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The Effect of an Online Decision-Making Skills Psychoeducation Programme on University Students' Decision-Making Styles: A Mixed Method Study[1]

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Abstract

This study examines the effect on university students' decision-making styles of an online decision-making skills psychoeducation programme focused on cognitive behavioural therapy. A nested design, which is one of the mixed method designs, was used in the study. In the quantitative part of the study, a quasi-experimental design was used to test the effect of the programme, while in the qualitative part, a phenomenological design was used. The quantitative data were obtained through the "Melbourne Decision Making Questionnaire", while the qualitative data were obtained through a "Semi-Structured Interview Form", "Session Evaluation Form" and "Psychoeducation Programme Evaluation Form". The quantitative data were collected from 22 participants, of whom 11 were in the experimental group and 11 were in the control group, and the qualitative data were collected from the 11 participants in the experimental group. Descriptive statistics, exploratory and confirmatory factor analysis, reliability analysis, the Friedman rank test, the Wilcoxon signed-rank test and the Mann-Whitney U test for independent samples were used for the analysis of the quantitative data. Content analysis was performed on the qualitative data. The study determined that the psychoeducation programme caused a partially significant increase in the decision-making self-esteem and vigilant decision-making style, a partially significant decrease in the avoidant decision-making style, and a significant decrease in the procrastinating decision-making style of the participants in the experimental group. However the psychoeducation programme did not have a significant effect on the hypervigilant decision-making style of the students in the experimental group. When the views of the participants were examined, the main views were that the content of the programme was considered satisfactory, that the programme was evaluated as an awareness-raising process, that it aroused positive and motivating emotions, and that it was a beneficial study that provided practical and tangible gains.

Keywords: Online decision-making skills psychoeducation programme, cognitive behavioural therapy, decision-making styles, university students, mixed method

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Introduction

When one considers that every moment of life involves a decision-making process, the idea of decision making may at first seem rather ordinary. However, studies show that most people are much weaker in terms of their decision-making skills than they think (Commendador, 2011). This brings to mind the question of how individuals can make healthier decisions for themselves (Scott & Bruce, 1995). This issue occupies an important place in the field of psychological counselling and guidance services, since one of the ultimate goals of these services is to enable individuals to make healthy decisions in areas where they have problems or wish to improve themselves (Egan, 2013). In addition, it is thought that being able to make healthy decisions is a harbinger of a decrease in existing psychological disorders (Bavolar & Orosova, 2015). Studies show that healthy decision-making behavior is associated with individuals' self-esteem, problem-solving skills and coping skills and is one of the important criteria of mental health (Avşaroğlu & Üre, 2007; Deniz, 2006; Palamarchuk & Vaillancourt, 2021). Healthy decision-making processes gain importance especially in the early stages of life. Since individuals face important responsibilities and developmental tasks during adolescence and young adulthood, decision-making behaviours are of critical importance (Nota & Soresi, 2004). University life, which begins at the end of adolescence and in the early stages of young adulthood, is a period when individuals, who generally move away from their families, take on all their life responsibilities and when their independent decision-making behaviours become even more important. During this period, students are faced with critical decision-making situations related to their careers, emotional and social processes, and personal development. Therefore, their acquisition of healthy decision-making behaviour directly impacts their future lives and life satisfaction (Wasarhelyi et al., 2019).

The fact that decision-making is an important pattern of behaviour in individuals' lives makes it important to analyse and monitor the decision-making processes correctly (Wolff & Crockett, 2011). The decision-making process consists of successive stages, in which each stage forms the basis for the next. The way each individual perceives and implements these stages differs from childhood onwards. These differences are examined under the name of decision-making styles. Decision-making styles determine individuals' preferences related to an event or situation (Deniz, 2004). Individuals need to acquire appropriate and effective decision-making skills so that they can develop themselves by obtaining satisfaction from their lives. Decision-making styles play a critical role in the acquisition of these skills (Thunholm, 2004). When the literature is examined, it can be seen that different decision-making styles are emphasised. Harren (1979) divided decision-making styles into three groups, namely rational, intuitive and dependent decision-making styles. Arroba (1977) examined decision-making styles under six categories: no thought, compliant, logical, emotional, intuitive and hesitant. Scott and Bruce (1995) on the other hand, separated decision-making styles into five groups as rational, intuitive, dependent, avoidant and spontaneous. One of these classifications is vigilant, procrastinating, avoidant and hypervigilant decision-making styles, which were shaped by the study conducted by Mann et al. (1998) on university students from different cultures (Deniz, 2004).

Healthy decision making is of critical importance for individuals' mental health (Avşaroğlu & Üre, 2007; Deniz, 2006; Palamarchuk & Vaillancourt, 2021), especially during the university period when decision-making behavior is more intense (Wasarhelyi et al., 2019). It is known that the behavior of the individual deeply affects the rest of the life and mental health of the individual. It is thought that decision-making styles play a key role in decision-making behaviors, therefore, dysfunctional decision-making styles should be changed in order to gain healthy decision-making behavior.In previous studies on the development of individuals' decision-making skills, it can be observed that decision-making styles were also emphasised (Çolakkadıoğlu & Güçray, 2012; Çolakkadıoğlu & Çelik, 2016; Ercengiz & Şar, 2018; Mann et al., 1988). However, it can be seen that in previous studies, determinants such as thoughts, core beliefs, assumptions, concerns, fears and priorities that shape decision-making styles were not emphasised. These elements are considered to be the key elements that shape decision-making styles (Bavolar & Bacikova-Sleskova, 2020; Gambetti & Giusberti, 2019), since while making decisions, individuals are affected by the attitudes, beliefs and values that develop within themselves. These elements are important factors in evaluating options, making final decisions and shaping the decision-making style used by the individual (Thunholm, 2004). In this regard, it is considered possible to enable the individual to make more careful and effective decisions by identifying and changing his/her irrational

thoughts and beliefs (Alwood & Salo, 2012; Van Dongen et al., 2005). In the field of psychological counselling, numerous therapeutic approaches for assisting individuals have emerged. Cognitive behavioural therapy (CBT), which is one of these approaches, asserts that the thoughts and beliefs of the individual are the basic elements that affect and determine their emotions and behaviours (Beck, 2020; Wenzel et al., 2016). In this respect, CBT is regarded as a correct approach that can be applied to individuals who require psychological support on the subject, as it focuses on the main elements that affect individuals' decision-making processes. One of the strengths of CBT is that it is an educational, preventive and developmental approach. Due to this characteristic, CBT has become a key approach used in preventive and developmental psychological support programmes (Brown, 2011; Gerrity & DeLucia-Waack 2007).

