

DOES PRECONCEPTION TRAINING AFFECT THE AVOIDANCE OF PREGNANCY? THE BUTTERFLY EFFECT: THE CASE OF HOME VISIT

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Aim: The aim of this study is to determine the effect of preconception training on the avoidance of pregnancy.

Materials and Methods: The study was conducted with pretest-posttest quasi- experimental design during home visits within the scope of the Butterfly Effect project. The population consisted of women who were aged 18–49 years and were living in villages with high fertility rates in a provincial centre in the Central Black Sea region. The sample was calculated by power analysis and included 100 women. The data were collected using a Personal Information Form and the Desire to Avoid Pregnancy (DAP) Scale. The women in houses selected through simple random method were visited. the personal information form and the DAP were applied to the women as pretest and then the preconception training was provided and the DAP was applied as posttest after this training

Findings: The DAP total score was 29.17 ± 13.28 before the training and 27.68 ± 13.05 after the training. A significant difference was found between the DAP total mean scores before and after the training and age, age of the partner, duration of marriage, use of family planning, and previous pregnancy or birth. Moreover, while the presence of living children and the use of family planning were effective on the DAP before the training, the variables of the partner's age, the use of family planning, and the number of years after which she would like to conceive a child were effective on the DAP after the preconception training.

Conclusion: In the study, it was determined that the women's desire to avoid pregnancy was moderate. The number of living children and the number of children planned for the family were significant predictors on the desire to avoid pregnancy.

Keywords: Preconception, Midwifery, Training, Avoidance of Pregnancy.

INTRODUCTION

Preconceptional care is defined as “care provided to couples of reproductive ages, regardless of pregnancy or desire to become pregnant, before pregnancy, to improve health outcomes for women, newborns, and children.” The preconception period proposes the process of providing direct or indirect healthcare interventions that have the potential to identify or modify biomedical, behavioural, and social risk factors associated with pregnancy, intrapartum, neonatal, and childhood mortality and morbidity [1]. Preconceptional care includes a wide range of interventions, such as training and empowerment of women, as well as health interventions such as immunisation and nutrition [2].

Planning and desire to conceive a child, or to avoid it, is one of the major goals of married individuals. However, many women in the fertile period, except for some periods (pregnancy and puerperium, etc.), desire to protect and avoid pregnancy in order to prevent unplanned, unintentional pregnancy [3]. In planned pregnancies, it is important to avoid and protect against pregnancy [4]. Preconceptional care enables the prevention of undesired pregnancies during formation of the planned pregnancies and the initiation and maintenance of the desired pregnancies in a healthier way [5]. It is important to assess women’s intention to conceive with accurate and reliable assessment tools for evaluating the desire to avoid pregnancy, preventing undesired pregnancies, and identifying the needs for contraceptive methods [6].

Healthcare professionals have an important role in identifying risks in women and men and making informed decisions about planning or avoiding pregnancy. Primary care for women of reproductive age should involve the assessment of a woman’s fertility goals and pregnancy plan [7]. The aim of this study is to determine the effect of preconception training on the avoidance of pregnancy.

Hypotheses:

-H₀: Preconception training has no effect on women’s avoidance of pregnancy.

-H₁ Preconception training has an effect on women’s avoidance of pregnancy.

MATERIALS AND METHODS

Aim of the Study

The study was conducted with cross-sectional, pretest and posttest quasi- experimental design during home visits within the scope of the Butterfly Effect project to determine the effect of preconception training on the avoidance of pregnancy.

Place and Time

The study was conducted with women of reproductive age who were between 18 and 49 years old, were in preconception period and were residing in seven villages of a provincial centre in the Central Black Sea region between 01/03/2023 and 30/06/2023.

Population and Sample

The population consisted of women of reproductive age aged 18–49 years in the preconception period in 7 villages of the provincial centre in the Central Black Sea region.

There are 103 villages and 9 towns in the provincial centre. The number of women between the ages of 15 and 49 in these villages is 10.039. The villages with a high population of women aged 15–49 years and a high fertility rate were selected when selecting the villages to be included in the sample. The number of villages to be included in the sample was determined by taking the 15–49 age list from the Provincial Directorate of Health. We initiated the study in the first village on the list and continued until the sample size was reached. The non-probability sampling method was used while selecting the sample. The G*Power 3.1.9.7 program was used to determine the sample [8]. Considering the small effect size recommendation of Cohen (1988) [9], the effect size was calculated as $f^2=0,15$ and according to the two-tailed hypothesis method, it was determined that the confidence interval was 80% [10] and the margin of error was 5%. As a result of the calculation, a sample size of 90 women was determined and the study was completed with 100 women, taking into account possible data losses.

