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# The Effect of Sex Education Program on the Attitudes of the Families of Adults with Intellectual Disabilities

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## Abstract

It is extremely important to provide sex education to individuals with intellectual disabilities because they do not know where, when, and in which situations their sexual behavior is appropriate or not, and because they cannot control their sexuality. This study aimed to examine the effect of the Sex Education Program for Families of Adults with Intellectual Disabilities (ZACEP) on the knowledge level of families of adults with intellectual disabilities and their attitudes towards their children's sexual development and sex education. The research adopted a single group pre-test and post-test model, one of the experimental research models. The sample consisted of nine mothers. The effectiveness data of the study were collected through the Parental Sex Education Attitude Scale. SPSS packet program was used for data analysis. The pretest and posttest items were first analyzed with descriptive statistics, then frequency, percentage, and maximum-minimum values were calculated. The t-test analysis for dependent samples is required to compare the pretest and posttest scores of a single group. However, due to the number of participants (N=9), the Wilcoxon Signed Rank Test, which is the nonparametric equivalent of t-test, was used. Research findings showed that the ZACEP did not affect the mothers' attitudes towards the sexuality of adults with intellectual disabilities. Besides, the ZACEP did not affect parents' attitudes towards sexuality at item level.

**Keywords:** Sex Education, Intellectual Disability, Family Education, Family Education Program, Attitude

## 1. Introduction

Sexuality is a crucial component of being human. Sexuality and sex drives have always taken place in human life, but when compared to the past, sexual problems and sex education have started to gain more prominence today. In particular, education has come to the fore in solving sexual problems and gaining acceptable sexual behaviors (Mermer, 1993). Psychoanalysts have studied the libido or sexual energy as the energy of all life instincts that serve the purpose of growth, development, and creativity of the individual's life (Cheauswantavee, 2002). Sexuality is still taboo today and has become a problem of fear and denial for individuals with intellectual disabilities (Earle, 2001). Numerous myths have been put forward over the centuries. Individuals with

intellectual disabilities have been claimed to be asexual, sexually fond, unable to control their sexuality, dependent, and childlike (Swango-Wilson, 2008). Even today, many individuals cannot accept sexuality regardless of all people's physical and intellectual abilities, sexual feelings, needs, and desires. However, just like individuals without disabilities, people with intellectual disabilities also have the same feelings, needs, and desires. They also have the right to receive sexual health care and sex education on sexual issues (Leutar & Mihokovic, 2007). Like adolescents, individuals with intellectual disabilities also need physical contact and touch, and they become interested in love and relationships as they grow older (Kreinin, 2001). However, a great number of young adults with disabilities do not receive sex education at home or at school. In this case, the issue of receiving sex education gains importance.

Sex education starts from childhood and continues until adulthood. It is the process of learning the physical and sexual characteristics of both the same sex and the opposite sex and acquiring the behaviors necessary for the individual to control their sexual instincts. Sex education is vital for both emotional and social harmony (Akay, 1999). The aim of sexual education is not only to ensure that the child complies with some necessary social rules, but also to enable people to develop freely in love, to regulate their sexual powers as much as possible, and to benefit from them for the happiness of themselves and others (Yurdakul, 1999).

Regarding sexual knowledge and experiences, there are some differences between children with normal development and those with intellectual disabilities. Children with normal development can share their sexual knowledge and experiences with their families, peers, and teachers, and they are socialized. The situation is different for individuals with intellectual disabilities. Therefore, sex education should be given with a professional approach in accordance with the mental development level of the individual. For individuals with intellectual disabilities to grow up mentally healthy, the more important it is to acquire sexually appropriate gender identities, the more important it is for family members to know and practice them (Murphy & Elies, 2006). Gordon (1973) acknowledges that all people have sexual needs, whether they are mentally retarded or not. The sexual needs of individuals begin in childhood and continue until later ages. Children with intellectual disabilities are generally believed to have more sexual interests and more sexually explicit behaviors than their peers. However, these children are perceived as such because they do not know where, when and in which situations sexually explicit behaviors are appropriate or not, in other words, they cannot control their sexuality (Artan, 2003). Therefore, sex education can enable individuals with intellectual disabilities to control their sexuality.

