

# The Effect of Extended Parallel Process Model on Sexual Self-Control of Female Adolescents in Aliabad Kotoul in 2020

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## Abstract

**Introduction:** This study we aimed to examine the effect of Extended Parallel Process Model (EPPM) on the sexual self-control of female adolescents in Aliabad Katoul in 2020.

**Methods:** This experimental study with two intervention and control groups was conducted on 50 second-year high school female students in Aliabad Katoul, who had been selected by simple random sampling method. In the intervention group, 8 training sessions (45-60 minutes each) were carried out in groups of 6-7 people, based on the EPPM for 2 months. Data were collected in both groups before and after the intervention, and then were analyzed by SPSS-16 statistical software using descriptive and inferential statistics.

**Results:** Independent t-test did not show a significant difference between the intervention and control groups before the intervention ( $P = 14.14$ ) in terms of the score of sexual self-control, but after the intervention, it showed a significant difference ( $P < 0.01$ ) between the two groups. Also, ANCOVA test showed a significant difference between the two groups by removing the pre-test effect ( $p < 0.01$ ,  $\text{Eta} = 0.64$ ), so that the EPPM was able to increase the sexual self-control of samples in the intervention group.

**Conclusion:** Considering the effectiveness of EPPM, the results showed that if people understand that they are at high risk of disease or health problem, they will be more sensitive towards performing high-risk behaviors. Therefore, increasing awareness and creating sensitivity can play an important role in controlling behaviors.

**Keywords:** EPPM, sexual self-control, adolescents

## Introduction

Adolescence is considered as one of the most important periods of human life<sup>1</sup>. Statistics show that one-fifth of the world's population is between 11 and 19

years old, 85% of whom live in developing countries<sup>2</sup>. In Iran, 27% of the total population is at the age of 11-19 years<sup>3</sup>. Adolescents at this age have a high tendency towards high-risk behaviors such as sexual relation as they have a greater desire to overcome limitations and greater sense of immortality<sup>4</sup>. Often at this age, adolescents do not have a precise understanding of the consequences of high-risk behaviors, especially sexual relations<sup>5</sup>. Adolescents are more inclined to have sexual relation due to their dominant sense of emotion. Adolescents are

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prone to immature and romantic sexual relations due to emotional behaviors and the dominance of emotions over logic<sup>6</sup>. These high-risk sexual behaviors lead to unpleasant and destructive physical, psychological and social consequences<sup>7</sup>. Sexual self-control as one of the preventive methods plays an important role in protecting adolescents against high-risk sexual behaviors<sup>12</sup>. Self-control is also the core of self-confidence, and protects people against stressful problems and situations in adolescence<sup>8</sup>. Teaching sexual self-control behaviors has an important role in increasing awareness, cognition and sensitivity towards interpersonal relationships between girls and boys<sup>4</sup>.

theEPPM is among models that have been used in recent years to provide health messages and prevent diseases and high-risk behaviors<sup>10</sup>. This model was introduced in 1992 by Kim Whit (16, 17), and includes four constructs of perceived sensitivity, perceived severity of risk, perceived effectiveness of available risk mitigation solutions, and perceived self-efficacy to deal with existing threat<sup>9</sup>. The main purpose of this model is to make individuals sensitive towards the threat posed by risk of unhealthy behavior (perceived sensitivity)<sup>11</sup>. This health model on variables in this study, the researcher decided to examine the effect of EPPM on sexual self-control of girls in Aliabad Kotoul in 2020.

## Method

This experimental study with two intervention and control groups was conducted on second year female students of high schools of Aliabad Katoul in Golestan province in 2020. The sample size in this study was 50 students (25 in intervention and 25 in the control groups) using G\* POWER statistical software.

The students were all single, had no history of divorce or engagement, and had not previously participated in similar training or workshops. Written consent was obtained from the parents of all students. Exclusion criteria were; being absent for more than one session (for the intervention group) and unwillingness to continue participating in the study. The samples were selected by simple random method among those who met the inclusion criteria, and then were divided into intervention and control groups by simple random

and lottery methods. The data collection tools included the standard girls' sexual self-control questionnaire that included 65 items. This questionnaire is scored based on a five-point Likert scale, ranging from 1 to 5 with higher score indicating higher sexual self-control<sup>13</sup>.

Validity of the questionnaire was confirmed by 10 faculty members of Golestan University of Medical Sciences. Also, the reliability of this instrument was confirmed by the retest method (0.80). the code of ethics number was as IR.IAU.CHALUS.REC.1399.002. Prior to the study, written consent was obtained from the parents and they were assured about the confidentiality of their information.