It can be seen that preventive and developmental psychological support services have been adopted more and become more widespread in recent years. Psychological counselling and guidance services provided at different school levels are grounded on an educational, preventive and developmental basis. The main purpose of all preventive and developmental approaches is for individuals to correctly analyse and gain awareness of the reasons and factors behind their own psychological processes (Conyne, 2000). In this regard, the practices carried out have revealed that psychoeducation programmes provide satisfactory answers to the educational, preventive and developmental aspects of the psychological counselling process (Gerrity & DeLucia-Waack, 2007). In Turkey, however, it can be seen that the physical infrastructure required for the expansion of psychoeducation programmes at all school levels and in universities is insufficient. It is considered important to seek easy and practical ways to overcome this deficiency and contribute to the expansion of psychoeducation programmes. Accordingly, within the framework of the opportunities offered by technology, conducting the programmes online is also a strong alternative (Coudray, et al., 2019; Visvalingam, et al., 2022). Globally and in Turkey, the use of online psychoeducation programmes was limited prior to the COVID-19 pandemic. As reasons for this, the fact that online psychoeducational practices would not be as effective as face-to-face programmes, that participants would experience trust problems, and that body language could not be understood were among the views put forward. However, the obligations during the pandemic process were instrumental in the spread of online psychoeducational practices. It can be said that as a result of the visible positive effects of these programmes, negative attitudes towards online psychoeducational practices declined (Yüksel-Şahin, 2021). This situation also shows that online psychoeducational practices can be easily chosen when the COVID-19 pandemic conditions decline and social distancing rules are no longer needed. Moreover, cognitive behavioural therapy consists of evidence-based processes and activities. In this respect, CBT is thought to provide a functional and effective infrastructure for online psychoeducational practices (Andersson & Cuijpers, 2008).

Based on the reasons mentioned above, the aim of this study was to determine the effect of a CBT-oriented online decision-making skills psychoeducation programme prepared by the researcher on university students' decision-making styles and to evaluate the participants' views on all stages of the programme. In line with this main purpose, the following hypotheses were tested and answers were sought to the questions below.

1. The posttest scores obtained from the decision-making questionnaire by the participants in the experimental group participating in the online decision-making skills psychoeducation programme are significantly higher than their pretest scores.

2. The follow-up test scores obtained from the decision-making questionnaire by the participants in the experimental group participating in the online decision-making skills psychoeducation programme are significantly higher than their pretest scores.

3. There is no significant difference between the pretest, posttest and follow-up test mean scores of the participants in the control group.

4. The decision-making questionnaire posttest scores of the participants in the experimental group participating in the online decision-making skills psychoeducation programme differ significantly from those of the participants in the control group.

5. What are the targeted learning outcomes of the participants in the experimental group regarding the programme?

6. What are the evaluations of the participants in the experimental group regarding the programme sessions and the effects of the programme?

Method

Research Model

This research was conducted with a nested design, one of the mixed method research models. This design is used to answer the purpose and find answers to different questions of the research with different data types, to support the elements of an experimental design, to test the intervention process, and to ensure the clarity of the results (Creswell & Clark, 2018). In this context, a 2 (experimental and control groups) x 3 (pretest-posttest-follow-up) quasi-experimental design was used to test the effect of the Online Decision-Making Skills Psychoeducation Programme. The quasi-experimental design is one of the experimental designs frequently used in the fields of psychology and education (Wallen & Fraenkel, 2013). Quasi-experimental designs involve the manipulation of independent variables like real experimental designs, but unlike these, do not involve the random assignment of participants to groups. Different from studies conducted in laboratory environments, studies in the field of psychological counselling are mostly carried out in natural environments. This makes random assignment to conditions difficult (Heppner et al., 2015). In the qualitative part of the study, data were collected for a different purpose at each stage. The qualitative data were collected in order to determine the learning outcomes of the programme before the experiment, to test the implementation from the perspective of the participants during the experimental procedure, and to make sense of the quantitative findings after the experiment. The collected qualitative data were analysed according to a phenomenological approach. In the phenomenological approach, the aim is to reveal the themes and patterns related to the subject in line with individuals' perceptions and evaluations (Creswell & Poth, 2016; Patton, 1990). The flow diagram of the study process is shown in Figure 1.

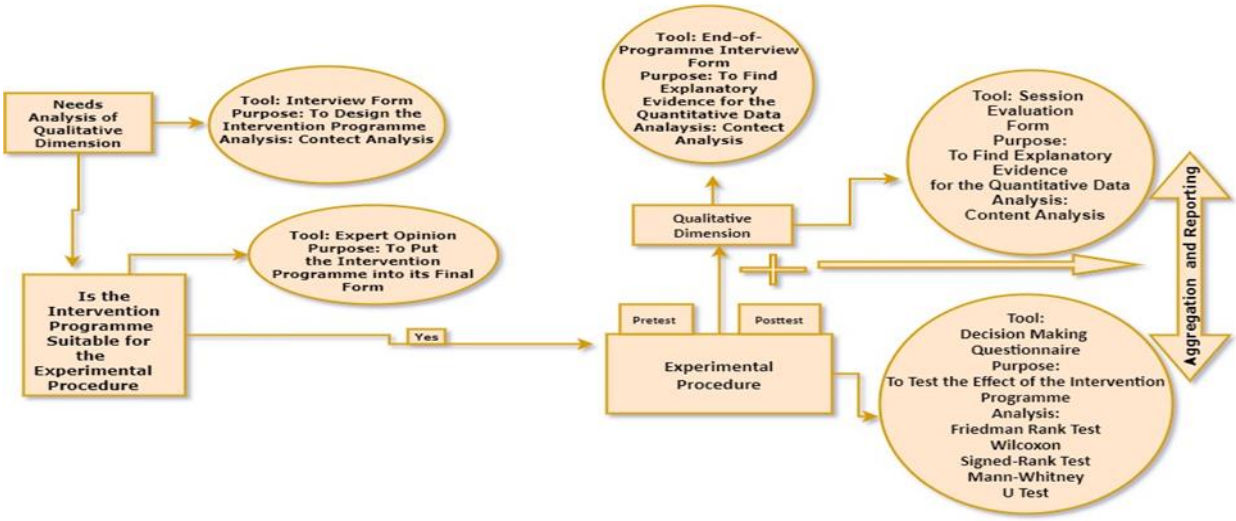

Figure 1. Research Process (Flow Diagram).

