Received: 24 October 2021 | Revised: 4 January 2022 | Accepted: 23 January 2022

DOI: 10.1111/ppc.13038

ORIGINAL ARTICLE

Perspectives in PSYCHIATRIC CARE WILEY

Online solution-focused psychoeducation as a new intervention for treating severe fear of childbirth: A randomized controlled trial in the pandemic period

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Abstract

Purpose: This study was conducted to determine the effect of solution-focused psychoeducation (SFP) and childbirth preparation training (CPT) on women's fear of childbirth and self-efficacy.

Methods: This randomized controlled trial was carried out at the family health center in Turkey. The sample of the study consisted of a total of 119 healthy primigravid women. These women were randomized into the SFP group ($n = 39$), CPT group ($n = 40$), and control group care ($n = 40$).

Findings: After the intervention, the women in the experiment groups had decreased fear of childbirth and increased self-efficacy.

Practice Implications: Midwifery care based on education and counseling provided by online synchronous video conferencing method during the pandemic period is an effective and safe method in reducing fear of childbirth in women and increasing their self-efficacy.

KEYWORDS
childbirth preparation training, fear of childbirth, solution-focused counseling, tele-education, tele-midwifery care

1 | INTRODUCTION

Fear of childbirth is defined as a common health issue for pregnant women related to an anxiety disorder or a phobic fear. Moreover, this fear is a problem affecting women and their family's health and wellbeing in pregnancy, labor, and the postpartum period (O'Connell et al., 2019; Pinkaew & Paorohit, 2020). Some studies show that pregnant women with fear of childbirth experience more frequently stress, anxiety, depression, longer labor time, and cesarean section (Fox et al., 2019; Henriksen et al., 2020; Rondung et al., 2019). Moreover, fear of childbirth is closely associated with developing postpartum depression and post-traumatic stress disorder (Capik & Durmaz, 2018). The prevalence of fear associated with childbirth is almost 20% worldwide. According to several studies, 24% of Australian women (Toohill, Fenwick, Gamble, & Creedy, 2014) and 24.6% of Swedish women (Rondung et al., 2019) experienced severe fear of childbirth. Also, some studies indicate that 12% of Norwegian women (Henriksen et al., 2020), 8% of Kenyan women (Onchonga, Moghaddam Hosseini, et al., 2020), 6.1% of Iranian women (Mortazavi & Agah, 2018), and 21% of Turkish women (Deliktas & Kukulu, 2019) suffered from clinical level fear of childbirth.

The cause of fear of childbirth is unclear, but there are various factors that are related. These factors leading to fear are primigravid (Onchonga, Moghaddam Hosseini, et al., 2020), a low education level (Gao et al., 2015), existing anxiety and depression (Haines et al., 2015), lack of social support (Azimi et al., 2018), and women's negative personality characters and prior negative birth experience (Wigert et al., 2020). Also, there is a negative relationship between self-efficacy and fear of childbirth. Women with low self-efficacy have experienced more fear of childbirth and chosen cesarean delivery (Rondung et al., 2016).

Appropriate treatment for fear of childbirth is important and essential, but agreement on the best treatment for fear of childbirth has not yet

been achieved. However, available evidence shows the positive effects of some interventions on women's fear (O'Connell et al., 2019). Several studies showed that interventions such as childbirth preparation training (CPT) (Kizilirmak & Baser, 2016), hypnobirthing (Uludag & Mete, 2020), haptotherapy (Klabbers et al., 2019), mindfulness training (Duncan et al., 2017), psychoeducation (Fenwick et al., 2018; Toohill, Fenwick, Gamble, Creedy, Buist, et al., 2014), midwife-led individual antenatal education (Andaroon et al., 2017), cognitive behavior therapy (Ucar & Golbasi, 2019), web-based cognitive behavior therapy (Nieminen et al., 2016), and solution-focused approach (Sharifzadeh et al., 2018) are effective methods to reduce women's fear.

In recent years, the solution-focused approach has been one of the popular consultancy models due to its effectiveness and shortness. The solution-focused approach is a short-term goal-focused, evidence-based therapeutic approach which constructs solutions rather than focusing on problems. This approach is known as hope counseling. This approach focuses on the capabilities and achievements of people rather than their defects and disabilities. Moreover, instead of dealing with difficult and unchangeable issues, solution-focused counseling focuses on issues that are likely to change (De Shazer et al., 2021). Due to the short time of application, practicality, and using simple and effective techniques, this method is recently used during pregnancy (Aslani et al., 2017; Mortazavi & Mehrabadi, 2021; Ramezani et al., 2017; Sharifzadeh et al., 2018).