Data Collection Tools

A “Personal information form” and “Desire to Avoid Pregnancy Scale” to determine women’s desire to avoid pregnancy were used as data collection tools in the study.

Personal Information Form

This form, which inquired about descriptive characteristics, included 16 questions about women’s socio-demographic and obstetric characteristics (age, educational background, partner’s age, partner’s profession, partner’s educational background, gestational week, duration of marriage, intended pregnancy, etc.). The researchers prepared the personal information form by reviewing the literature [3, 11].

Desire to Avoid Pregnancy Scale (DAP)

Rocca et al., developed the scale in 2019 to assess women’s desire to avoid pregnancy prospectively (in the next three months and one year) and consists of 14 items and 3 factors [12]. Özten conducted the Turkish

validity and reliability study of the scale in 2022. The factors of the scale are Cognitive Desires and Preferences (items 1, 2, 3, 6, 7, 8, 9, and 10), Affective Feelings and Attitudes (items 5, 11, and 13), and Anticipated Practical Consequences (items 4, 12, and 14). The scale is scored on a five-point Likert model anchored at “0=strongly agree,” “1=agree,” “2=neither agree nor disagree,” “3=disagree,” and “4=strongly disagree.” Positive items of the scale are scored between 0-4, while reverse items are scored between 4-0. A high score indicates an elevated desire to avoid pregnancy, while a low score indicates a reduced desire to avoid pregnancy. Rocca et al. found that the Cronbach’s alpha value of the original version of the scale (Desire to Avoid Pregnancy Measure, DAPM) was 0.90, and Özten (2022) found that the Cronbach’s alpha value of the scale (Desire to Avoid Pregnancy Scale -DAP) was 0.95. In the present study, it was determined that Cronbach’s alpha value was 0.90 before the training and 0.91 after the training.

Implementation Plan of the Study

Before travelling to the villages determined to collect the data, village mukhtars were informed through the Provincial Directorate of Health and the village mukhtar was asked to provide preliminary information to the villagers. The Youth Office of the university in the provincial centre funded the study. The researchers designed brochures and utilised them in the training. The data were collected by visiting the women residing in the villages one by one in their homes. The desire to avoid pregnancy scale was applied to the women face-to-face before the training, and after they completed the scale, the researchers provided the women with a training about the preconception period. During the training, the training content prepared by the researchers was used. After the trainings were completed in about 15-20 minutes, the desire to avoid pregnancy scale was applied again.

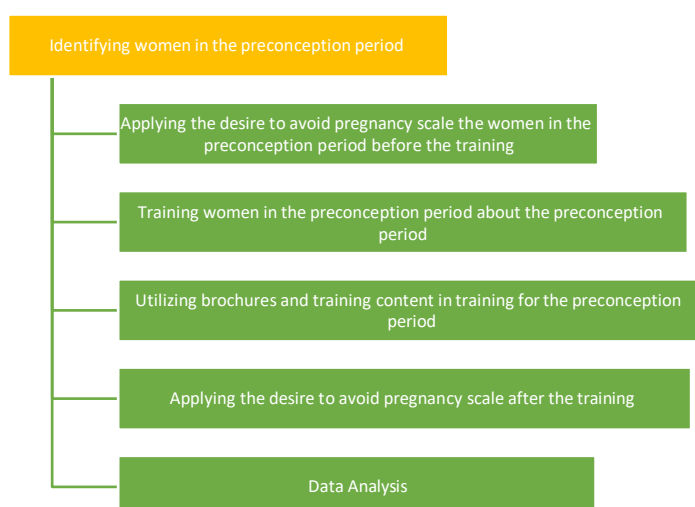


Figure 1: Implementation Plan of the Study

Characteristics of the Participants

Inclusion Criteria: The women who were aged 18–49 years, graduated from at least primary school, were able to speak and understand Turkish, were not diagnosed with pregnancy or menopause, were fertile, voluntarily agreed to participate in the study, and gave their consent to participate in the study were included in the study.

