium, and high).

Inclusion criteria

The inclusion criteria for parents were as follows: having at least one child under age 12 years and having at least the literacy of reading and writing Persian.

Exclusion criteria

The exclusion criteria were as follows: having a history of participating in the children sexuality education program.

Data were collected by trained field researchers. The researchers referred to cluster head address in two people teams with an introduction letter. They moved to the right and home to home. If the parents were not present at home, at one other time, the questioner was followed up again. The questionnaires were completed by parents by self-report without consultation with the other.

Ethical considerations

The current research project was approved by the Ethics Committee of Shahroud University of Medical Sciences with the ethical code of IR.SHMU.REC.2015.48, and written informed consent was obtained from all the participants. Therefore, to consider the ethical points, the participant' name remained anonymous. The researcher respected the right of individuals to withdraw the research at any stage.

Data analysis

Descriptive statistics (frequency, mean, and standard deviation) were used to analyze the data, and multiple linear regressions were used to detect correlations between demographic variables and knowledge, attitude, and practice. The effect of cluster sampling was included in the calculation of standard errors and confidence interval using survey data analysis and "svy" command in STATA software.

RESULTS

The demographic characteristics of the participating parents are shown in Table 1. 41.3% of the 600 participants in the study were the fathers and the rest were mothers. The mean age of fathers and mothers was 32.55 ± 3.64 and 37.32 ± 4.57 , respectively. In terms of education, 46.2% held diploma degrees. The majority of the fathers, 40.7%, were self-employed and the majority of the mothers, 69.9%, were homemakers. As Figure 1 shows, the majority of the parents, 66.7%, displayed a moderate knowledge in response

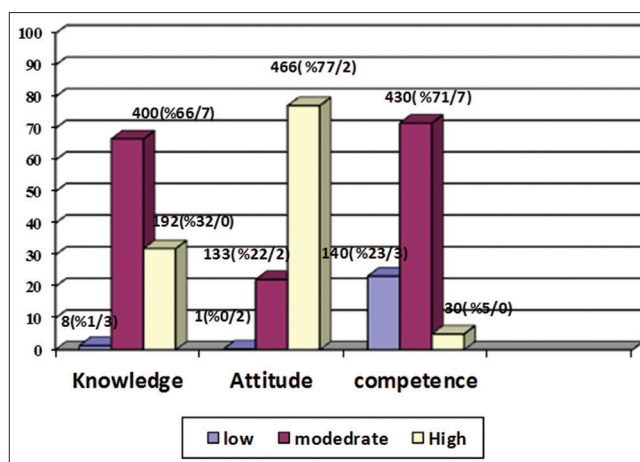
Table 1: The sociodemographic characteristics of the participated parents (n=600) in Qaemshahr, Iran, 2015

Characteristics	n (%)
Sex	
Mother	352 (58.7)
Father	248 (41.3)
Education degree	
Primary school	18 (3)
Secondary school	57 (9.6)
High school	4 (0.7)
Diploma	277 (46.2)
Associate	75 (12.5)
Bachelors	129 (21.5)
Masters	31 (5.2)
Doctorate	9 (1.5)
Number of children	
1	364 (60.7)
2	211 (35.2)
≥3	25 (4.1)
Job	
Father	
Unemployed	2 (0.8)
Office employee	72 (27)
Self-employment	101 (40.7)
Labor	65 (26.2)
Others	8 (3.2)
Mother	
Employed	47 (13.4)
Homemaker	246 (69.9)
Labor	2 (0.6)
Others	57 (16.3)

to their children's sexual behavior, and 77.6% had a positive attitude toward children's sexuality education. Although a majority of 78.2% believed that parents are children's first educators with respect to sexuality, 82.2% did not talk with their children about sexual issues, and 88.7% of the parents did not know how to react to their children's sexual behaviors. Only 5% of the parents had a suitable practice in response to sexual behavior of their children. The answers to questions of the CSB questionnaire are described in detail in Table 2. There was a significant association between total score of parents' attitude with knowledge ($P < 0.001$, $\beta = 0.32$), education ($P = 0.005$, $\beta = 0.13$), and high economic situation ($P = 0.03$, $\beta = 0.67$). There was a positive association between parents' practice and education ($P < 0.001$, $\beta = 0.13$). The relationship between other demographic variables and knowledge, attitudes, and practice of parents is shown in Table 3.

DISCUSSION

This study assessed Iranians' parental competence in response to their children's sexual behavior. Nowadays, parental competence is considered as a fundamental issue given its potential for improving the children's sexual health. Our findings highlight the parental incompetence in proper response to their children's sexual behaviors at different ages, regardless of fair scores they obtained in

**Figure 1: The knowledge, attitude, and practice of parents about sexuality in Qaemshahr, Iran, 2015**

knowledge and positive attitudes toward management of sexual behavior children. The parental competency was revealed poor in competence.