Psychoeducation is a method using systematic and psychosocial techniques to create the desired behavior change for a person. Psychoeducational intervention contributes opportunities for information, expressing emotions, grafting of hope, developing strategies for self-recognition, learning, and solving problem skills. Psychoeducation aims for the individual to understand the problem, to identify oneself interventions in coping with the problem, and to actively participate in the solution process (Fenwick et al., 2018). Studies investigating the effect of solution-focused psychoeducation (SFP) or counseling on fear of childbirth are limited (Mortazavi & Mehrabadi, 2021; Sharifzadeh et al., 2018). Sharifzadeh et al. (2018) reported in their study that a six-session solution-focused midwifery counseling program is effective to reduce the fear of childbirth in women. Mortazavi and Mehrabadi (2021) found that a five-session group solution-focused counseling program is effective in reducing pregnancy anxiety and fear of childbirth in women. According to these studies, the effectiveness of the solution-focused approach is increasing self-efficacy, coping with fear, and useful strategies for women (Mortazavi & Mehrabadi, 2021; Sharifzadeh et al., 2018).

During the Covid-19 pandemic period, online antenatal care is recommended due to its effectiveness in reducing health inequalities (Wu et al., 2020). No studies were found that investigated the effect of online SFP on fear of childbirth and self-efficacy. For this reason, the purpose of the study was to determine the effect of online SFP and online CPT on fear of childbirth and self-efficacy. The following hypotheses were tested:

H1 – *Solution-focused psychoeducation reduces pregnant women's fear of childbirth.*

H2 – *Childbirth preparation program reduces pregnant women's fear of childbirth.*

H3 – *Solution-focused psychoeducation increases pregnant women's self-efficacy.*

H4 – *Childbirth preparation program increases pregnant women's self-efficacy.*

2 | METHODS

2.1 | Study design and sample

In this study, a randomized controlled pre-posttest survey design was used. The study aimed to determine the effect of SFP and CPT via online synchronous video conferencing given to primigravida women on fear of childbirth and self-efficacy. The reason to chose primigravid women is that the fear of childbirth is higher in primigravid women than in multigravid women, and the factors causing fear are similar.

This study employed a pretest–posttest experimental design with a control group. The study was carried out at the Family Health Center. The sample size was calculated by power analysis. The *p* ratio was taken as 0.50 to keep the sample size at the maximum level. Power analysis showed that the sample size should be at least 40 pregnant women for each group, with a 5% margin of error, 30% effect size, and 80% ability to represent the population (power). The sample size was composed of 120 pregnant women (40 in the SFP group, 40 in the CPT group, and 40 in the control group). The participants were randomized into three groups using random number tables by the researcher. The study was conducted with a total of 126 pregnant women. Seven participants were excluded from the study. Eventually, the study sample was composed of 119 pregnant women. The consort flow diagram (Figure 1) shows the study sample and phases.

Study inclusion criteria

- having an educational level of at least elementary school;
- being at the 28th gestational week (Childbirth Attitude Scale (CAS) begins to be implemented earliest at 28 gestational weeks);
- severe fear of childbirth (between 66.68 and 100 points according to CAS);
- no high-risk pregnancy;
- primigravida;
- living with partner;
- having Internet access and having Zoom application in a smart device (phone, computer, tablet).

2.2 | Measurements

The data of the study were collected using the Pregnancy Information Form (PIF), the CAS, and the Self-Efficacy Scale (SES).

2.2.1 | PIF

This form prepared by the researchers consisted of a total of 15 questions about the pregnant women's socio-demographic characteristics (age, partner's age, education level, employment status, etc.), obstetric factors (gestational age, wanted pregnancy, prenatal care status, etc.). This form was created by the researchers through Google Forms.

2.2.2 | CAS

This scale was developed by Lowe (2000) for fear of childbirth. The Turkish validity and reliability of the scale were performed by Dönmez et al. (2014). This scale consisting of 16 items is a 4-point Likert-type. The scale items are scored between 1 and 4 (1 = *never*, 4 = *to very often*). All items in the scale are scored positively;