Considering the sex education of children and young adults with intellectual disabilities, the developmental levels should be considered (not their age), when examining their sexual development. This indicates that many situations that seem like problems to parents and educators are not actually problems (Çakmak, 2011). Physical intimacy formed within the framework of social relations with individuals with intellectual disabilities becomes a problem in their sexual development. Instructional staff should maintain their relationships in a friendly atmosphere according to the age and mental development of the child, but they should make maximum efforts not to exceed the socio-cultural boundaries. Statements must be concrete and clear in a way that does not cause misunderstandings and interpretations while giving sex education to individuals with intellectual disabilities who are at an educable level. What is meant to be told should be expressed briefly and clearly, and abstract, implicit or suggestive words should be avoided (Artan, 2003; Boyacıoğlu, Karaçam, & Özcan, 2018). Families are the first teachers of their children in their sex education, as in many other areas, but many families are afraid of talking about sexuality with their children, regardless of their disabilities. When talking about sexual experiences, families often fear that they do not have enough knowledge to answer questions appropriately and that their children know too much or too little about sexuality. They do not know when to start the conversation, they find themselves inadequate in discussions, and some families think that time is a problem in matters related to their children's sexuality (Kreinin, 2001). The process of acquiring information about sexual matters of individuals with intellectual disabilities includes more complex processes than individuals with normal development. It is often not possible for them to obtain accurate and necessary information from their friends or books. Therefore, individuals with intellectual disabilities need sex education with the guidance of their parents and teachers (Kempton, 1975; Akdemir & Sarı, 2019; Tutar- Güven & İşler, 2015). This study is significant as it was conducted with families of adult individuals with intellectual disabilities to examine

- their perspectives on sexuality,
- their approaches to the sexuality and sexual education of adults with intellectual disabilities
- their sexual knowledge adequacy, and from whom and how they obtained this information,
- whether they consider the sexual education program necessary or not.

Besides, this study is important in terms of informing about the content of a sex education program to be organized, the method to be applied, and the tools and equipment to be used. This study aimed to examine the effect of the Sex Education Program for Families of Adults with Intellectual Disabilities (ZACEP) on the knowledge and attitudes of parents of adults with intellectual disabilities towards their children's sexual development and education. Thus, with this study, it was aimed to contribute to the knowledge level of families of adults with intellectual disabilities and their attitudes towards their children's sexual development and sex education. To achieve these goals, the following research question were prepared:

1. Does the ZACEP increase parental attitudes towards the sexuality of individuals with intellectual disabilities?

## 2. Method

### 2.1 Research Design

The research was designed with a single group pretest-posttest model, one of the experimental research models. The "Parental Sex Education Attitude Scale" was applied to the participants before and after the implementation. The independent variable of the research was the ZACEP developed by the researcher. The dependent variable was the examination of parents' knowledge levels and parental attitudes towards the sexuality of individuals with intellectual disabilities. However, during the implementation, no data on the families' knowledge level were collected due to the reasons stated earlier; only data on their attitudes towards sexuality were collected.

### 2.2 Participants

The study was conducted with nine participants. They were the mothers of adults with intellectual disabilities working in the İbrahim Ethem Kesikbaş Handicapped Assembly Workshop of Eskişehir Tepebaşı Municipality. Table 1 presents the characteristics of the participants.

Table 1: Demographic Characteristics of Participants

Mother's Age	Child's Age	Number of children	Social security	Level of education	Mother's Job	Father's Job	Average Monthly Income
42	21	2	SGK	Primary school	Housewife	Retired	1750 TL
55	31	2	SGK	Primary school	Housewife	Retired	1000 TL
56	25	3	SGK	Primary school	Housewife	Worker	850 TL
42	20	2	SGK	Primary school	Housewife	Worker	850 TL
46	21	2	SGK	Secondary school	Housewife	Officer	1900 TL
66	33	2	SGK	Secondary school	Housewife	Retired	2000 TL
66	34	2	SGK	Primary school	Housewife	Retired	1000 TL
68	35	5	Yok	Primary school	Housewife	Worker	900 TL
59	33	5	SGK	Primary school	Housewife	Teacher	1640 TL