Exclusion Criteria: Those who were asylum-seekers or refugees, who participated in the study but then decided to withdraw from the study, and filled out the data collection forms incompletely or failed to complete them were excluded from the study.

Data Analysis: The data were statistically analysed using the SPSS 25.0 software in a computer environment. Descriptive statistical measures (mean, standard deviation, minimum and maximum values, and percentages) were used. Since parametric test assumptions were fulfilled in the data analysis, Independent Sample t test and Paired Sample t test were used in pretest-posttest and to determine the difference between mean values of two independent groups. One-way analysis of variance was used for more than two independent groups (Tukey test to determine which group mean is different from the others). Linear regression analysis for variables that are considered to have an effect on the avoidance of pregnancy before and after the training, and repeated measures two-way analysis of variance for determining the effect of scale total scores on variables were applied, and the significance level was determined as 0.05.

While evaluating data in terms of the analysis for normality, Kolmogorov-Smirnov test statistics and p-value, skewness, and kurtosis coefficients were analysed to determine how the data of the total scores of the scale and its subscales were distributed.

If the p-value was greater than 0.05 or the skewness and kurtosis coefficients were within

± 2 limits, the data were considered to have been normally distributed based on the recommendation of Tabachnick and Fidell (2013) [13].

FINDINGS

The analysis of the DAP mean scores before and after the training indicated that the DAP total mean score was 29.17 ± 13.28 before the training and 27.68 ± 13.05 after the training. The total mean score dropped after the training, women adopted a more positive approach towards pregnancy, and there was a significant difference between the mean total scores of the scale before and after the training ($p < 0.05$). When the mean scores of the DAP subscales were analysed, it was determined that the mean scores on all subscales dropped after the training, and women held a positive perspective towards pregnancy in cognitive, affective, and objective terms. A significant difference was found between the mean

scores of the cognitive desires and preferences subscale before and after the training ($p < 0.05$), while no significant difference was found between the mean scores of the affective feelings and attitudes and anticipated practical consequences subscales before and after the training ($p > 0.05$) and mean scores were similar (Table 1). When the internal validity coefficients reliability levels of the DAP were analysed, it was determined that the overall reliability level of the overall DAP and the cognitive desires and preferences subscale before and after the training was highly reliable ($0.80 < \alpha < 1.00$), and the reliability levels of the internal validity coefficients of the affective feelings and attitudes and anticipated practical consequences subscales before and after the training were highly reliable ($0.61 < \alpha < 0.80$) (Table 1).

Intergroup comparison between the DAP total mean score and mean scores of its subscales before and after the training and sociodemographic characteristics showed that there was a significant difference between the variables of age, educational background, partner's age, partner's educational background, and duration of marriage and the Cognitive Desires and Preferences subscale, between the variables of age, educational background, partner's age, partner's educational background, and duration of marriage variables and the Affective Feelings and Attitudes subscale, between the variables of age, partner's age, and duration of marriage and the Anticipated Practical Consequences subscale, and between the variables of age, partner's age, and duration of marriage and the overall DAP ($p < 0.05$) (Table 2).

Intergroup comparison between the DAP total mean scores and mean scores of its subscales before and after the training and obstetric characteristics indicated that there was a significant difference between the variables of pregnancy, childbirth, use of family planning methods, and the number of years after which people would like to conceive a child and the Cognitive Desires and Preferences subscale, between the variables of pregnancy, childbirth, presence of living children, and the number of years after which people would like to conceive a child and the Affective Feelings and Attitudes subscale, between the variables of pregnancy and childbirth and the Anticipated Practical Consequences subscale, and between the variables of pregnancy, childbirth, presence of living children, use of family planning methods, and the number of years after which people would like to conceive a child and the overall DAP ($p < 0.05$) (Table 3).

Linear regression analysis conducted to reveal how the variables considered to have an effect on women's desire to avoid pregnancy predicted their DAP scores before the training showed that five predictor variables demonstrated a significant correlation ($R^2 = 0.314$) with the desire to avoid pregnancy ($F = 6.328$; $p > 0.05$). These five variables accounted for 31.4% of the desire to avoid pregnancy. When the significance order of these variables on the dependent variable was evaluated according to the standardised regression coefficients, it was found that the number of living

children ($\beta=6.922$) held the highest significance and the number of children planned for the family ($\beta=-5.145$) held the lowest significance. Considering the significance tests of the regression coefficients, it was found that the number of living children and the number of children planned for the family were significant predictors of the desire to avoid pregnancy ($p<0.05$).