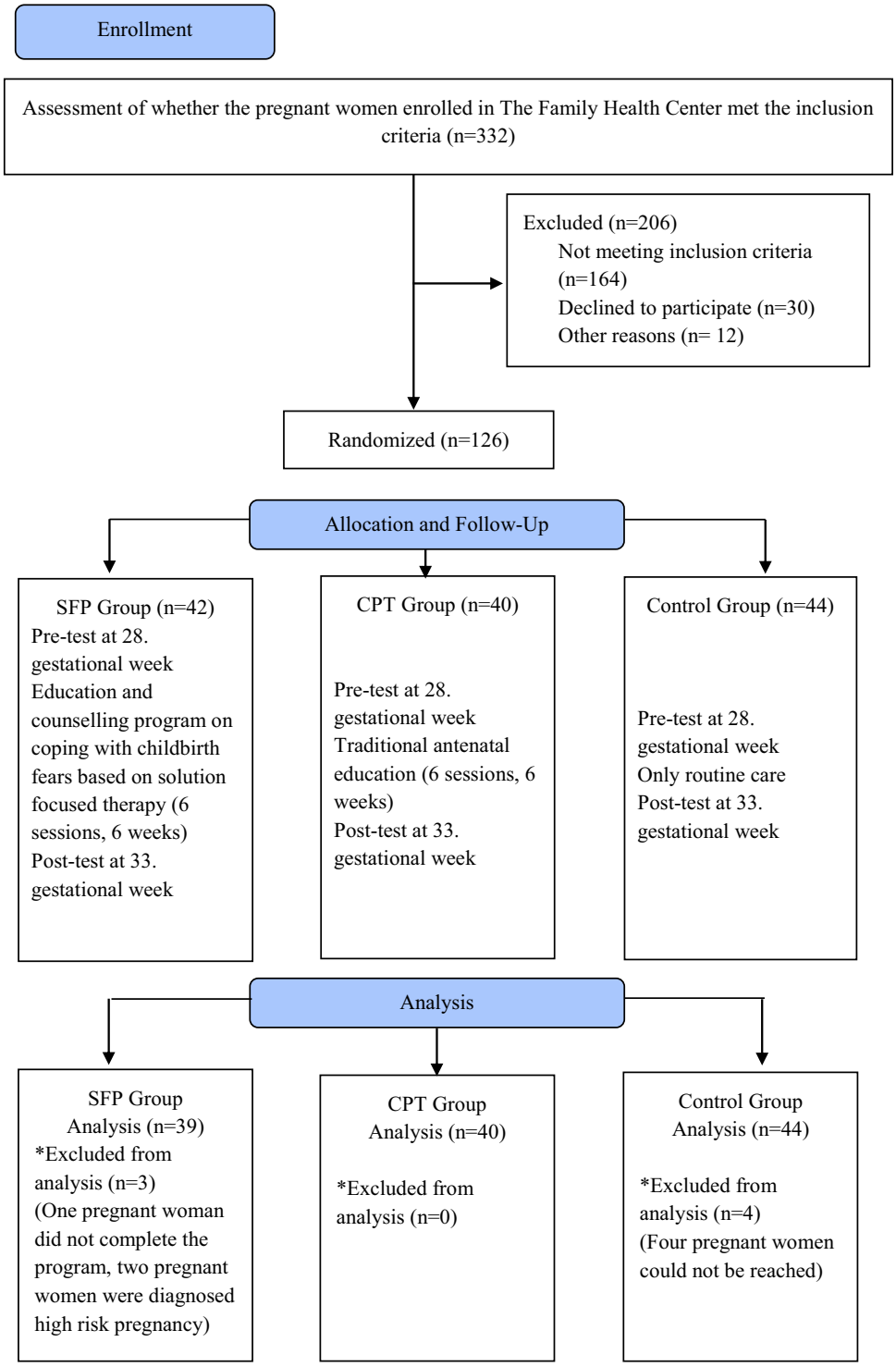

FIGURE 1 The consort flow diagram. CPT, childbirth preparation training; SFP, solution-focused psychoeducation [Color figure can be viewed at wileyonlinelibrary.com]

therefore, the scores ranged from 16 to 64. The scale has no cutoff score, and high scores indicated higher fear. The CAS has no cutoff score, so the CAS's raw score was converted to 0–100 to determine the fear level (converted formula = Raw score × 100/64). The CAS scores between 0 and 33.33 were considered as mild, between 33.34 and 66.67 as moderate, and between 66.6 and 100 as severe fear of childbirth (Masoumi et al., 2016). This conversion was used only to determine severe fear of childbirth in the study. Data of research was assessed with a raw score of CAS. Cronbach's alpha coefficient for the Turkish version was 0.82 (Dönmez et al., 2014).

2.2.3 | SES

This scale was developed by Sherer et al. (1982) to evaluate behavior and behavioral changes. Turkish validity and reliability of the scale were performed by Gözüm and Aksayan (1999). This scale is a self-assessment scale consisting of 23 items and 4 subfactors in the scale as starting behavior, continuing behavior, behavior completion, and fight with obstacles. The subdimension of starting behavior reflects the willingness to start the behavior, and the subdimension of continuing behavior reflects the continuity of this willingness. The subdimension of behavior completion reflects the effort required to complete the behavior and self-confidence. Finally, the subdimension of fight with obstacles reflects the persistent attitude in facing adversity. The scale items are 5-point Likert-type scored between 1 and 5 (1 = *strongly disagree*, 5 = *strongly agree*). The scale's total scores ranged from 23 to 115. The scale has no cutoff score, and high scores indicated higher self-efficacy. Cronbach's alpha coefficient for the Turkish version was 0.81 (Gözüm & Aksayan, 1999).