### 2.3 Data Collection

For research effectiveness data, two tools were considered: the “Parental Sex Education Attitude Scale” (Appendix-1) and the “Information Gathering Test on Adult Sexuality for Families” (Appendix 2) developed by the researcher. However, due to the aforementioned reasons, only the Parental Sex Education Attitude Scale was applied to the participants before and after the implementation. Scales were filled in by mothers. Research effectiveness data were collected at the beginning of the first session and the end of the last session.

#### 2.3.1 Determining the Requirement

Along with the description of subjects, give the mended size of the sample and number of individuals meant to be in each condition if separate conditions were used. State whether the achieved sample differed in known ways from the target population. Conclusions and interpretations should not go beyond what the sample would warrant.

#### 2.3.2 Measures and Covariates

A needs analysis was conducted to create the content of the ZACEP presented to the parents. To determine the needs of the parents, the Family Needs Determination Tool (AGBA) form was applied to the participants. The AGBA used in this study is the updated version of the AGBA scale, which was adapted into Turkish by Bülbin Sucuoğlu (2005) within the scope of the project named “e-FISEP (Family Information and Support Education Program: The Effectiveness of Online Information and Support Services in the Education of Parents of Children with Intellectual Disabilities)” supported by Tubitak and Anadolu University in 2012-2013.

#### 2.3.3 Analyzing and Prioritizing the Requirement

After collecting the scales filled in by the participants, the requirement was determined in the light of the most marked items on the scales and the common themes derived from the answers given to the question asked at the end of the scale: “If there are any other than the ones mentioned above, list the five most basic needs of your family in order of importance.” The subject of sex education, which is not included in the items in the AGBA scale, but is one of the most frequently written (4 times) answers given to open-ended questions, was determined as a requirement.

#### 2.3.4 Introducing the Program

The ZACEP is a family education program that aims to (i) support families of adults with intellectual disabilities for the development of their children in the areas of sexual development, (ii) inform families of adults with intellectual disabilities about the issues they need to pay attention to during the sexual education process and to help them cope with the problems they encounter in this process, and (iii) inform families of adults with intellectual disabilities about sexual abuse and neglect and to assist their children in matters related to safety skills.

#### *Main Aim*

The main goal of the program is to increase the knowledge and attitudes levels of families of adults with intellectual disabilities towards the sexual development and sexual education of their children.

#### *Sub-Aims*

Parents can explain the development of their children regarding sexual development.

Parents can explain how masturbation education should be given and what should be considered during the sex education process.

Parents will explain the concept of child neglect and sexual abuse as well as the precautions to be taken. The parents will explain safety skills and how safety skills should be taught.

### *Content*

- Part I: Sexuality and Sexual Development in Adulthood
  - What Does the Word Sexuality Mean?
  - Development Periods
  - Our Special Children in Adulthood
  - Duties of Families
  - Family-Child Communication and Problematic Behaviors
- Part II: Sex Education
  - What is Sex Education?
  - Role of Family in Sex Education
  - Masturbation Education
  - Things to Consider
  - What are the Benefits of Sex Education?
  - What do families do?
  - Solutions
- Part III: Child Neglect and Sexual Abuse
  - Child Neglect
  - Sexual Abuse
  - Difference Between Both Term
  - Types of Sexual Abuse
  - Good Touch - Bad Touch
  - Ways to Protect Children from Sexual Abuse
  - What should be done when a child is sexually abused?
  - Authorities to Apply in Case of Sexual Abuse
- Part IV: Teaching Security Skills
  - What is Security Skill?
  - Importance of Security Skills
  - Grouping of Security Skills
  - What are Kidnapping Attempts?
  - Reactions to Kidnapping Attempts
  - Social Story

### *Learning-Teaching Processes*

The ZACEP can be considered as a family education program aimed at educating parents as parents. Regarding the goals and sub-goals determined for the ZACEP, the research was conducted in three stages. These are the preparation, implementation, and conclusion stages of the written and visual materials to be used for presenting the content of the program. The steps for each phase and the materials used in these steps were explained below.