Study Group

The study group of the research consists of 22 university students (11 in the experimental group and 11 in the control group) continuing their education at different universities. Within the scope of the research, the Melbourne Decision Making Questionnaire and a personal information form prepared by the researcher were administered to 534 students via Google Forms through convenience sampling, which is one of the non-random sampling methods. In addition, in the questionnaire form, the necessary information about the psychoeducation programme was provided, and a section was added requesting

the contact information of students wishing to participate. The criterion sampling method, which is a type of purposive sampling, was used to determine the experimental and control groups (Patton, 1990). During the evaluation of the data obtained using the decision-making questionnaire, the arithmetic mean values for each sub-dimension of the scale were first calculated for the group from which the data were collected. Within this scope, it was assumed that individuals whose decision-making self-esteem and vigilant decision-making style scores were below the average, and whose avoidant, procrastinating and hypervigilant decision-making style scores were above the average, were at risk in terms of their decision-making behaviours. From among students who were included in any of the criteria specified in these sub-dimensions, the experimental group was formed by conducting pre-interviews with 11 students who volunteered, while the control group was also formed with 11 students who volunteered. While determining the participants in the experimental and control groups in the study, not only the mean scores, but also the interview data, the voluntariness of the participants, and their declarations about attending the sessions regularly were taken into account (Brown, 2020; Walsh, 2013). It was observed that 81.8% of the participants in the experimental and control groups were female students and that 18.2% were male students. Among the participants, 9.1% continued their education in the 1st grade, 27.3% in the 2nd grade, 54.5% in the 3rd grade, 4.5% in the 4th grade, and 4.5% in the 5th grade. Since participation in the study was based on voluntariness, no intervention was made to the ratio of female and male students.

Data Collection Tools and Process

In the study, the "Melbourne Decision Making Questionnaire I-II (MDMQ I-II)" was administered within the scope of the pretest, posttest and follow-up test to determine the decision-making styles of the university students. In addition, a "personal information form" prepared by the researchers was used to determine the students' socio-demographic characteristics. Within the scope of the research, interviews were conducted using a "semi-structured interview form", "session evaluation form" and "psychoeducation programme evaluation form" prepared by the researchers. The necessary permission was obtained for the decision-making questionnaire and for the compliance of the study with scientific research and publication ethics. Expert opinion was sought for the interview forms prepared for the qualitative interviews, and then the interviews were conducted in their final version. Due to the restrictions created by the COVID-19 process, the decision-making questionnaire was administered within the scope of the pretest, posttest and follow-up test online via Google Forms to students who continued their education at different universities in Turkey during the 2021-2022 academic year. Before the implementation of the programme, qualitative interviews were conducted using the "semi-structured interview form" in the online ZOOM platform, the other qualitative data collection tools were sent to the participants online via e-mail after each programme session and at the end of the programme, and the filled forms were also sent to the researchers online via e-mail. Information on the data collection tools used within the scope of the research is presented below.

Melbourne Decision Making Questionnaire I-II (MDMQ I-II)

The Melbourne Decision Making Questionnaire was developed by Mann et al. (1998) to measure self-esteem and decision-making styles in decision making. The adaptation of the questionnaire to Turkish culture was made by Deniz (2004). The scale consists of two parts. The first part aims to determine the level of self-esteem in decision making. This part of the questionnaire consists of 6 three-point Likert-type items under a single factor. The highest score that can be obtained from this part of the questionnaire is 12. The second part of the questionnaire measures decision-making styles. This section consists of 22 three-point Likert-type items under a single factor. In this part of the questionnaire, there are four sub-dimensions: vigilant, avoidant, procrastinating and hypervigilant decision-making styles. In all sub-dimensions of the questionnaire, the internal consistency coefficient varied between .65 and .85 (Deniz, 2004). Following the reliability analyses conducted within the scope of the current study, the Cronbach alpha internal consistency coefficients were calculated as .68 for decision-making self-esteem, .73 for the vigilant decision-making style, .70 for the hypervigilant decision-making style, .70 for the procrastinating decision-making style, and .71 for the avoidant decision-making style. Following the exploratory factor analysis (EFA) performed to test the validity of the questionnaire in the study, the Bartlett sphericity test result of the questionnaire was found to be significant, the KMO value was calculated as .87, and the total explained variance was determined as 37%. Confirmatory factor analysis

was performed to confirm the 5-factor structure of the questionnaire. The fit indices (X2/df=2.64, CFI=.86, GFI=.89, AGFI=.87, RMSEA=.05) obtained as a result of the first-stage confirmatory factor analysis were found to be at an acceptable level of fit (Kline, 2011). .

Semi-Structured İnterview Form

This is a form created in the study by the researchers to obtain the opinions of the students who participated in the experimental group regarding the aims and content of the Online Decision-Making Skills Psychoeducation Programme.

Session Evaluation Form

This is a form prepared by the researchers and administered at the end of each session to determine the functions and effectiveness of the sessions in the Online Decision-Making Skills Psychoeducation Programme.

Psychoeducation Programme Evaluation Form

This is a form prepared by the researchers and administered at the end of the programme to determine the general effects of the Online Decision-Making Skills Psychoeducation Programme and the participants' suggestions regarding the programme.

Personal Information Form

This is an information form that includes questions aimed at determining the students' gender and grade levels.