2.3 | Data collection

Data were collected using a mobile network system between April and December 2020. Firstly, the researcher conducted a preinterview via phone with the women who met the inclusion criteria to the necessary information about the study. Then, the researcher sent the CAS's link using Google Forms to women to determine the fear of childbirth level. Women who scored ≥66.68 on the questionnaire were considered to be in severe fear of childbirth and were included in the study; women who scored <66.68 on the questionnaire were excluded. The participants were randomized by the random numbers table. According to the random numbers, the table was separated into three groups. The volunteer information form was read to the women who met the criteria and agreed to participate in the study, and their oral and written consent was obtained. The women who agreed to participate in the study were explained the study protocol according to groups. The other data collection tools (PIF and SES) were collected using Google Forms. All data obtained through the online self-report method were saved using Google Forms. At the end of the preinterview, the first session date was set with the women in the SFP and CPT groups.

2.4 | Intervention

The study included three groups: intervention groups (SFP and CPT) and control groups categorized as follows.

2.4.1 | SFP

SFP intervention was developed by researchers using available solution-focused techniques solely for the purpose of the study. There are both educational and psychological techniques in this intervention program. In the preinterview, the SFP group was asked about educational topics, which their need about pregnancy, labor, postpartum, and newborn care. Education topics chosen by women were offered in the first two sessions. The women in the SFP group received, per 1 day of the week, the 6-week psychoeducation program on coping with childbirth fears based on solution-focused therapy. All sessions were conducted individually with an online synchronized video conference technique. Chart 1 shows program details. After 2 days from the last session, women were sent the CAS and the SES for posttest. Education and counseling were offered by the researcher, who is a midwife and has certification in solution-focused therapy.

2.4.2 | CPT

CPT intervention was structured by researchers according to the Ministry of Health pregnant information class training. There is only education in this intervention program. The women in this group received 1 day of the week, the 6-week traditional antenatal education. This education was conducted individually with an online synchronized video conference technique. Chart 2 shows the program details. After 2 days from the last education session, women were sent the CAS and the SES for posttest. Education was offered by the researcher, who is a midwife and has certification in childbirth education training.

2.4.3 | Control groups

The control group received only routine care. Routine care consists of prenatal care such as control of blood pressure, weight, fundal height measures, auscultation of fetal heart rate, and laboratory tests. Six weeks later, women in this group were called by phone and obtained information about their pregnancies and health. The women were

CHART 1 Individual solution-focused psychoeducation program by online synchronous video conferencing technique

Sessions time/duration	Techniques and tasks
1st session, 28. gestational week/60 min	*Techniques*: initiation to the first interview, pre-session change, goal setting, miracle question, scaling question, search for exceptions, a consulting break, and a message including compliments and task. *Tasks*: daily success sentences, my features that I never wanted to lose, the miracle question *Antenatal education*: *chosen topic by the woman*
2nd session, 29. gestational week/60 min	*Techniques*: EARS question set, a consulting break, and a message including compliments and tasks. *Tasks*: daily success sentences, picture of anxiety, helping hand technique *Antenatal education*: *chosen topic by the woman*
3rd session, 30. gestational week/40 min	*Techniques*: EARS question set, a consulting break, and a message including compliments and tasks. *Tasks*: daily success sentences, flagging the minefield
4th session, 31. gestational week/30 min	*Techniques*: EARS question set, a consulting break, and a message including compliments and tasks. *Tasks*: daily success sentences, mind mapping.
5th session, 32. gestational week/30 min	*Techniques*: EARS question set, a consulting break, and a message including compliments and tasks. *Tasks*: daily success sentences, letter writing to future
6th session, 33. gestational week/30 min	*Techniques*: EARS question set, a consulting break, and a message including compliments.

Abbreviation: EARS, Eliciting, Amplifying, Reinforcing, and Start again.

CHART 2 Individual childbirth preparation training program by online synchronous video conferencing technique

Education time/duration	Education topics
28. gestational week/60 min	Reproductive system, pregnancy formation, and fetal development, mother's physiological and psychological changes during pregnancy, psychological disorders during pregnancy, pregnancy follow-up, routine tests, and immunization
29. gestational week/60 min	Daily life during pregnancy, nutrition, and nutritional support during pregnancy
30. gestational week/60 min	Common problems and solutions during pregnancy, danger signs during pregnancy, and what to do
31. gestational week/60 min	Stages of labor and birth, nonpharmacological pain management during labor
32. gestational week/60 min	Psychological changes and adaptation in the postpartum period, postpartum birth control
33. gestational week/60 min	Breastfeeding and newborn care

sent the CAS and the SES for posttest. After the posttest, women were asked whether there were any questions about pregnancy, labor, postpartum and newborn care, and they were answered.