The linear regression analysis conducted to evaluate how these variables predicted the DAP scores after the training showed that these predictor variables demonstrated a significant correlation ($R^2=0.315$) with the desire to avoid pregnancy ($F=6.357$; $p<0.05$). These five variables accounted for 31.5% of the desire to avoid pregnancy. When the importance order of these variables on the dependent variable was evaluated according to the standardised regression coefficients, it was found that the number of living children ($\beta=6.626$) held the highest importance and the number of children planned for the family ($\beta=-4.802$) held the lowest importance. Considering the significance tests of the regression coefficients, it was found that the number of living children and the number of children planned for the family were significant predictors of the desire to avoid pregnancy ($p<0.05$) (Table 4).

DISCUSSION

This study revealed the effect of preconception training on pregnancy avoidance. According to the DAP results before and after the preconception training, very important and striking findings were obtained regarding the factors that were considered to have an effect on women's desire for pregnancy. The findings were discussed in the literature.

The research revealed a significant difference ($p<0.05$) between the variables of age, partner's age, and duration of marriage in the intergroup comparison of the pre- and post- training mean scores of the overall DAP and its subscales with sociodemographic characteristics ($p<0.05$) (Table 2). There are many factors that affect women's avoidance of pregnancy [14, 15]. The study by Özten (2022) reported that women aged 40 years and over avoided pregnancy more than women aged 18–29 years, and the duration of marriage was also an important variable [11]. Contrary to Özten, the study conducted by Rocca et al. (2016) reported that women between the ages of 15 and 24 and those without children were more likely to avoid pregnancy [16]. Another study stated that nulliparous women of younger ages and women holding higher educational levels were more likely to avoid pregnancy [17]. In the present study, it was determined that women aged 35 years and over were more likely to desire to avoid pregnancy. It was considered that this difference in the present study may have resulted from changes in the demographic characteristics of women and differences in the populations in the study.

The intergroup comparison of the pre- and post-training DAP total mean scores and the obstetric characteristics showed that there was a significant difference between the variables of pregnancy, childbirth, the presence of living children, use of family planning method, and the number

of years after which the women desired to conceive a child ($p < 0.05$) (Table 3). It is known that intervals shorter than two years between two pregnancies negatively affect the health of both mother and infant [18]. In the literature, it has been reported that the mode of delivery, years since the last pregnancy, and four or more pregnancies affect the avoidance of pregnancy [11]. According to the findings of the study conducted by Gençer and Ejder Apay (2020), women who had fewer pregnancies had a significantly higher desire for pregnancy [19]. The result of the present study, which is compatible with the literature, suggest that women who live in rural areas have higher fertility rates.

When the DAP mean scores used before and after preconception training were analysed in the present study, it was found that the DAP total mean score was 29.17 ± 13.28 before the training and 27.68 ± 13.05 after the training. It was found that the total mean score dropped after the training, women adopted a more positive approach towards pregnancy, and there was a significant difference between the mean total scores of the scale before and after the training ($p < 0.05$). A study by Özten (2022) reported that women who had two or more pregnancies suffered a miscarriage, and had a child had significantly higher scores on the scores of the overall scale and its subscales compared to women who had never been pregnant [11]. Another study also revealed that the mean score on the avoidance of pregnancy scale was high, and higher scores were considered to indicate more avoidance of pregnancy [16]. The present study revealed that the women's desire to avoid pregnancy was at moderate level. Contrary to the literature, it was considered that a lower mean score was due to the fact that women were living in rural areas and their awareness of planned pregnancy raised after the training.