Online Decision-Making Skills Psychoeducation Programme

Psycho-education is applications based on knowledge and skills offered to individuals to cope with their problems (Çivitçi, 2020). The main purpose of these practices is to enable the individual to cope with both his current problems and the problems he may encounter in his future life (Corey, 2015). Psycho-educational programs are carried out on a certain subject, within the framework of determined objectives. The content of these programs, the methods and techniques to be used, and the functioning of the program are predetermined. In this framework, practitioners should also be experts in the subject (Brown, 2020). Prior to the development of the Online Decision-Making Skills Psychoeducation Programme based on CBT, the researcher received 52 hours of cognitive behavioural therapy training. Moreover, the researcher examined many studies on the theoretical foundations and practices of CBT. At this stage, theoretical and practical scientific studies and resources related to CBT (Beck, 1993; Beck, 2020; Greenberger & Padesky, 2015; Salkovskis, 1997; Wenzel et al., 2016) were utilised. Furthermore, studies and resources on the theoretical foundations and practices of psychoeducation (Brown, 2020; Corey, 2015; Walsh, 2013) were also made use of. During the research process, some of the intervention studies on decision-making styles (Çolakkadıoğlu & Güçray, 2012; Çolakkadıoğlu & Çelik, 2016; Ercengiz & Şar, 2018; Mann et al., 1988) were also utilised while preparing the theoretical basis, principles and practices of the programme. Afterwards, the content was shaped in line with the objectives determined as a result of the interviews with the participants, and the psychoeducation programme was finalised (see Appendix Table 1). The psychoeducation programme was implemented in 10 sessions, each lasting 80 minutes, via the online ZOOM application. Since the psychoeducation programme was implemented online, mostly visual and auditory activities were included. It is considered sufficient for psychoeducational practices prepared for university students and adults to last from 8-12 sessions, with a period of 60-90 minutes for each session (Brown, 2020; Walsh, 2013).

Data Analysis

The SPSS 24.0 and AMOS 24.0 software programs were used for the analysis of the quantitative data in the study. First of all, exploratory factor analysis, confirmatory factor analysis and reliability analysis were performed to test the validity and reliability of the Melbourne Decision Making Questionnaire. The fact that the skewness and kurtosis coefficients of scale scores in a data set are within the limits of ±1.5 indicates that the scores are normally distributed. In addition, the homogeneity of variance results should be taken into account in determining the analysis methods to be used for within-group and between-group comparisons (Tabachnick & Fidell, 2013). As a result of the descriptive analysis made

within this framework, it was observed that the skewness and kurtosis coefficients of some of the sub-dimensions of the questionnaire were not within the value range determined for normal distribution, and when the results of Levene's test were examined, it was observed that the groups did not show a homogeneous distribution in some sub-dimensions of the questionnaire. Therefore, it was decided to use non-parametric tests to seek answers to the hypotheses. In this context, the Friedman rank test, which is a non-parametric test, was used for within-group comparisons, that is, to determine whether there was a significant difference between the pretest, posttest and follow-up test measurements of the groups, while the Wilcoxon signed-rank test for related samples was used to determine the source of the difference in cases where a significant difference was detected. The Mann-Whitney U test for independent samples, which is a non-parametric test, was used to determine the difference between the posttest measurements of the groups. In the study, statistical analyses of the findings were carried out based on a .05 level of significance. In the qualitative phase of the research, the qualitative data collected online from the participants prior to the programme, after each session and at the end of the programme were subjected to thematic analysis by both the researcher and an expert experienced in qualitative data analysis (Braun & Clarke, 2006; Patton, 1990). The results of both analyses were compared and the necessary revisions were made. Afterwards, the codes and themes obtained from the analyses and agreed upon were reported using a fluent language and supported by direct quotations.

Findings

Quantitative Findings

This part of the study includes the results of the analysis of the collected data. Firstly, Table 1 shows the descriptive statistical values of the pretest, posttest and follow-up test scores of the experimental and control groups in the Melbourne Decision Making Questionnaire (MSDS I-II).

Table 1.
Descriptive Statistics for Pretest, Posttest and Follow-Up Test Scores of Experimental and Control Groups

Decision-Making Styles	Experimental Group						Control Group					
	Pretest		Posttest		Follow-up test		Pretest		Posttest		Follow-up test	
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD
Decision-making self-esteem	1.04	.15	1.04	.25	1.45	.15	.98	.32	1.09	.17	1.19	.31
Hypervigilant decision-making style	1.29	.18	1.20	.40	1.21	.34	1.29	.36	1.25	.36	1.18	.34
Vigilant decision-making style	1.45	.34	1.63	.32	1.75	.38	1.45	.16	1.48	.27	1.21	.35
Avoidant decision-making style	1.34	.26	.80	.41	.75	.36	1.05	.23	1.00	.22	.92	.33
Procrastinating decision-making style	1.41	.37	.83	.43	.54	.41	1.30	.28	1.32	.41	1.14	.32

As can be seen in Table 1, there are differences between the results of the pretest, posttest and follow-up test regarding the experimental and control groups' scores in the sub-dimensions of the decision-making questionnaire. Furthermore, it can be seen that there are differences between the experimental and control groups' posttest scores in the sub-dimensions of the decision-making questionnaire. To examine whether these observed differences are statistically significant, the experimental and control groups' pretest, posttest and follow-up test scores in the sub-dimensions of the decision-making questionnaire were compared within themselves (within-group comparisons). Afterwards, the posttest scores of the experimental and control groups in the sub-dimensions of the decision-making questionnaire were compared with each other (between-group comparisons). These statistical

procedures are listed below by considering the hypotheses.

Within-Group Comparisons

The Friedman rank test was used to test the hypotheses for the in-group comparisons set out below. The Wilcoxon signed-rank test was also performed for the hypotheses in which a significant difference was detected within the group.

1. The posttest scores obtained from the decision-making questionnaire by the participants in the experimental group participating in the online decision-making skills psychoeducation programme are significantly higher than their pretest scores.

2. The follow-up test scores obtained from the decision-making questionnaire by the participants in the experimental group participating in the online decision-making skills psychoeducation programme are significantly higher than their pretest scores.

3. There is no significant difference between the pretest, posttest and follow-up test mean scores of the participants in the control group.

In order to test hypotheses 1, 2 and 3, the scores obtained in the questionnaire by the students in the experimental and control groups from the pretest, posttest and follow-up test measurements were compared using the Friedman rank test for related samples, and the findings are presented in Table 2.