2.5 | Research variables

2.5.1 | Dependent variables

The dependent variables are pregnant women's scores on the fear of childbirth and self-efficacy.

2.5.2 | Independent variables

The independent variables are individual SFP and individual CPT.

2.5.3 | Control variables

The control variables are pregnant women's socio-demographic (age, partner age, educational level, income level, employment status, etc.) and obstetric (gestational age, wanted pregnant, prenatal care status, etc.) characteristics.

2.6 | Data assessment

The study's data were analyzed using the SPSS 23.0 package program and evaluated using descriptive statistics (frequency, percentage, mean, standard deviation, min-max values). Whether the data were suitable for normal distribution was assessed with the Shapiro–Wilk test, skewness and kurtosis values. Because data were normal distribution, dependent sample *t-test*, ANOVA, and Tukey tests were used. The results were evaluated using a 95% confidence interval, which represents a significance level of 0.05.

2.7 | Ethical consideration

Before starting the research, written permission was obtained from the noninterventional Clinical Research Ethics Committee (Date: 02.01.2019, Decision No: 2019-01/26), and Provincial Health Directorate (Date: 13.02.2020, Decision No: 26521195-604.02) to conduct the study. The researcher informed all pregnant women about the purpose and scope of the study. Women who met the study's inclusion criteria were asked to sign an informed consent form using the Google Forms method before starting the research. After the posttest, the researcher digitally sent all the pregnant women in the groups the "Ministry of Health Pregnant Information Class Training Book."

3 | RESULTS

All women in the intervention groups completed six sessions. Table 1 compares the socio-demographic characteristics of the pregnant women in the groups. There was no statistically significant difference between the socio-demographic characteristics of the women in the groups. The groups were determined to be homogenous as they were similar in terms of variables regarding the socio-demographic characteristics ($p > 0.05$, Table 1).

As shown in Table 2, there was no statistically significant difference between the groups. The women in the groups were determined to be homogenous as they were similar in terms of variables regarding the obstetric characteristics ($p > 0.05$, Table 2).

Table 3 presents the intra- and intergroup comparisons of the pretest and posttest CAS total, SES total, and SES subscales mean scores of the women in the SAF, CPT, and control groups. The difference between participants' intergroup CAS and SES pretest mean scores was not statistically significant ($F = 1.648$, $p = 0.197$; $F = 0.267$ $p = 0.767$, respectively). However, the difference between participants' intergroup CAS and SES posttest mean scores was statistically significant ($F = 55.697$, $p = 0.000$; $F = 8.046$, $p = 0.001$, respectively). However, in the pre-evaluation of the women in the groups (SFP, CPT, and control) their fear of childbirth was similar (47.74 ± 4.82, 47.80 ± 5.81, and 46.03 ± 4.10, respectively) ($p > 0.05$), in the post-evaluation women's fear of childbirth in the SFP (33.28 ± 7.51) and CPT (37.68 ± 8.23) groups decreased, and those of in the control group increased (49.55 ± 5.22) ($p < 0.001$). The fear of childbirth in the SFP group was less than in the CPT group ($p < 0.05$). In the post-evaluation, while the self-efficacy levels of women in SFP and CPT groups increased similarly (94.72 ± 10.17, 91.48 ± 8.98, respectively), the self-efficacy levels of women in the control group decreased (85.15 ± 12.86) ($p < 0.05$).

There was a statistically significant difference between the intragroups for SES subscales. The difference between women in the SFP group starting behavior, continuing behavior, behavior completion, and fight with obstacles subscales posttest mean scores were statistically significant ($t = -3.185$, $p = 0.003$; $t = -3.473$, $p = 0.001$; $t = -3.323$, $p = 0.002$; $t = -5.991$, $p = 0.000$, respectively). In the post-evaluation, all of the self-efficacy subscales levels of women in the SFP group increased. The difference between women in the CPT group only continuing behavior subscale posttest mean scores was statistically significant ($t = -2.681$, $p = 0.011$). In the post-evaluation, continuing behavior subscales of the self-efficacy levels of women in the CPT group increased. The difference between women in the control group starting behavior and continuing behavior, subscales posttest mean scores was statistically significant ($t = 2.090$, $p = 0.043$; $t = 2.782$, $p = 0.008$, respectively). In the post-evaluation, starting behavior and continuing behavior subscales of women's self-efficacy levels in the control group decreased ($p < 0.05$, Table 3).