Considering the significance tests of the regression coefficients in the study, it was found that the number of living children and the number of children planned for the family were significant predictors of the desire to avoid pregnancy ($p < 0.05$) (Table 4). In their study, Stulberg et al., (2020) reported that there was a significant correlation between the scores of desire to avoid pregnancy and contraception [20]. This result suggested that the preconception training was important and could be beneficial for indecisive women. The study by Weitzman (2017) stated that the idea of intermittent pregnancy affects the avoidance of pregnancy, which was correlated with socioeconomic variables [21]. Another study reported a significant difference between the avoidance of pregnancy scale and partner relationships, the age of the woman, and the number of children [22]. Another study reported that women avoided pregnancy by indicating that "it would be much better for me if I got pregnant within three months" and they adopted the importance of preconception care [23]. In planned pregnancies, it is important to avoid and protect against pregnancy [4]. The results of the studies support our study data. Training related to the preconception period greatly contributes to increasing the desire for pregnancy.

CONCLUSION AND RECOMMENDATIONS

The study revealed that the women's desire to avoid pregnancy was moderate. The number of living children and the number of children planned for the family were significant predictors of the desire to avoid pregnancy. Also, the women avoided pregnancy less after preconception training and the training provided during the preconception period compensated for women's lack of knowledge, helped them gain a more positive perspective on pregnancy, and encouraged them towards pregnancy.

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Table 1: Distribution of internal validity coefficients and mean values of the total and sub-dimensions of the Desire to Avoid Pregnancy Scale

	Desire to Avoid Pregnancy Scale Pre-Training		Desire to Avoid Pregnancy Scale Post-Training		t/p*
	$\bar{X} \pm SS$ (min-max)	Cronbach's Alpha	$\bar{X} \pm SS$ (min-max)	Cronbach's Alpha	
Desire to Avoid Pregnancy	29,17 $\pm$ 13,28 (0-56)	0,90	27,68 $\pm$ 13,05 (0-52)	0,91	2,454/0,016
Cognitive Desires and Preferences	16,80 $\pm$ 7,57 (0-32)	0,84	15,62 $\pm$ 7,57 (0-30)	0,85	3,113/0,002
Affective Feelings and Attitudes	6,41 $\pm$ 3,34 (0-12)	0,66	6,22 $\pm$ 3,35 (0-12)	0,73	0,729/0,468
Expected Objective Results	5,96 $\pm$ 3,42 (0-12)	0,63	5,84 $\pm$ 3,41 (0-12)	0,74	0,504/0,615

*paired sample t test

Table 2: Desire to Avoid Pregnancy Scale (DAP) Total and Sub-Dimension Mean Scores and Intra-Group and Inter-Group Comparison with Sociodemographic Characteristics (N=100)