### *Preparation Phase*

First, the environment and participants were determined. Eskişehir Tepebaşı Municipality İbrahim Ethem Kesikbaş Assembly Workshop was set as a venue. Participants were nine mothers (of adults with intellectual disabilities) working in this workshop and continuing the MİMEP project carried out in cooperation with İŞKUR and Anadolu University. After determining the participants, to get to know the mothers, families were asked to fill in the “Family Recognition Form.” Besides, written consent was obtained from the families for the research through the “Parental Consent Form.” To develop the content of the program, family needs were identified. In this context, the AGBA was sent to the families and filled in. Before the implementation of the program, pretest

and posttest materials were prepared. The “Parental Sex Education Attitude Scale,” which was used as a pretest-posttest, and the “Information Gathering Test on Adult Sexuality for Families” were applied to the families. A poster was prepared by the researcher using the Adobe Photoshop program in order to inform the families about the place, date, and content of the program. A “certificate of attendance” was prepared by the researcher using the Adobe Photoshop program to give to families at the end of the program. Content and materials were prepared in accordance with the requirements. A fixed camera on a tripod to record all sessions, a screen and projector to reflect the presentations, and a laptop were pre-arranged to ensure that the environment is ready.

### *Creating Content*

First, the needs of the families were determined. Then, the content was created under four different headings based on the needs and in accordance with the developmental characteristics of the participants. Reviewing the literature, the content was briefly explained in a PowerPoint presentation. The titles of the parts were as follows:

#### *Part I: Sexuality and Sexual Development in Adulthood*

The first part included sexuality, developmental periods, the characteristics of these periods and issues that may be encountered, the duties and responsibilities of families during developmental periods, problem behaviors, and family reactions.

#### *Part II: Sex Education*

The second part consisted of the definition of sex education, the importance of the family in this process and the issues that the family should consider, the benefits of sex education, the importance of masturbation education and how it should be taught, and the mistakes that families make.

#### *Part III: Child Neglect and Sexual Abuse*

This part involved detailed information about child neglect and sexual abuse, types of sexual abuse and its characteristics, ways to protect children from sexual abuse, what to do in case of sexual abuse and authorities to apply in this process.

#### *Part IV: Teaching Security Skills*

The fourth part introduced the importance and grouping of security skills, necessary security skills at home and in the community, abduction attempts and appropriate responses to these attempts, and the methods used in teaching security skills.

### *Implementation Process*

Before the implementation, the AGBA and Family Identification Form were sent to the families, and the stage of determining the requirements and demographic characteristics of the participants was completed. A pre-test (the Parental Sex Education Attitude Scale) was administered. The content developed based on the requirements was presented to the families in four sessions. At the beginning of each session, presentation outputs related to the sessions were distributed to the families. The content of each session was introduced through a PowerPoint presentation. With the group meetings organized, families who experienced similar situations were brought together and families were allowed to chat and share during the breaks between the sessions.

### *Sessions*

#### *Session 1*

After sending the invitations of the ZACEP family education program to the families, the first meeting took place on the predetermined date and place. Before the program, a consent form was sent to the families stating that all four sessions would be video-recorded and would not be shared with anyone, and written permission was obtained. Just before the session, verbal consent was taken from the families again. Practitioner families had to arrange the environment before the meeting and check the necessary materials for the presentation. After the families entered the hall, people greeted each other, then the practitioner introduced herself. Before the

presentation, the practitioner handed out pre-tests to families and informed them about how to fill out the pre-tests as well as the importance of these tests. Families were asked to be sincere when filling out the tests. Before filling out the tests, they were asked to take a quick look and whether they had any questions about the tests. After collecting the tests, the slide was projected on the wall with a short introductory sentence and the presentation began. Presentation printouts were distributed to families. Then, brief information was given about what the ZACEP program was, its purpose, how many sessions it would take, what they needed to do during the program, and what would happen at the end of the program. For the first session of ZACEP, a presentation on "Sexuality and Sexual Development in Adulthood" was projected on the wall. During the presentation, questions and answers were held with those who wanted to take the floor, and it was ensured that the family actively participated in the session so that they did not get bored during the presentation. The presentation was followed by a discussion section to answer the questions (if any) of the families. After the discussion section, the session came to an end, and refreshments were served. The families were thanked for their participation and reminded of the date, time, and content of the next session.