4 | DISCUSSION

The results of this study were conducted to determine the effect of SFP and CPT via online synchronous video conferencing given to primigravida women on fear of childbirth and self-efficacy were compared with information reported in the literature. This experimental study is the first to report findings on online synchronous SFP programs to reduce fear of childbirth and increase self-efficacy of women in the pandemic period.

This study found no statistically significant difference between the pregnant women in the SFP, CPT, and control groups regarding their socio-demographic and obstetric characteristics (Tables 1 and 2). These results suggested that the groups were distributed homogeneously. Furthermore, this study determined no statistically significant difference between the pretest CAS, SES total, and subscales mean scores of the pregnant women in all groups (Table 3). These results also suggested that the pregnant women in the experiment and control groups had similar fear and self-efficacy levels.

Appropriate treatment for fear of childbirth which is a common problem affecting women's health and wellbeing is very important (Pinkaew & Paorohit, 2020). Online antenatal care can be a preferable alternative for women since it can provide pregnancy-related information and remote clinic consultations during the pandemic period. Also, online prenatal care can reduce healthcare inequality due to its convenience and cost-effectiveness (Wu et al., 2020). Queensland Clinical Guideline (2021) recommends online educational models (e.g., group/individual sessions via online platforms, static web resources, email contact, support groups, telehealth appointments) to

TABLE 1 Socio-demographic characteristics of the women in the groups

Characteristics	SFP ($n = 39$)	CPT ($n = 40$)	Control ($n = 40$)	Test and p value
Age (years), mean ± SD	27.67 ± 3.71	27.80 ± 2.71	27.18 ± 3.99	$F = 0.350$
				$p = 0.705$
Educational level, n (%)				
Primary school	5 (12.8)	4 (10.0)	3 (7.5)	
Secondary school	7 (17.9)	8 (20.0)	9 (22.5)	$X^2 = 0.761$
University and above	27 (69.3)	28 (70.0)	28 (70.0)	$p = 0.944$
Partners' educational school, n (%)				
Primary school	5 (12.8)	3 (7.5)	3 (7.5)	$X^2 = 3.046$
Secondary school	9 (23.1)	10 (25.0)	15 (37.5)	$p = 0.550$
University and above	25 (64.1)	27 (67.5)	22 (55.0)	
Occupational status, n (%)				
Yes	17 (43.6)	23 (57.5)	15 (37.5)	$X^2 = 3.380$
No	22 (56.4)	17 (42.5)	25 (62.5)	$p = 0.185$
Partners' occupational status, n (%)				
Yes	39 (100.0)	38 (95.0)	40 (100.0)	$X^2 = 4.018$
No	0 (0.0)	2 (5.0)	0 (0.0)	$p = 0.134$
Income status, n (%)				
Less than expenses	3 (7.7)	3 (7.5)	2 (5.0)	$X^2 = 6.442$
Equal to expenses	24 (61.5)	26 (65.0)	34 (85.0)	$p = 0.168$
More than expenses	12 (30.8)	11 (27.5)	4 (10.0)	
Family structure, n (%)				
Nuclear family	38 (97.4)	39 (97.5)	40 (100.0)	$X^2 = 1.030$
Extended family	1 (2.6)	1 (2.5)	0 (0.0)	$p = 0.597$
Duration of marriage	2.00 ± 1.00	2.30 ± 1.07	2.00 ± 1.06	$F = 1.097$
(mean ± SD, years)				$p = 0.337$

Abbreviations: X^2, Pearson's chi-squared test; F, ANOVA.

TABLE 2 Obstetric characteristics of the women in the groups

Characteristics	SFP ($n = 39$)	CPT ($n = 40$)	Control ($n = 40$)	Test and p value
Desired/planned pregnancy status, n (%)				
Yes	39 (100)	38 (95.0)	38 (95.0)	$X^2 = 2.018$
No	0 (0.0)	2 (5.0)	2 (5.0)	$p = 0.365$
First examine time in pregnancy, n (%)				
4. gestational week	9 (23.1)	5 (12.5)	13 (32.5)	$X^2 = 4.603$
5–8. gestational week	27 (69.2)	31 (77.5)	24 (60.0)	$p = 0.330$
8–12. gestational week	3 (7.7)	4 (10.0)	3 (7.5)	
Prenatal care place, n (%)				
Hospital	38 (97.4)	35 (87.5)	36 (90.0)	$X^2 = 2.732$
Private doctor clinic	1 (2.6)	5 (12.5)	4 (10.0)	$p = 0.255$

Abbreviation: X^2, Pearson's chi-squared test.