Sociodemographic Characteristics	n	%	Desire to Avoid Pregnancy Scale total and sub-dimensions												
			Cognitive desires and preferences before training $\bar{X} \pm SS$	p*	Cognitive desires and preferences post-training $\bar{X} \pm SS$	Affective feelings and attitudes pre-training $\bar{X} \pm SS$	p*	Affective feelings and attitudes post training $\bar{X} \pm SS$	Expected objective results pre-training $\bar{X} \pm SS$	p*	Expected objective results post training $\bar{X} \pm SS$	DAP total pre-training $\bar{X} \pm SS$	p*	DAP total after training $\bar{X} \pm SS$	p*
Age	40	40,0	14,67±6,70 ^a		14,05±6,62 ^a	5,52±2,95 ^a		5,35±2,77 ^a	5,07±3,54 ^a		4,72±2,96 ^a	25,27±11,84 ^a		24,12±10,96 ^a	
19-26 years old	35	35,0	16,02±8,32 ^b		14,34±8,18 ^b	6,08±3,30 ^b		5,60±3,28 ^b	5,65±3,00 ^b		5,54±3,10 ^b	27,77±13,70 ^b		25,48±13,45 ^b	
27-34 years old	25	25,0	21,28±6,03 ^{ab}		19,92±6,33 ^{ab}	8,28±3,39 ^{ab}		8,48±3,38 ^{ab}	7,80±3,21 ^{ab}		8,04±3,59 ^{ab}	37,36±11,62 ^{ab}		36,44±11,96 ^{ab}	
35 years and above			6,842/0,002		6,050/0,003	6,012/0,003		8,828/0,000	5,533/0,005		8,577/0,000	7,550/0,001		8,807/0,000	0,002
F/p**															
The average age $\bar{X} \pm SS$ (min-max)			29,30±6,37 (19-45)												
Educational background															
literate	10	10,0	22,80±7,65 ^{ab}		19,90±6,40 ^a	8,30±3,26		8,50±3,43	7,80±3,67		7,90±3,41 ^a	38,90±14,02 ^{ab}		36,30±12,91 ^a	
Primary education	23	23,0	19,30±5,35		19,00±4,95 ^b	7,78±2,76 ^a		6,52±2,64	6,95±3,41		6,78±2,98	34,04±10,14		32,30±9,87	0,051
secondary education	36	36,0	15,47±7,29 ^a		14,41±7,47	5,72±3,36		5,97±3,28	5,16±3,09	0,026	4,83±3,18 ^a	26,36±12,71 ^a		25,22±12,59	
High school and above	31	31,0	14,54±8,04 ^b		13,12±8,19 ^{ab}	5,58±3,33 ^a		5,54±3,67	5,54±3,49		5,64±3,65	25,67±13,67 ^b		24,32±13,99 ^a	
F/p**			4,674/0,004		4,526/0,005	3,784/0,013		2,156/0,098	2,509/0,063		3,044/0,033	4,506/0,005		3,824/0,012	
Spouse's age															
19-26 years old	20	20,0	10,40±5,63 ^{ab}		9,40±5,97 ^{ab}	4,70±2,59 ^a		3,60±2,16 ^a	3,65±2,85 ^a		3,25±2,22 ^a	18,75±9,58 ^a		16,25±8,75 ^{ab}	
27-34 years old	36	36,0	16,72±6,88 ^a		15,75±6,84 ^a	6,00±3,12		6,00±2,98	5,61±3,27	0,000	5,69±2,95	28,33±11,90		27,44±11,30 ^a	0,000
35 years and above	44	44,0	19,72±7,18 ^a		18,34±7,07 ^b	7,52±3,48 ^a		7,59±3,37 ^a	7,29±3,21 ^a		7,13±3,57 ^a	34,59±13,00 ^a		33,06±12,80 ^b	
F/p**			13,081/0,000		11,933/0,000	5,823/0,004		12,063/0,000	9,437/0,000		10,679/0,000	12,113/0,000		14,535/0,000	
Spouse average age $\bar{X} \pm SS$ (min-max)			33,13±6,99 (19-50)												
Spouse's education level															
Primary education	27	27,0	19,85±7,05 ^a		19,25±5,99 ^{ab}	8,07±3,11 ^{ab}		7,37±3,31	6,59±3,56		6,85±3,32	34,51±12,65 ^a		33,48±11,62 ^a	
secondary education	29	29,0	15,13±7,58 ^a		13,24±7,26 ^a	5,34±3,16 ^a		5,48±3,39	5,10±3,16	0,039	5,13±3,57	25,58±12,84 ^a		23,86±13,17 ^a	0,086
High school and above	44	44,0	16,02±7,50		14,95±7,80 ^b	6,09±3,29 ^b		6,00±3,23	6,13±3,47		5,68±3,30	28,25±13,20		26,63±12,86	
F/p**			3,259/0,043		5,217/0,007	5,450/0,006		2,455/0,091	1,434/0,243		1,879/0,159	3,522/0,033		4,316/0,016	
Marriage duration															
1-10 years	65	65,0	14,66±6,69		14,06±7,00	5,69±3,03		5,20±2,86	5,15±3,23		4,86±2,79	25,50±11,72		24,12±11,32	
11 years and above	35	35,0	20,77±7,61		18,51±7,62	7,74±3,53		8,11±3,40	7,45±3,31	0,000	7,65±3,74	35,97±13,48		34,28±13,64	0,000
t/p***			-4,147/0,000		-2,938/0,004	-3,040/0,003		-4,310/0,000	-3,367/0,001		-3,869/0,000	-4,038/0,000		-3,987/0,000	
Average marriage duration $\bar{X} \pm SS$ (min-max)			9,41±7,13 (1-27)												

* Two-way analysis of variance in repeated measurements, **One-Way Anova, ***Independent Sample t test, a-b: There is a significant difference between groups with the same letter on the same variable

Table 3: Comparison of Desire to Avoid Pregnancy Scale (DAP) Total and Sub-Dimension Mean Scores with Obstetric Characteristics (N=100)