Table 2.
Results of Friedman Rank Test for Pretest, Posttest and Follow-Up Test Measurements of Experimental and Control Groups ın Decision-Making Questionnaire

Variables	Groups	Measurements	*N*	*MR*	*Sd*	X^2	*p*
Decision-making self-esteem	Experimental	Pretest	11	1.64	2	9.135	0.010*
		Posttest	11	1.68			
		Follow-up test	11	2.68			
	Control	Pretest	11	1.55	2	4.200	0.122
		Posttest	11	2.09			
		Follow-up test	11	2.36			
Vigilant decision-making style	Experimental	Pretest	11	1.45	2	9.172	0.010*
		Posttest	11	2.05			
		Follow-up test	11	2.50			
	Control	Pretest	11	2.23	2	3.846	0.146
		Posttest	11	2.23			
		Follow-up test	11	1.55			
Procrastinating decision-making style	Experimental	Pretest	11	2.82	2	14.976	0.001*
		Posttest	11	1.95			
		Follow-up test	11	1.23			
	Control	Pretest	11	2.18	2	2.313	0.315
		Posttest	11	2.14			
		Follow-up test	11	1.68			
Avoidant decision-making style	Experimental	Pretest	11	2.86	2	14.333	0.001*
		Posttest	11	1.82			
		Follow-up test	11	1.32			
	Control	Pretest	11	2.36	2	3.765	0.152
		Posttest	11	2.00			
		Follow-up test	11	1.64			

Table 2 continuing

Hypervigilant decision-making style	Experimental	Pretest	11	2.41	2	4.357	0.113
		Posttest	11	1.77			
		Follow-up test	11	1.82			
	Control	Pretest	11	2.14	2	0.500	0.779
		Posttest	11	1.95			
		Follow-up test	11	1.91			

MR: Mean Rank **p<.05*

As can be seen in Table 2, there is a significant difference between the pretest, posttest and follow-up test scores of the experimental group regarding decision-making self-esteem and the vigilant, procrastinating and avoidant decision-making styles (p<.05). However, it can be seen that there is no significant difference between the pretest, posttest and follow-up test results of the experimental group regarding the hypervigilant decision-making style (p>.05). Moreover, no significant difference was found between the pretest, posttest and follow-up test measurements of the control group in the sub-dimensions of the decision-making questionnaire (p>.05). Regarding the significant differences observed between the experimental group's pretest, posttest and follow-up test scores for decision-making self-esteem and the vigilant, procrastinating and avoidant decision-making styles, in order to determine the measurement or measurements to which the differences were related, the measurements were compared using the Wilcoxon signed-rank test for paired groups, and the obtained results are shown in Table 3.

Table 3.
Results of Wilcoxon Signed-Rank Test for Paired Groups Regarding Pretest, Posttest and Follow-Up Test Masurements of Experimental Group

Variables	Paired comparisons	Group	*N*	*MR*	*SR*	*z*	*p*
Decision-making self-esteem	Pretest-posttest	Negative ranks	4	4.50	18.00	.000	1.000
		Positive ranks	4	4.50	18.00		
		Ties	3				
	Pretest-follow-up	Negative ranks	1	2.50	2.50	-2.572	.010*
		Positive ranks	9	5.83	52.50		
		Ties	1				
	Posttest-follow-up	Negative ranks	1	1.50	1.50	-2.501	.012*
		Positive ranks	8	5.44	43.50		
		Ties	2				
Vigilant decision-making style	Pretest-posttest	Negative ranks	0	.00	.00	-2.032	.042*
		Positive ranks	5	3.00	15.00		
		Ties	6				
	Pretest-follow-up	Negative ranks	1	6.00	6.00	-1.974	.048*

**p<.05*

Table 3 continuing

		Positive ranks	8	4.88	39.00		
		Ties	2				
	Posttest-follow-up	Negative ranks	1	5.00	5.00		
		Positive ranks	5	3.20	3.20	-1.166	.244
		Ties	5				
Procrastinating decision-making style	Pretest-posttest	Negative ranks	8	5.31	42.50		
		Positive ranks	1	2.50	2.50	-2.382	.017*
		Ties	2				
	Pretest-follow-up	Negative ranks	11	6.00	66.00		
		Positive ranks	0	.00	.00	-2.947	.003*
		Ties	0				
	Posttest-follow-up	Negative ranks	8	5.88	47.00		
		Positive ranks	2	4.00	8.00	-2.005	.045*
		Ties	1				
Avoidant decision-making style	Pretest-posttest	Negative ranks	9	5.61	50.50		
		Positive ranks	1	4.50	4.50	-2.350	.019*
		Ties	1				
	Pretest-follow-up	Negative ranks	11	6.00	66.00		
		Positive ranks	0	.00	.00	-2.940	.003*
		Ties	0				
	Posttest-follow-up	Negative ranks	7	6.36	44.50		
		Positive ranks	3	3.50	10.50	-1.741	.082
		Ties	1				

MR: Mean Rank, **SR:** Sum of Ranks **p<.05*

Examination of Table 3 reveals a significant difference between the decision-making self-esteem follow-up test scores of the experimental group and their pretest scores (z=-2.572; p<.05), but no significant difference between their decision-making self-esteem posttest and pretest scores (z=.000; p>.05). Based on these findings, it can be said that there was no difference in the decision-making self-esteem levels of the students in the experimental group as a result of the experimental procedure, but that there was a significant increase in the follow-up test measurements compared to the pretest. A significant difference can be seen between the vigilant decision-making style pretest scores of the experimental group and their posttest scores in favour of the posttest scores (z=-2.032; p<.05). This significant increase was also maintained in the follow-up test, and there was a difference between the pretest scores and the follow-

up test scores in favour of the follow-up test (z=-1.974; p<.05). In line with these findings, it can be said that there was an increase in the vigilant decision-making style scores of the students in the experimental group as a result of the experimental procedure, and that this increase was also maintained in the follow-up test. The procrastinating decision-making style posttest scores of the experimental group decreased significantly compared to their pretest scores (z=-2.382; p<.05). It is observed that their follow-up test scores also decreased significantly compared to the pretest scores (z=-2.947; p<.05). Based on these findings, it can be said that there was a significant decrease in the procrastination decision-making style scores of the students in the experimental group as a result of the experimental procedure, and that this significant decrease continued in the follow-up test measurement. Considering the avoidant decision-making style posttest scores of the experimental group, it can be said that their pretest scores decreased significantly as a result of the intervention programme (z=-2.350; p<.05). This significant decrease continued in the follow-up test measurements (z=-2.940; p<.05). In line with these findings, it can be said that there was a significant decrease in the avoidant decision-making style scores of the students in the experimental group as a result of the experimental procedure, and that this significant decrease was also maintained in the follow-up test measurement.