TABLE 3 Intra- and intergroup comparisons of the pretest and posttest CAS total, SES total, and SES subscales mean scores of the women in the groups

Scale	SFP (n = 39), $\bar{x} \pm SD$	CPT (n = 40), $\bar{x} \pm SD$	Control (n = 40), $\bar{x} \pm SD$	F/p
CAS				
Pretest	47.74 ± 4.82	47.80 ± 5.81	46.03 ± 4.10	1.648/0.197
Posttest	33.28 ± 7.51	37.68 ± 8.23	49.55 ± 5.22	55.697/0.000**
t/p	13.472/0.000**	8.204/0.000**	−4.941/0.000**	
SES				
Pretest	87.72 ± 11.0	89.25 ± 9.54	89.03 ± 9.56	0.267/0.767
Posttest	94.72 ± 10.17	91.48 ± 8.98	85.15 ± 12.86	8.046/0.001*
t/p	−7.356/0.000**	−2.688/0.011*	2.219/0.032*	
SES subscales				
Starting behavior				
Pretest	33.23 ± 4.64	33.55 ± 3.99	32.88 ± 4.18	0.250/0.780
Posttest	34.85 ± 3.64	33.15 ± 4.19	31.55 ± 5.13	5.616/0.005*
t/p	−3.185/0.003*	0.652/0.518	2.090/0.043*	
Continuing behavior				
Pretest	27.67 ± 4.02	27.85 ± 4.15	28.08 ± 2.80	0.120/0.887
Posttest	29.54 ± 4.85	29.45 ± 3.38	26.15 ± 4.45	8.162/0.000**
t/p	−3,473/0.001*	−2.681/0.011*	2.782/0.008*	
Behavior completion				
Pretest	18.77 ± 3.83	18.58 ± 3.32	19.00 ± 3.74	0.137/0.872
Posttest	20.31 ± 3.05	19.13 ± 3.40	18.75 ± 3.39	2.406/0.095
t/p	−3.323/0.002*	−1.133/0.264	0.470/0.641	
Fight with obstacles				
Pretest	8.05 ± 2.32	9.28 ± 2.43	9.08 ± 1.70	3.598/0.030
Posttest	10.03 ± 1.98	9.75 ± 1.96	8.70 ± 2.15	4.706/0.011*
t/p	−5.991/0.000**	−1.474/0.148	0.961/0.342	

Note: CAS's raw score was used (16–64 points).

Abbreviation: CAS, Childbirth Attitude Scale; *F*, ANOVA; SES, Self-Efficacy Scale; *t*, paired-samples *t* test.

*$p < 0.05$; **$p < 0.001$.

pregnant women in the pandemic period. The online synchronous SFP program was determined to be effective in reducing the fear of childbirth. This result confirms the hypothesis: "Solution-focused psychoeducation reduces the pregnant women's fear of childbirth." In their study, Sharifzadeh et al. (2018), a six-session solution-focused counseling program was given to pregnant women by midwives. After the intervention, the mean score of fear of childbirth of women is lower than the control group, and this difference is statistically significant. This result is similar to the results of the present study. Mortazavi and Mehrabadi (2021) found that solution-focused counseling (five sessions) reduced pregnancy anxiety and fear of childbirth. Some studies show that preparation for childbirth through educational programs based on psychoeducation (Fenwick et al., 2018; Toohill, Fenwick, Gamble, Creedy, Buist, et al., 2014) and psychotherapy (Nieminen et al., 2016; Ucar & Golbasi, 2019) reduces fear of childbirth. The psychoeducation program, like the solution-focused approach, is an evidence-based therapeutic intervention that reduces women's fear of childbirth. Antenatal psychoeducation intervention is provided to women with information, empowers, activates support systems, and gained coping behaviors. Toohill, Fenwick, Gamble, Creedy, Buist, et al. (2014) report in their study that women's fear of childbirth mean score decreased after tele-psychoeducation intervention by midwives. Similar results were found in the study of Fenwick et al. (2018). Cognitive-behavioral therapy, one of the psychotherapy applications, also focuses on thoughts and actions, such as SFP. Ucar and Golbasi (2019) study reported that CPT based on cognitive behavioral therapy techniques decreased women's fears of birth. Also, Nieminen et al. (2016) report

in their study that web-based cognitive behavioral therapy was found to be effective in reducing the fear of childbirth in nulliparous women with severe fears.

The online synchronous childbirth preparation program was determined to be effective in reducing the fear of childbirth. This result confirms the hypothesis: "Childbirth preparation program reduces the pregnant women's fear of childbirth." Some studies show that traditional antenatal educational program reduces fear of childbirth. Masoumi et al. (2016) report in their study that women's fear of childbirth mean score decreased after group antenatal education. Also, Andaroon et al. (2017) find in their study that women's fear of childbirth reduces after midwife-led individual antenatal education and counseling. Studies have reported that traditional antenatal education decreases the fear of pregnant women (Madhavanprabhakaran et al., 2017; Onchonga, Várnagy, et al., 2020). This result is similar to the results of the present study. This study's results indicate that both the online childbirth preparation education and the online solution-focused program were successful in reducing primigravid women's fear of childbirth.