Parental competence

In this study, Ghamshahr (Mazandaran province, the province in the Northern region of Iran) parents (14/8%) speak to their child about sexuality-related matters and only about 5% had high competence.

The main reasons, we argue, are as follows: (1) lack of preparedness, (2) parent-child poor communication in sexuality-related talks, and (3) hesitation and fear of sexuality-related concepts.

According to our results, in a qualitative study conducted by Sharifi *et al.*^[17] and Abolghasemi and Merghati-Khoei^[18] in Iran, parents have not received any education and do not have sufficient skills in sexuality education for children. Furthermore, the results of Turnbull^[19] support our study findings. This study expressed that parents did not have the necessary skills to discuss sexual issues with their children. Furthermore, El-Shaieb and Würtele study in Turkey showed that families were not comfortable talking with their children before 5–7 years of age about sexual issues; this was different in religious and nonreligious families.^[20] The cultural similarities between the two cultures might be the reason why the results are similar. Studies have shown that a number of factors, including lack of knowledge, skills, or comfort, modesty and shyness, fear, suitable educational content, and efficient health-care system, may impress a parent's or caregiver's role in children sexuality education. Health-care providers are important resources that guide and advise parents by providing training, resources, understanding, and encouragement.^[10,14,17-25] In Iranian

Table 2: Parents' response to the items of Children's Sexuality Management Questionnaire in Qaemshahr, Iran, 2015

Field	Questions	Responses, n (%)			
		Correct	Incorrect	Don't know	
Knowledge	1. Is playing with genitalia instead of her/his toys normal?	317 (52.8)	132 (22)	151 (25.2)	
	2. Is self-stimulation in children aged 5–7 years normal?	113 (18.8)	335 (55.8)	152 (25.3)	
	3. Would that be normal for 2 years toddler enjoying nudity?	65 (10.8)	228 (38)	307 (51.2)	
	6. Is looking at a peer's genitalia normal for children?	190 (31.7)	276 (46)	134 (22.3)	
	Attitude	5. Are games like "doctor/patient" or "mother and father" considered normal?	416 (69.3)	136 (22.7)	48 (8)
		7. Is touching and stimulating genitalia normal for children?	187 (31.2)	268 (44.7)	145 (24.2)
8. Is teacher the first-line sexuality educator for children up to age 12?		446 (74.3)	78 (13)	76 (12.7)	
9. Are parents as the first-line sexuality educator for children up to age 12?		469 (78.2)	93 (15.5)	38 (6.3)	
12. Do you think sexuality education is necessary for children?		276 (46)	217 (36.2)	107 (17.8)	
13. Should a child at age 3–4 know the difference between girl and boy?		327 (54.5)	125 (20.8)	148 (24.7)	
14. Does a child at age 3 normally ask questions about pregnancy, childbirth, and infant?		199 (33.2)	255 (42.5)	146 (24.3)	
15. Do children basically reveal sexual behaviors?		222 (37)	160 (26.7)	218 (36.3)	
16. Do you think your sexual behavior as the secret hold?		348 (58)	73 (12.2)	179 (29.8)	
Practice		4. Do you believe that children should be exposed to sexuality themes via internet or satellite	140 (23.3)	274 (45.7)	186 (31)
	10. Do you think you must speak to your child about sexuality-related matters?	89 (14.8)	493 (82.2)	18 (3)	
	11. Do you monitor your children's sexual behavior?	81 (13.5)	482 (80.3)	37 (6.2)	
	17. Do you think children should be prevented from sexual behavior?	111 (18.5)	429 (71.5)	60 (10)	
	18. Do you know what to do in facing with your child's sexual behaviors?	8 (1.3)	532 (88.7)	60 (10)	

Table 3: Associations between demographic factors and knowledge, attitudes, and competence of parents using multiple linear regression models

Independent variables	Knowledge		Attitude		Practice	
	β coefficient (95% CI)	P	β coefficient (95% CI)	P	β coefficient (95% CI)	P
Age (years)	0.02 (-0.002-0.04)	0.07	-0.01 (-0.05-0.02)	0.55	0.02 (-0.004-0.04)	0.11
Education (years)	0.01 (-0.03-0.05)	0.65	0.13 (0.04-0.22)	0.005	0.13 (0.07-0.18)	<0.001
Number of children	-0.20 (-0.44-0.03)	0.09	0.03 (0.43-0.49)	0.88	0.16 (-0.10-0.44)	0.22
Economic status	0.06 (-0.75-0.19)	0.38	0.28 (0.02-0.54)	0.03	-0.18 (0.02-0.54)	0.02
Gender (male=1, female=0)	-0.20 (-0.45-0.04)	0.11	-0.08 (-0.56-0.39)	0.71	-0.16 (-0.44--0.12)	0.26
Knowledge score	-	-	0.32 (0.16-0.47)	<0.001	-0.01 (-0.10-0.07)	0.75
Attitude score	-	-	-	-	0.02 (-0.01-0.07)	0.22

CI: Confidence interval

culture and context, most parents, due to lack of home-, school-, and society-based sexuality education programs, are not educated and have lack of preparedness in sexuality issues. Therefore, parents avoid from involving in children's sexuality education.^[3,17,22] This study suggests that Ghamshahr parents want and need help and support in educating their children about sexuality.