Between-Group Comparisons

In the study, the Mann-Whitney U test was used to test the hypothesis that *"The decision-making questionnaire posttest scores of the participants in the experimental group participating in the online decision-making skills psychoeducation programme differ significantly from those of the participants in the control group"*. To test this hypothesis, the mean scores obtained by the experimental and control groups from the posttest measurement were compared. The findings regarding this procedure are presented in Table 4.

Table 4.
Mann-Whitney U Test Results Regarding Posttest Scores of Experimental and Control Groups ın Sub-Dimensions of Decision-Making Questionnaire

Variables	Group	*N*	*MR*	*SR*	*U*	*z*	*p*
Decision-making self-esteem	Experimental	11	10.86	119.50			
	Control				53.500	-.473	.636
		11	12.14	133.50			
Vigilant decision-making style	Experimental	11	13.18	145.00			
	Control				42.000	-1.244	.214
		11	9.82	108.00			
Procrastinating decision-making style	Experimental	11	8.36	92.00			
	Control				26.000	-2.301	.021*
		11	14.64	161.00			
Avoidant decision-making style	Experimental	11	9.77	107.50			
	Control				41.500	-1.263	.207
		11	13.23	145.50			
Hypervigilant decision-making style	Experimental	11	10.73	118.00			
	Control				52.000	-.589	.556
		11	12.27	135.00			

MR: Mean Rank, **SR:** Sum of Ranks **p<.05*

When Table 4 is examined, no significant difference can be seen between the posttest scores of the experimental and control groups for decision-making self-esteem or the vigilant, avoidant and hypervigilant decision-making styles (p>.05). As shown in Table 4, it was determined that only the procrastinating decision-making style posttest scores of the experimental group are significantly lower than the procrastinating decision-making style posttest scores of the control group (U=26.000; p<.05).

Qualitative Findings

In the study, to find an answer to the question "*What are the targeted learning outcomes of the participants in the experimental group regarding the programme?*", the participants were interviewed using the "Semi-Structured Interview Form" via the online ZOOM platform before the experimental study. Following the analysis of the obtained data, the programme was shaped and the main themes of

the Online Decision-Making Skills Psychoeducation Programme were created (see Appendix Table 1). With regard to the implementation process and the effects of the programme, to find an answer to the question "*What are the evaluations of the participants in the experimental group regarding the programme sessions and the effects of the programme?*", the "Session Evaluation Form" and "Psychoeducation Programme Evaluation Form" were used. When the participants' evaluations of the psychoeducation programme sessions are examined, it can be seen that they regarded the sessions as an awareness-raising, instructive and beneficial process and that they found the content productive. The participants stated that the programme created many different emotions in them throughout the process, and it was observed that these expressed emotions were generally positive ones (see Appendix Table 2). When the general evaluations of the participants at the end of the psychoeducation programme are examined, they stated that the programme made a positive impression on them, created awareness in them, and increased their decision-making skills. In addition, the participants made suggestions for making the subjects more concrete, increasing the number of activities, conveying the topics through case studies, and conducting the programme face-to-face (see Appendix Table 3).

Discussion

As a result of the study, it can be said that the online decision-making skills psychoeducation programme conducted with a focus on CBT led to a partial increase in the decision-making self-esteem and vigilant decision-making style, and a partial decrease in the avoidant decision-making style of the participants in the experimental group. It can be seen that the psychoeducation programme resulted in a significant decrease in the procrastinating decision-making style of the participants in the experimental group. It was also observed that the programme did not have any effect on the participants' hypervigilant decision-making style. In the qualitative data collected at the point of better understanding of these quantitative results, the participants stated that the program is an awareness-raising, instructive and beneficial process in general, leaving positive effects on them and increasing their decision-making skills. In this respect, the positive changes that the program brought about in the decision-making styles of the participants can be better understood. The inability of the program to create the expected positive changes on some decision-making styles can be explained in the context of the deficiencies highlighted in the qualitative data, by making the subjects more concrete, increasing the number of activities, transferring the subjects through case studies, and making the program face-to-face. It can be stated that these results show some similarities to the findings of previous studies in the literature. In the study by Mann et al. (1988), in which they tested the effects of a conflict theory-based decision-making skills training programme, they observed an increase in the participants' cautious-selective decision-making style and decision-making self-esteem. The cautious-selective decision-making style describes a decision-making process similar to the vigilant decision-making style used in this study. In this respect, it can be said that the partial increase in the participants' vigilant decision-making style and levels of decision-making self-esteem in the study show parallelism with the results obtained in the study conducted by Mann et al. (1988).

In other studies (Çolakkadıoğlu & Güçray, 2012; Çolakkadıoğlu & Çelik, 2016), in which the effect on decision-making styles of a conflict theory-based decision-making skills psychoeducation programme developed was examined, it was found that the psychoeducation programme increased participants' decision-making self-esteem and cautious-selective decision-making style, while it reduced the complacent, panic and cop-out decision-making styles. In the literature, decision-making styles are generally examined in two groups as positive and negative decision-making styles. Positive decision-making styles describe healthy ways of decision-making in which individuals determine options according to a purpose, gather information about the options, calculate the advantages and disadvantages, and make their decisions accordingly (Klaczynski et al., 2001). In this respect, it can be said that the partial increase in decision-making self-esteem and the vigilant decision-making style in this study bears similarities to the results of previous studies (Mann et al., 1988; Çolakkadıoğlu & Güçray, 2012; Çolakkadıoğlu & Çelik, 2016). In a study examining the effect on decision-making styles of a psychoeducation programme based on Acceptance and Commitment Therapy (Ercengiz & Şar, 2018), it was found that the programme resulted in a significant reduction in the participants' dependent and avoidant decision-making styles, but that it did not have a significant effect on their instant, intuitive and rational decision-making styles. In this study, too, it can be said that similar results were obtained

for the procrastinating and avoidant decision-making styles, which describe a similar decision-making process to the dependent and avoidant decision-making styles discussed in the abovementioned study. In addition, it can be seen that similar results were obtained for the instant decision-making style, which describes a similar decision-making process to the hypervigilant decision-making style. However, although there was a partial increase in the vigilant decision-making style of the participants in this study, there was no significant increase in the rational decision-making style, which describes a similar decision-making process, in the study conducted by Ercengiz and Şar (2018).