Midwifery counseling given to women with fear of childbirth can help to establish a reliable relationship between woman and midwife and to investigate theirs previous and current fears (Wulcan & Nilsson, 2019). For this reason, the women in the intervention groups decreased their fear of childbirth after the intervention. When comparing the two methods in the study, the online SFP was more effective to reduce the fear of childbirth than the online childbirth preparation education ($p < 0.05$). This difference stems from the solution-focused approach philosophy. The SFP shows different ways of coping with the fear of childbirth. The advantage of SFP compared with the traditional childbirth preparation method is that it focuses on solutions in place of analyzing the problem. The women in the SFP group were emphasized that small changes are important because they will turn into big changes. The women in this group realized what is possible and changeable. They learned to seek practical and efficient solutions for dealing with fears instead of not focusing on unchangeable issues in their lives. Unlike traditional CPT, the SFP program was encouraged women's strengths, to find effective coping methods for their fears, to do more helpful solution ways, and was emphasized women's self-efficacy. Some studies show that the solution-focused approach is effective to reduce the stress of pregnant women (Aslani et al., 2017) and improving women's postpartum mental health (Ramezani et al., 2017).

The online synchronous SFP program was determined to be effective in increasing self-efficacy. This result confirms the hypothesis: "Solution-focused psychoeducation increases the pregnant women's self-efficacy." In an extensive literature review, no previous studies were found that investigated the effect of the solution-focused approach on the self-efficacy of pregnant women. However, there are many studies investigating the effect of a solution-focused approach on self-efficacy in different groups (adolescents, female students). These studies show that the solution-focused approach is an effective method in increasing the self-efficacy of individuals (Cepukiene et al., 2018; Hendar et al., 2019; Karakaya & Özgür, 2019). In different studies close to the philosophy of solution-focused approach, it was found that the self-efficacy of the participants increased. Some studies show that similar to the solution-oriented approach, motivational interviewing (Saffari et al., 2020), self-efficacy-based education (Ghahremani et al., 2017), and mindfulness-based education (Duncan et al., 2017) increase the self-efficacy of pregnant women. This result is similar to the results of the present study. The online synchronous childbirth preparation program was determined to be effective in increasing self-efficacy. This result confirms the hypothesis: "Childbirth preparation program increases the pregnant women's self-efficacy." In the literature review, some studies were found that CPT is effective in increasing women's general self-efficacy. Jaqin et al. (2019) find in their study that women's self-efficacy increases after antenatal education and counseling program. Tsai et al. (2018) and Izadirad et al. (2017) find similar results in their study. These findings support the results of the present study. The women in the intervention groups increased their self-efficacy after the intervention. The self-efficacy of women in the two intervention groups increased similarly ($p < 0.05$).

4.1 | Limitations

This study had some limitations and strengths. This study had a limited sample because it was conducted with severe fear of childbirth women's and geographical and social differences. One of the limitations is that the sample size of this study was relatively small. The other limitation is being costly in terms of time (six sessions). Therefore, the research results cannot be generalized. One of the strengths was that women could access online midwifery care (counseling and education) during the pandemic period. Another strength of the study was that it was more effective SFP than childbirth training. It is recommended to be applied in a larger sample group and test the effectiveness of shorter sessions. In addition, it is recommended to use other scales that measure fear of childbirth for pregnant women <28 gestational weeks.

5 | IMPLICATIONS FOR NURSING PRACTICE

The online education and counseling offered to pregnant women during pandemics decreased their fear of childbirth and increased their self-efficacy. According to the results of this study, online SFP and online childbirth training have been effective in reducing the fear of childbirth and increasing self-efficacy in the pandemic period. However, online SFP is more effective in reducing the fear of childbirth in pregnant women. It is recommended to use midwifery solution-focused counseling techniques and childbirth preparation classes to reduce fear and to increase the self-efficacy of women during pregnancy. Due to the limited number of similar studies, further large-scale studies are recommended for the generalization of the results of this study.

ACKNOWLEDGMENT

The authors would like to thank the pregnant women for their involvement in this study.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

ETHICS STATEMENT

This study received approval from the Research Ethics Board of the University of Sivas Cumhuriyet.

DATA AVAILABILITY STATEMENT

The authors elect to not share data.

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How to cite this article: Kaya, N., & Guler, H. (2022). Online solution-focused psychoeducation as a new intervention for treating severe fear of childbirth: A randomized controlled trial in the pandemic period. *Perspectives in Psychiatric Care*, 1–11. https://doi.org/10.1111/ppc.13038