#### *Session 2*

Practitioner families organized the environment before the meeting. After the families greeted each other, the practitioner gave brief information about the second session, and a friendly conversation was made. Then, the presentation on "Sex Education" was projected on the wall. During the presentation, questions and answers were held with those who wanted to take the floor, and it was ensured that the family actively participated in the session so that they did not get bored during the presentation. The presentation was followed by a discussion section to answer the questions (if any) of the families. After the discussion section, the session came to an end, and refreshments were served. Presentation printouts were distributed to families. The families were thanked for their participation and reminded of the date, time, and content of the next session.

#### *Session 3*

Practitioner families organized the environment before the meeting. After the families greeted each other, the practitioner gave brief information about the third session, and a friendly conversation was made. Then, the presentation on "Child Neglect and Sexual Abuse" was projected on the wall. During the presentation, questions and answers were held with those who wanted to take the floor, and it was ensured that the family actively participated in the session so that they did not get bored during the presentation. The presentation was followed by a discussion section to answer the questions (if any) of the families. After the discussion section, the session came to an end, and refreshments were served. Presentation printouts were distributed to families. The families were thanked for their participation and reminded of the date, time, and content of the next session.

#### *Session 4*

Practitioner families organized the environment before the meeting. After the families greeted each other, the practitioner gave brief information about the fourth session, and a friendly conversation was made. Then, the presentation on "Teaching Security Skills" was projected on the wall. During the presentation, questions and answers were held with those who wanted to take the floor, and it was ensured that the family actively participated in the session so that they did not get bored during the presentation. The presentation was followed by a discussion section to answer the questions (if any) of the families. The questions of families were answered. After the discussion section, the presentation printouts were distributed to families. The practitioner handed out the post-tests and informed them about how to complete the post-tests and the importance of these tests. Families were requested to be sincere when filling out the tests. Before filling out the tests, they were asked to take a quick look and whether they have any questions about the tests. After collecting the tests, the families were thanked for their participation. Finally, the session came to an end, and refreshments were served.

#### *Final Phase*

Post-tests were applied at the end of the last session to measure the effectiveness of the implementation. To announce that the family education was successfully completed, a short meeting, independent of the sessions, was held. Participants were thanked and given their certificates of participation. A souvenir photo was taken with each participant, and this process was also video recorded. In the video recording, families were asked to briefly

express their opinions and suggestions about the program. At the end of the interviews, brief information was given about the use of the materials distributed and the contact information.

#### *Evaluation*

The effectiveness of the program was evaluated through the Parental Sex Education Attitude Scale applied before and after the implementation.

#### *2.4. Data Analysis*

The SPSS packet program was used to analyze the research data. The pretest and posttest items were first analyzed with descriptive statistics, then frequency, percentage, and maximum-minimum values were calculated. The t-test analysis for dependent samples is required to compare the pretest and posttest scores of a single group. However, due to the number of participants (N=9), the Wilcoxon Signed Rank Test, which is the nonparametric equivalent of T-test, was used. The Wilcoxon Signed Rank Test is used to compare the results of two different tests in which a group is evaluated at the ordinal measurement level. These two tests can be pretest and posttest given to the same people. The difference between Wilcoxon and t-test is that Wilcoxon compares the ranks of individuals instead of means (Akbulut, 2010). The Parental Sex Education Attitude Scale developed by Sari (2005) consists of 14 items. It is a 5-point Likert scale, from (strongly agree) 5 to 1 (strongly disagree). The lowest score that can be obtained from the scale is 14, and the highest score is 70.

### **3. Results**

This part examined whether there were any changes in attitudes levels of families of adults with intellectual disabilities towards the sexual development and sex education of their children because of the ZACEP.