An individual's decision-making self-esteem is shaped by his/her perceptions, thoughts, assumptions and core beliefs about him/herself (Filippello et al., 2013). The implemented programme included activities focusing on individuals' automatic thoughts, assumptions and core beliefs. It is thought that such activities created awareness in the participants and enabled them to take bold, individual steps in their decision-making processes. In addition, it can be said that focusing on the decision-making processes in the implemented programme and carrying out activities in this direction created an awareness of the decision-making processes in the participants, which in turn led to a positive change in the vigilant decision-making style. The procrastinating decision-making style is a negative decision-making style. Individuals who use negative decision-making styles take false steps in their decision-making processes and shift the responsibility for their decisions to others (Deniz, 2004). It can be said that within the scope of the programme, focusing on both the decision-making processes and the responsibilities in decision-making, and carrying out related activities created awareness in the participants, and this awareness effectively reduced their procrastinating decision-making style. Furthermore, it is thought that especially the topics related to decision-making responsibility and anxiety and the implementation of activities in this direction in the programme led to a decrease in the participants' avoidant decision-making styles. In the study, there was no significant programme-related change in the participants' hypervigilant decision-making style. The CBT approach emphasises that reducing individuals' avoidance and safety behaviours is important in the struggle against anxiety (Salkovskis, 1997). The intervention study was carried out via the online ZOOM programme for ten sessions. In this respect, the anxiety experienced by the participants in the decision-making process and the limited effect in reducing the hypervigilant decision-making style is seen as a consistent result. In fact, in the interviews held during the implementation process and after the implementation, the participants considered the fact that the programme was online and allowed only a weak interaction as a limitation. It can be seen that the qualitative findings collected before, during and after the experiment in the programme are functional in explaining and making sense of the quantitative results, and in revealing the contributions of the participants regarding the deficiencies in the programme. Since no randomness is sought for participation in groups in quasi-experimental designs, problems with internal validity are experienced (Heppner et al., 2015). These internal validity problems can be reduced by holistic interpretation of data obtained from different data sources through data triangulation (Patton, 1990). In this regard, it is thought that in the study, determining the learning outcomes and accordingly, the content of the programme following the qualitative interviews made before the intervention programme, and the fact that in the qualitative data collected during and after the programme, the participants regarded the programme as a satisfactory and beneficial intervention, enabled a better understanding of the quantitative results. Visvalingam et al. (2022) and Çolakkadıoğlu and Çelik (2016) stated that the qualitative data they collected in their studies made the quantitative results more understandable. Moreover, the participants' opinions and suggestions on the weaknesses of the programme in both the session evaluation forms and the programme evaluation forms provide a strong source of information about the issues that need to be emphasised and corrected in order to make the intervention programme more effective.

Recommendations

It was observed that the implemented intervention programme had an impact on the participants' decision-making self-esteem and decision-making styles. For this reason, it is recommended that within the scope of preventive and developmental guidance by psychological counselling and guidance services in universities, the programme be revised and implemented with regard to the decision-making skill, which is a very important part of life. In addition, the results show that decision-making behavior can change. In this respect, it is recommended that different programs should be prepared and implemented

by psychological counseling and guidance services in universities for decision-making skills on vocational and career, emotional and social processes and personal development in order for students to make sound decisions during the university period when critical decisions are taken. It is recommended that researchers prepare different training programmes aimed at contributing to psychological counselling and guidance practices related to decision-making processes, and that they apply them especially to participants in the adolescent and young adulthood periods, which are critical periods for decision-making processes. In addition, it is seen that qualitative studies in the literature on decision making are limited, so it is recommended to consult the opinions of individuals.

Limitations

In addition to the contributions stated above, this research also has some limitations. In this study, the experimental and control groups were formed on a voluntary basis. Therefore, there was an imbalance in the groups, especially in terms of gender. The fact that the study was conducted with a quasi-experimental design also constitutes a limitation in terms of internal validity. Moreover, the fact that the participants in the study were university students constitutes a limitation in terms of generalising the findings to other segments of society. Finally, it is thought that conducting the study via the online ZOOM platform weakened interaction for both the implementer and the participants, which constitutes a limitation in terms of the study findings.

Conclusion

In this study, despite a number of limitations that emerged due to the pandemic conditions, it can be seen that results emerged that reveal the effectiveness of the online psychoeducation programme for decision-making processes and decision-making styles. It can be stated that these results also provide supportive findings in terms of the practicability and effectiveness of online psychoeducation programmes in the field of psychological counselling and guidance.

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References

Allwood, C. M., & Salo, I. (2012). Decision-making styles and stress. *International Journal of Stress Management, 19*(1), 34–47. https://doi.org/10.1037/a0027420

Andersson, G. & Cuijpers, P. (2008). Pros and cons of online cognitive–behavioural therapy. *The British Journal of Psychiatry,* 193(4), 270-271. doi: 10.1192/bjp.bp.108.054080

Arroba, T. (1977). Styles of decision making and their use: An empirical study. *British Journal of Guidance & Counselling, 5*(2), 149–158. https://doi.org/10.1080/03069887708258110

Avşaroğlu, S., & Ömer, Ü. (2007). Investigation of self-esteem, decision-making and stress coping styles of university students in terms of self-esteem and some variables. *Selcuk University Journal of Social Sciences Institute*, (18), 85-100.