The researcher completed the questionnaires before and after the intervention and then, while completing the pre-test during the first session, performed the routine school training in the control group. The data collection time was between 20-30 minutes. In the intervention group, 8 training sessions (45-60 minutes each) were performed twice a week (according to the EPPM) in the groups of 6-7 people over 2 months. The training sessions in the intervention group was carried out as follow:

**Session 1:** Based on assessing the threats and the severity of adolescents' perceptions and vulnerability towards physical and sexual maturity, the psychological changes in puberty and new needs as well as psychological differences between girls and boys were discussed. **Session 2:** In order to examine the perception severity and evaluate compatibility and efficiency, the values, contradiction of needs against values, types of relationships and boundaries, mutual responsibility in each relationship, friendship, and friend selection criteria were discussed. **Session 3:** The topics of responsibility and friend selection criteria were completed and more questions and answers sessions with students were performed. **Session 4:** This session aimed at assessing the threat, adaptation, and efficacy of adolescents in relation to sexual self-control, sexual desires, and healthy sexual behaviors. **Session 5:** The aim of this session was to evaluate the adolescents' adaptation and coping strategies for high-risk sexual behaviors and sexually transmitted diseases. **Session 6:** In this session, cultural and social norms about gender

and warning signs of mental health were discussed. **Session 7:** Awareness about sexual behaviors and sexual self-control was discussed. **Session 8:** The level of adolescents' perception was determined through student assessment. At the end, the researcher, while appreciating the samples, collected post-test information 2 weeks after the intervention. The data were entered into SPSS-16 statistical software and the normality of information scores was determined by descriptive statistics (tables, mean and standard deviation) and inferential statistics (paired t-test, independent t-test, chi-square and Fisher's exact test) at the significant level of 0.05.

### Findings

The mean age of samples in the intervention group was  $16.08 \pm 0.7$  years and in the control group was  $15.76 \pm 0.58$  years, and independent t-test did not show a significant difference ( $P = 0.08$ ) between the two groups in this area. Also, the birth rate of students in the family in the intervention group was  $1.68 \pm 0.62$  years and in the control group was  $1.78 \pm 1.66$  years, and independent t-test did not show a significant difference between the two groups in this area ( $P = 0.66$ ). The Fisher's exact test did not show a significant difference between the intervention and control groups in terms of

students' educational level ( $P = 0.08$ ), father's education ( $P = 0.89$ ), mother's education ( $P = 0.14$ ), mother's job ( $P = 0.053$ ), and father's job ( $P = 0.14$ ).

The score of sexual self-control in the intervention group was  $219.6 \pm 24.4$  before the intervention, which increased to  $224.96 \pm 8.58$  after the intervention. Paired t-test showed a significant difference ( $P < 0.01$ ) in the scores of sexual self-control in the intervention group before and after the intervention. In the control group, the score of sexual self-control was  $215 \pm 61.01$  before the intervention and  $216.88 \pm 58.58$  after the intervention. Paired t-test did not show a significant difference ( $P = 0.14$ ) between the scores of sexual self-control in the control group before and after the intervention. Also, independent t-test before the intervention did not show a significant difference ( $P = 0.14$ ) between the intervention and control groups in terms of the scores of sexual self-control. However, after the intervention independent t-test showed a significant difference between the intervention and control groups ( $P < 0.01$ ) in terms of the scores of sexual self-control. The ANCOVA test showed a significant difference between the two groups by eliminating the pre-test effect, so that possibly 62% of all changes in the post-test had been done by the use of EPPM (Table 1).

**Table 1: The effect of EPPM on sexual self-control of female students in the high schools of Aliabad Kotoul in 2020**

Source of variance	Sum of squares	Degree of freedom	Mean of squares	F value	Significant level	Eta
Modified model	2703.24	2	1351.62	11.24	$P < 0.01$	0.23
Post-test separator	10029.9	1	10018.9	83.14	$P < 0.01$	0.62
Group	620.27	1	620.27	5.16	$P = 0.01$	0.09
Error	5650.3	47	120.21			
Sum	2447754	50				
Total	8353.29	49				

## Discussion

The results showed that, the EPPM was able to increase the sexual self-control of female students. The results of this study are consistent with other studies in this field.

Based on the results of this study, it can be argued that the EPPM increases awareness by increasing health beliefs and creating sensitivity towards high-risk behaviors<sup>9</sup>. Sex education causes adolescents to think more deeply about sexual relations, and be more sensitive and aware of interpersonal relationships<sup>4</sup>.

According to the EPPM, if people believe that they are at a great risk of disease or health hazard, they will become more sensitive towards it<sup>16</sup>. In addition to increasing motivation, this model increases people's perception of high-risk behaviors<sup>17</sup>. Studies have shown that, there is a significant difference between perceived sensitivity of people who perform high-risk behaviors and people who do not. This difference is more prominent in students who perform high-risk behaviors and are less aware of the risks involved<sup>15</sup>. Awareness and sensitivity can play an important role in controlling behaviors<sup>2</sup>. The purpose of sex education during adolescence is not only to provide information on the transmission of sexual diseases and sexual relation, but also to empower people to control their sexual instincts and manage their sexual behavior<sup>18</sup>. Therefore, health programs tailored to the sexual needs of adolescents have an important role in the care and protection of adolescents against high-risk sexual behaviors. Thus, providing sex education for adolescents is among the educational necessities of education system in Iran<sup>14</sup>.

One of the limitations of this study was that, the study was solely conducted on girls. Therefore, it is suggested that in future studies, this theory should be applied on both sexes.

## Conclusion

Considering the effectiveness of EPPM on sexual self-control of girls, it can be argued that the purpose of this training program is not only to help learners gain knowledge and awareness, but also to help them develop skills and change attitudes toward personal values.

Therefore, teaching sexual issues in adolescence can be considered as an effective solution in most aspects of life.

**Ethical Clearance – Taken**

**Source of Funding– Self**

**Conflict of Interest –Nil**

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