Table 2: Descriptive Statistics of the Parental Sex Education Attitude Scale (Pre-test)

<b>Descriptive Statistics</b>					
	N	Average	Standard Deviation	Minimum	Maksimum
Ö1	9	3,6667	1,65831	1,00	5,00
Ö2	9	2,5556	,88192	2,00	4,00
Ö3	9	3,4444	1,42400	1,00	5,00
Ö4	9	3,0000	1,65831	1,00	5,00
Ö5	9	2,1111	1,16667	1,00	4,00
Ö6	9	2,2222	,66667	1,00	3,00
Ö7	9	2,3333	1,73205	1,00	5,00
Ö8	9	4,4444	,52705	4,00	5,00
Ö9	9	2,7778	1,09291	1,00	5,00
Ö10	9	2,5556	1,74005	1,00	5,00
Ö11	9	3,5556	1,42400	1,00	5,00
Ö12	9	3,5556	1,74005	1,00	5,00
Ö13	9	4,2222	1,09291	2,00	5,00
Ö14	9	4,3333	,86603	3,00	5,00

Ö1: Pretest item number 1 N: The number of participants

As seen in Table 2, the lowest score given to item 1 was 1, and the highest score was 5. The mean of item 1 was 3.66, and the standard deviation was 1.65. Similarly, the descriptive statistics of other items can be found in Table 2.

Table 3: Descriptive Statistics of the Parental Sex Education Attitude Scale (Post-test)

<b>Descriptive Statistics</b>					
	N	Minimum	Maksimum	Average	Standard Deviation
s1	9	4,00	5,00	4,5556	,52705
s2	9	1,00	2,00	1,2222	,44096
s3	9	1,00	5,00	4,2222	1,30171

s4	9	2,00	5,00	4,1111	1,26930
s5	9	1,00	4,00	1,6667	1,00000
s6	9	4,00	5,00	4,6667	,50000
s7	9	1,00	5,00	2,7778	2,10819
s8	9	1,00	5,00	3,4444	1,87824
s9	9	1,00	5,00	2,7778	1,71594
s10	9	1,00	2,00	1,3333	,50000
s11	9	2,00	5,00	4,2222	1,09291
s12	9	2,00	5,00	4,4444	1,01379
s13	9	1,00	5,00	4,3333	1,32288
s14	9	1,00	5,00	4,3333	1,32288
Valid (listwise)	N 9				

According to Table 3, the lowest score given to item 1 was 4, and the highest score was 5. The mean of item 1 was 4.55, and the standard deviation was 0.53. Similarly, the descriptive statistics of other items can be found in Table 3.

Table 4: Comparison of Pretest-Posttest Total Scores of the Parental Sex Education Attitude Scale

<b>Descriptive Statistics</b>					
	N	Average	Standard Deviation	Minimum	Maksimum
Pretest	9	44,6667	4,94975	38,00	50,00
Posttest	9	48,1111	6,37268	37,00	54,00

Table 4 indicates that the average of the pretest scores of the participants was 44.66, while the average of the posttest scores increased to 48.11. While the lowest score from the pretest was 38, the highest score was 50. The lowest score obtained from the posttest was 37, and the highest score was 54.

Table 5: Comparison of the Ranks of Pretest-Posttest Results of the Parental Sex Education Attitude Scale

<b>Wilcoxon Signed Rank Test</b>				
		N	Average Rank	Sum of Ranks
Posttest – Pretest	Negative Rank	2 <sup>a</sup>	1,50	3,00
	Positive Rank	5 <sup>b</sup>	5,00	25,00
	Tied	2 <sup>c</sup>		
	Total	9		

a. Posttest < Pretest

b. Posttest > Pretest

c. Posttest = Pretest

The “Wilcoxon Signed Ranks Test” table displays the summary of score ranks. As seen in Table 5, the number of rows in which the posttest was lower than the pretest was 2 (negative rows), and the number of rows where the posttest was higher than the pretest is 5 (positive rows). The number of connected rows was 2.