Our results showed that parent educational level was a significant determinant for the parental practices about response to children's sexual behaviors. Therefore, it can be noted that education improvement increases individual incentive and willingness to use multiple educational resources, participate in educational programs, and use their past experiences. Research has found that literacy and education is an important factor in the development of public health.^[26] This finding is consistent with previous studies conducted by Liu and Edwards in China,^[27] which suggested that parental educational level was a significant factor in a parent's ability to communicate sexuality information with children.

Parental attitude

Our results showed that 78.2% of the parents believed that parents are first and foremost educators for sexuality education of children fewer than 13 years of age.

Many factors affect parents' positive attitude. One of these factors is probably parents' emphasis on their children's "sex training and education." Although research has shown, sexuality education requires a cooperation of parents, schools, and the society.^[10,28] There are still disagreements about who has the primary role in children's sexuality education. Some researchers believe that parents are responsible for sexuality education for children before school, whereas the school and the society should have only supporting roles in this respect.^[3] Other researchers believe that teachers should give sexuality education,^[29] and still, others believe that only scientifically trained adults are responsible for education because parents are not trained.^[3] These findings are consistent with the findings of other studies with diverse communities,^[30-36] in which parents were found to be the first sex educators of children. However, in Kurtuncu *et al.*'s study^[37] in Istanbul, Turkey, 30.8% of the parents believed that parents should give

sexuality education to their children. The reason for this difference can be the cultural differences between the two communities.

Parental knowledge

Our findings showed that the majority of the parents displayed moderate knowledge in response to the questions. Parents in our study probably gained their moderate share of knowledge from various information sources in recent years and also from the strong emphasis on preventive care in this era. Moreover, parents' knowledge of management of children's sexual behaviors can result from the cultural beliefs of the target population.

The results of this study showed that there was no significant association between parents' knowledge with age, gender, education, economic status, and the number of children.

Age may be one of the factors that affect the ability of parents to manage children's sexual behavior, whereas in this study, the parents' older age was not associated with increase of the overall score of parents' knowledge, attitude, and practice. Therefore, it seems that the unique role of parents in sexuality education for children has been neglected and ignored from the past. Kurtuncu *et al.* showed that knowledge and attitudes of parents increased with age. The reason for this difference may be due to differences in the study groups; the majority of the participants in their study were nurses and physicians and more of them were over 36 years of age.^[37]

In our study, no significant relationship was observed between knowledge and educational level, whereas in the study by Kurtuncu *et al.*,^[37] the education of participants increased knowledge and attitude. Perhaps, the reason for this difference is due to differences in the education levels of study groups. In the current study, parents with more children did not have higher scores in terms of knowledge, attitude, and behavior than those with fewer children, i.e., the experience of having children does not help to increase knowledge, attitude, and practice. It is, however, obvious because parents were not trained when they had their older children. In the study by Kurtuncu *et al.*,^[37] the knowledge and attitude of the participants increased with their education.

The results also showed that the gender did not have a significant relationship with the level of parental knowledge, attitude, and competence, which were in contrast with Liu's findings.^[27] To justify this matter, cultural differences can be mentioned. According to the culture of the target society, apparently, both parents are equally

involved in the management of sexual behavior of their children, and this should be noted in the development of training programs.

Our findings showed that the economic situation did not have a significant relationship with the level of parental knowledge. In most studies, as the economic situation and welfare of the society improved, knowledge increased as well.^[27,31] However, given the lack of family-, school-, and society-based sex education in Iran, this result is not unexpected.^[14]

In this study, parents' correct answer to the questions regarding attitude had a significant relationship with parents' education, knowledge, and economic status. Hence, it seems that those who had higher levels of knowledge were more likely to train their children about sexual issues, which had also led to the parent's positive attitude. In this study, parents' attitude was also influenced by parents' education and high economic status; on the one hand, more knowledge had made parents to have a more positive attitude.

CONCLUSION

Participating parents did not have adequate preparation and high competence to face and respond to their children's sexual behavior. More importantly, preparedness or unpreparedness is correlated with a number of demographic characteristics of parents in the three domains of knowledge, attitude, and competence. Identification of the knowledge, attitudes, and competence of parents and the effective variables has a significant impact on designing educational interventions and developing parents' competence. Parents' high education plays an important role in the attitudes and competence to manage children's sexual behavior. As a result, skill-building training courses are essential for groups with lower education. Furthermore, suitable interventions should be designed for groups with low and moderate education who do not have a good attitude.

Conflicts of interest

There are no conflicts of interest.

Authors' contributions

All authors were involved in the conceptualization of the study revising the manuscript and interpreting the results.

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