Sociodemographic Characteristics	n	%	Desire to Avoid Pregnancy Scale total and sub-dimensions							
			Cognitive desires and preferences before training	Cognitive desires and preferences post-training	Affective feelings and attitudes pre-training	Affective feelings and attitudes post-training	Expected objective results pre-training	Expected objective results post-training	DAP total pre-training	DAP total after training
			$\bar{X} \pm SS$	$\bar{X} \pm SS$	$\bar{X} \pm SS$	$\bar{X} \pm SS$	$\bar{X} \pm SS$	$\bar{X} \pm SS$	$\bar{X} \pm SS$	$\bar{X} \pm SS$
										p*
Pregnancy Status										
Yes	77	77,0	18,45 $\pm$ 7,18	16,88 $\pm$ 7,40	7,05 $\pm$ 3,28	6,96 $\pm$ 3,31	6,61 $\pm$ 3,39	6,54 $\pm$ 3,43	32,11 $\pm$ 12,71	30,38 $\pm$ 12,85
No	23	23,0	11,26 $\pm$ 6,22	11,39 $\pm$ 6,29	4,26 $\pm$ 2,64	3,73 $\pm$ 2,07	3,78 $\pm$ 2,59	3,47 $\pm$ 2,04	19,30 $\pm$ 10,13	18,60 $\pm$ 9,19
t/p***			4,339/0,000	3,224/0,002	3,729/0,000	5,615/0,000	4,255/0,000	5,300/0,000	4,424/0,000	4,087/0,000
Birth Status										
Yes	73	73,0	18,72 $\pm$ 7,24	17,26 $\pm$ 7,23	7,21 $\pm$ 3,27	7,15 $\pm$ 3,23	6,75 $\pm$ 3,34	6,63 $\pm$ 3,38	32,69 $\pm$ 12,74	31,04 $\pm$ 12,61
No	27	27,0	11,59 $\pm$ 5,91	11,18 $\pm$ 6,42	4,22 $\pm$ 2,48	3,70 $\pm$ 2,18	3,81 $\pm$ 2,70	3,70 $\pm$ 2,49	19,60 $\pm$ 9,61	18,59 $\pm$ 9,54
t/p***			4,580/0,000	3,836/0,000	4,889/0,000	6,095/0,000	4,097/0,000	4,701/0,000	4,838/0,000	4,653/0,000
Existence of Living Children										
Yes	75	75,0	18,68 $\pm$ 7,14	17,30 $\pm$ 7,14	7,13 $\pm$ 3,27	7,06 $\pm$ 3,23	6,72 $\pm$ 3,35	6,56 $\pm$ 3,37	32,53 $\pm$ 12,63	30,93 $\pm$ 12,46
No	25	25,0	11,16 $\pm$ 5,94	10,56 $\pm$ 6,25	4,24 $\pm$ 2,57	3,68 $\pm$ 2,24	3,68 $\pm$ 2,57	3,68 $\pm$ 2,57	19,08 $\pm$ 9,70	17,92 $\pm$ 9,59
t/p***			4,739/0,000	4,210/0,000	4,533/0,000	5,788/0,000	4,716/0,000	4,457/0,000	4,862/0,000	4,765/0,000
Average number of living children			$\bar{X} \pm SS$ (min-max)		$\bar{X} \pm SS$ (min-max)		$\bar{X} \pm SS$ (min-max)		$\bar{X} \pm SS$ (min-max)	
Status of using family planning method										
Yes	36	36,0	20,38 $\pm$ 6,90	18,44 $\pm$ 6,72	7,61 $\pm$ 3,36	7,86 $\pm$ 3,46	7,75 $\pm$ 3,03	7,25 $\pm$ 3,34	35,75 $\pm$ 11,90	33,55 $\pm$ 12,00
No	64	64,0	14,78 $\pm$ 7,23	14,03 $\pm$ 7,49	5,73 $\pm$ 3,16	5,29 $\pm$ 2,93	4,95 $\pm$ 3,23	5,04 $\pm$ 3,21	25,46 $\pm$ 12,64	24,37 $\pm$ 12,53
t/p***			3,782/0,000	2,930/0,004	2,780/0,007	3,929/0,000	4,238/0,000	3,237/0,002	3,985/0,000	3,569/0,001
Number of children planned for the family										
1-2 children	50	50,0	15,36 $\pm$ 6,40	14,42 $\pm$ 6,67	5,76 $\pm$ 2,88	5,26 $\pm$ 2,91	5,34 $\pm$ 3,10	5,20 $\pm$ 2,81	26,46 $\pm$ 10,95	24,88 $\pm$ 10,82
3 and above	50	50,0	18,24 $\pm$ 8,41	16,82 $\pm$ 8,13	7,06 $\pm$ 3,66	7,18 $\pm$ 3,50	6,58 $\pm$ 3,64	6,48 $\pm$ 3,85	31,88 $\pm$ 14,87	30,48 $\pm$ 14,53
t/p***			-1,926/0,057	-1,612/0,110	-1,969/0,052	-2,974/0,004	-1,830/0,070	-1,896/0,061	-2,074/0,041	-2,185/0,031
Average number of children planned for the family			$\bar{X} \pm SS$ (min-max)		$\bar{X} \pm SS$ (min-max)		$\bar{X} \pm SS$ (min-max)		$\bar{X} \pm SS$ (min-max)	
After how many years do you want to have children?										
less than 1 year	15	15,0	7,86 $\pm$ 7,06 ^{abc}	6,93 $\pm$ 6,08 ^{abc}	3,73 $\pm$ 2,96 ^a	3,46 $\pm$ 2,06 ^a	3,26 $\pm$ 2,37 ^a	3,26 $\pm$ 2,25 ^a	14,86 $\pm$ 11,23 ^{ac}	13,66 $\pm$ 9,67 ^{ab}
in 2-5 years	26	26,0	13,65 $\pm$ 6,27 ^{ad}	13,65 $\pm$ 7,50 ^{ad}	4,65 $\pm$ 2,78 ^b	4,46 $\pm$ 2,92 ^b	4,65 $\pm$ 3,00 ^b	4,19 $\pm$ 2,93 ^b	22,96 $\pm$ 10,93 ^b	22,30 $\pm$ 11,43 ^c
6 years and above	9	9,0	16,44 $\pm$ 4,39 ^b	15,77 $\pm$ 3,86 ^b	6,77 $\pm$ 3,45	6,22 $\pm$ 2,33	5,11 $\pm$ 4,13	5,11 $\pm$ 2,89	28,33 $\pm$ 11,13 ^c	27,11 $\pm$ 8,55 ^a
Does not plan to have children	50	50,0	21,18 $\pm$ 5,41 ^{cd}	19,22 $\pm$ 5,78 ^{cd}	8,06 $\pm$ 2,75 ^{ab}	7,96 $\pm$ 3,03 ^{ab}	7,60 $\pm$ 2,95 ^{ab}	7,60 $\pm$ 3,11 ^{ab}	36,84 $\pm$ 9,79 ^{ab}	34,78 $\pm$ 10,59 ^{bc}
F/p**			23,608/0,000	16,305/0,000	13,245/0,000	14,402/0,000	10,822/0,000	12,740/0,000	21,506/0,000	18,669/0,000