<b>Test Statistics<sup>a</sup></b>	
	Posttest- Pretest
Z	-1,869 <sup>b</sup>
Asymp. Sig. (2-tailed)	,062

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks

Positive and negative ranks, the Z value of mean rank, and significance level are given in the “Test Statistics.” The Z value found was -1.869, and the significance level ( $p > .001$ ) was above .001. In other words, no significant difference was found between the pre-test and post-test. The total score of the Parental Sex Education Attitude Scale reported that the ZACEP did not affect on the attitudes of the participants towards the sexuality of adults with intellectual disabilities.

Table 6: Comparison of the Pretest-Posttest Data for Each Item in the Parental Sex Education Attitude Scale

		<b>Wilcoxon Signed Ranks Test</b>		
		N	Mean Rank	Sum of Ranks
s1 - ö1	Negative Rank	1 <sup>a</sup>	2,00	2,00
	Positive Rank	4 <sup>b</sup>	3,25	13,00
	Tied	4 <sup>c</sup>		
	Total	9		
s2 - ö2	Negative Rank	9 <sup>d</sup>	5,00	45,00
	Positive Rank	0 <sup>e</sup>	,00	,00
	Tied	0 <sup>f</sup>		
	Total	9		
s3 - ö3	Negative Rank	0 <sup>g</sup>	,00	,00
	Positive Rank	5 <sup>h</sup>	3,00	15,00
	Tied	4 <sup>i</sup>		
	Total	9		
s4 - ö4	Negative Rank	0 <sup>j</sup>	,00	,00
	Positive Rank	5 <sup>k</sup>	3,00	15,00
	Tied	4 <sup>l</sup>		
	Total	9		
s5 - ö5	Negative Rank	3 <sup>m</sup>	2,50	7,50
	Positive Rank	1 <sup>n</sup>	2,50	2,50
	Tied	5 <sup>o</sup>		
	Total	9		
s6 - ö6	Negative Rank	0 <sup>p</sup>	,00	,00
	Positive Rank	9 <sup>q</sup>	5,00	45,00
	Tied	0 <sup>r</sup>		
	Total	9		
s7 - ö7	Negative Rank	3 <sup>s</sup>	3,83	11,50
	Positive Rank	4 <sup>t</sup>	4,13	16,50
	Tied	2 <sup>u</sup>		
	Total	9		
s8 - ö8	Negative Rank	4 <sup>v</sup>	6,00	24,00
	Positive Rank	4 <sup>w</sup>	3,00	12,00
	Tied	1 <sup>x</sup>		
	Total	9		
s9 - ö9	Negative Rank	3 <sup>y</sup>	4,33	13,00
	Positive Rank	4 <sup>z</sup>	3,75	15,00
	Tied	2 <sup>aa</sup>		
	Total	9		
s10 - ö10	Negative Rank	4 <sup>ab</sup>	2,50	10,00
	Positive Rank	0 <sup>ac</sup>	,00	,00
	Tied	5 <sup>ad</sup>		
	Total	9		
s11 - ö11	Negative Rank	1 <sup>ae</sup>	1,50	1,50
	Positive Rank	3 <sup>af</sup>	2,83	8,50
	Tied	5 <sup>ag</sup>		
	Total	9		

s12 - ö12	Negative Rank	0 <sup>ah</sup>	,00	,00
	Positive Rank	3 <sup>ai</sup>	2,00	6,00
	Tied	6 <sup>aj</sup>		
	Total	9		
s13 - ö13	Negative Rank	1 <sup>ak</sup>	1,00	1,00
	Positive Rank	1 <sup>al</sup>	2,00	2,00
	Tied	7 <sup>am</sup>		
	Total	9		
s14 - ö14	Negative Rank	1 <sup>an</sup>	4,00	4,00
	Positive Rank	3 <sup>ao</sup>	2,00	6,00
	Tied	5 <sup>ap</sup>		
	Total	9		

Considering item 1, for example, Table 6 compared the pre-test and post-test at the item level in terms of the attitude towards sex education. For example, for item 1, the number of rows in which the post-test scores were lower than the pre-test scores was 1, whereas the number of rows with post-test scores higher than the pre-test scores was 4, and the number of connected rows was 4. The other items can be interpreted similarly. Also, the posttest scores of all participants in the 1st, 3rd, 4th, 7th, 9th, 11th, 12th, and 14th items are higher than the pretest scores.

#### Test Statistics

	s1 - ö1	s2 - ö2	s3 - ö3	s4 - ö4	s5 - ö5	s6 - ö6	s7 - ö7
Z	-1,511 <sup>b</sup>	-2,807 <sup>c</sup>	-2,070 <sup>b</sup>	-2,041 <sup>b</sup>	-,921 <sup>c</sup>	-2,699 <sup>b</sup>	-,439 <sup>b</sup>
Asymp. Sig. (2-tailed)	,131	,005	,038	,041	,357	,007	,660
	s8 - ö8	s9 - ö9	s10 - ö10	s11 - ö11	s12 - ö12	s13 - ö13	
Z	-,866 <sup>b</sup>	-,172 <sup>c</sup>	-1,841 <sup>b</sup>	-1,289 <sup>b</sup>	-1,604 <sup>c</sup>	-,447 <sup>b</sup>	
Asymp. Sig. (2-tailed)	,386	,863	,066	,197	,109	,655	
				s14 - ö14			
Z				-,368 <sup>b</sup>			
Asymp. Sig. (2-tailed)				,713			

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks

c. The sum of negative ranks equals the sum of positive ranks

Asymp. Sig.: Significance level

“Test Statistics” of Table 6 show the Z value for each item as well as their significance level. The significance level of all items was found to be above .001 ( $p > .001$ ). In other words, no significant difference was observed between the pre-test and post-test scores. Therefore, the ZACEP had no effect on parents' attitudes towards sexuality.

#### 4. Discussion

This study, which examined whether there were any changes in attitudes levels of families of adults with intellectual disabilities towards the sexual development and sex education of their children because of the ZACEP, shares similar and opposite findings with the literature.

The research findings showed that the ZACEP did not affect the attitudes of adults with intellectual disabilities towards their sexuality. Çelik (2017) concluded that families did not prioritize the sexual education of their children with intellectual disabilities and were not interested in researching and learning the subject. Similarly, in this study, families did not attach importance to the sessions. This result may be because the sessions were carried out in a very short time and the participants attended another family education program on the same day. According to the research findings, the ZACEP had no effect on the attitudes of adults with intellectual disabilities towards their sexuality at the item level. Due to the families' low education level, the items might not be fully understood. It is thought that the families' negative attitudes towards the subject of sexuality might also affect the results of the research. Similarly, Sayın (2007) acknowledged that families might have negative attitudes towards sexuality by exhibiting behaviors such as ignoring or suppressing.

The present study reported families' positive attitudes towards the ZACEP. This inference could be observed in the conversations with the families after each session and the video recording of the families' thoughts on the program after the last session. The most important aspect of this study is that it brought together families who experienced similar processes and enabled them to relax, support each other and share various emotional experiences. Studies advocate that children with intellectual disabilities and their families face social pressure and exclusion problems (Brown & McCann, 2017; Perlin & Lynch, 2016; Dekker et al., 2014; Pownall et al., 2011). Çelik (2018) complained that families could not reach experts when they needed help and information. In this context, the study will serve to overcome the distant relations between the families of adults with special needs and the experts working in the field. Both the implementation process and the literature review underline the necessity of further research on the subject.

The study has various limitations.

- This research is limited to nine mothers.
- As the research was carried out in a short time, social validity data were not collected.
- Some of the participants were found to be illiterate and have a very low education level. Besides, since they participated in two different family education programs on the same day, the application of four data collection tools (two scales, two knowledge tests) was not suitable for the developmental level of the participants and took too much time; thus, the knowledge tests were not used. Therefore, mothers were only administered the "Parental Sex Education Attitude Scale," whose validity and reliability were tested for the ZACEP.
- In this case, we could not collect data on whether the ZACEP, which was developed as one of the research purposes, increased the knowledge level of mothers about the sexuality of individuals with intellectual disabilities.

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