* Double analysis of variance in repeated measurements, **One-Way Anova, ***Independent Sample t test, a-d: There is a significant difference between groups with the same letter on the same variable

Table 4: Regression analysis of the Desire to Avoid Pregnancy Scale total score before and after training

Before Training	β	S.E.	p*	95% CL	
				Lower	Upper
Age	0,247	0,444	0,581	-0,640	1,133
Spouse's age	0,552	0,388	0,160	-0,223	1,326
marriage duration	-0,385	0,430	0,374	-1,244	0,473
Number of living children	6,922	2,015	0,001	2,902	10,942
Number of children planned for the family	-5,145	2,294	0,028	-9,721	-0,568
$R^2 = 0,314$ $F = 6,328$ $p = 0,000^*$					
After training	β	S.E.	p*	95% CL	
				Lower	Upper
Age	0,415	0,438	0,346	-0,459	1,289
Spouse's age	0,674	0,383	0,083	-0,090	1,437
marriage duration	-0,696	0,424	0,105	-1,543	0,150
Number of living children	6,626	1,987	0,001	2,662	10,589
Number of children planned for the family	-4,802	2,262	0,037	-9,314	-0,290
$R^2 = 0,315$ $F = 6,357$ $p = 0,000^*$					

* Linear regression analysis was used