Bavoľár, J., & Orosová, O. (2015). Decision-making styles and their associations with decision-making competencies and mental health. *Judgment and Decision making, 10*(1), 115-122.

Bavolar, J., & Bacikova-Sleskova, M. (2020). Psychological protective factors mediate the relationship between decision-making styles and mental health. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues,* 39(4), 1277–1286. https://doi.org/10.1007/s12144-018-9831-9

Beck, A. T. (1993). Cognitive therapy: Past, present, and future. *Journal of Consulting and Clinical Psychology,* 61(2), 194–198. https://doi.org/10.1037/0022-006X.61.2.194

Beck, J. S. (2020). *Cognitive behavior therapy: Basics and beyond.* Guilford Publications.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brown, N. W. (2020). *psychoeducational groups: Process and practice.* Routledge. https://doi.org/10.4324/9781315169590

Commendador, K. (2011). The relationship between maternal parenting style, female adolescent decision making, and contraceptive use. *Journal of the American Academy of Nurse Practitioners, 23*(10), 561-572.https://doi.org/10.1111/j.1745-7599.2011.00635.x

Conyne, R. K. (2000). Prevention in counseling psychology: At long last, has the time now come? *The Counseling Psychologist*, *28*(6), 838–844. https://doi.org/10.1177/0011000000286005

Corey, G. (2015). *Theory and practice of group counseling.* Cengage Learning.

Coudray, C., Palmer, R., & Frazier, P. (2019). Moderators of the efficacy of a web-based stress management intervention for college students. *Journal of Counseling Psychology*, *66*(6), 747–754. https://doi.org/10.1037/cou0000340

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches.* Sage publications.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.

Çivitci, A. (2020). *Group psycho-education*. Ankara: Pegem Publications

Çolakkadıoğlu, O., & Güçray, S. (2012). The effect of conflict theory based decision-making skill training psycho-educational group experience on decision making styles of adolescents. *Educational Sciences: Theory & Practice, 12*(2), 669 - 676. Retrieved from https://eric.ed.gov/?id=EJ981811

Çolakkadıoğlu, O., & Çelik, B. (2016). The effect of decision-making skill training programs on self-esteem and decision-making styles. *Eurasian Journal of Educational Research,* 65, 259-276. http://dx.doi.org/10.14689/ejer.2016.65.15

Deniz, M. E. (2004). Investigation of the relation between decision-making self-esteem, decisionmaking styles and problem solving skills of university students. *Eurasian Journal of Educational Research, 4* (15), 23-35. Retrieved from https://dergipark.org.tr/en/pub/ejer/issue/42412/510642

Deniz, M. (2006). The relationships among coping with stress, life satisfaction, decision-making styles and decision self-esteem: An investigation with Turkish university students. *Social Behavior and Personality: an international journal, 34*(9), 1161-1170.

Egan, G. (2013). *The skilled helper: A problem-management and opportunity-development approach to helping.* Cengage Learning.

Ercengiz, M., & Şar, A. H. (2018). The effect of decision-making skills psycho-training programme related acceptance and commitment therapy on decision making styles. *Sakarya University Journal of Education, 8*(4), 109-130. https://doi.org/10.19126/suje.417797

Filippello, P., Sorrenti, L., Larcan,L. & Rizzo, A. (2013). Academic underachievement, self esteem and self-efficacy in decision making. *Mediterranean Journal of Clinical Psychology, 1* (3),1-11. https://doi.org/10.6092/2282-1619/2013.1.934

Gambetti, E., & Giusberti, F. (2019). Personality, decision-making styles and investments. *Journal of Behavioral and Experimental Economics*, 80, 14-24. https://doi.org/10.1016/j.socec.2019.03.002

Gerrity, D. A., & DeLucia-Waack, J. L. (2007). Effectiveness of groups in the schools. *Journal for Specialists in Group Work, 32*(1), 97–106. https://doi.org/10.1080/01933920600978604

Greenberger, D., & Padesky, C. A. (2015). *Mind over mood: Change how you feel by changing the way you think*. Guilford Publications.

Harren, V. A. (1979). A model of career decision making for college students. *Journal of Vocational Behavior, 14*(2), 119–133. https://doi.org/10.1016/0001-8791(79)90065-4

Heppner, P. P., Wampold, B. E., Owen, J., & Wang, K. T. (2015). *Research design in counseling.* Cengage Learning.

Klaczynski, P.A., Byrnes, J.B., & Jacobs, J.E. (2001), "Introduction: Special Issue on decision making*". Journal of Applied Developmental Psychology, 22,* 225-236. https://doi.org/10.1016/S0193-3973(01)00081-8

Kline, R. B. (2011). *Principles and practice of structural equation modeling.* Guilford Press.

Mann, L., Harmoni, R., Power, C., Beswick, G., & Ormond, C. (1988). Effectiveness of the GOFER course in decision making for high school students. *Journal of Behavioral Decision Making, 1*, 159-168. https://doi.org/10.1002/bdm.3960010304

Mann, L., Radford, M., Burnett, P., Ford, S., Bond, M., Leung, K., Nakamura, H., Vaughan, G., & Yang, K.S. (1998). Cross-cultural differences in self- reported decision-making style and confidence. *International Journal of Psychology, 33*, 325-335. https://doi.org/10.1080/002075998400213

Nota, L., & Soresi, S. (2004). Improving the problem-solving and decision-making skills of a high ındecision group of young adolescents: A test of the``difficult: No problem!"training. *International Journal for Educational and Vocational Guidance,* 4(1), 3-21. https://doi.org/10.1023/B:IJVO.0000021054.81492.8d

Palamarchuk, I. S., & Vaillancourt, T. (2021). Mental resilience and coping with stress: A comprehensive, multi-level model of cognitive processing, decision making, and behavior. *Frontiers in Behavioral Neuroscience*, 15, 719674. https://doi.org/10.3389/fnbeh.2021.719674

Patton, M. Q. (1990). *Qualitative evaluation and research methods.* SAGE Publications. https://doi.org/10.1002/nur.4770140111

Salkovskis, P. M. (Ed.). (1997). *Frontiers of cognitive therapy.* Guilford Press.

Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and Psychological Measurement, 55*(5), 818–831. https://doi.org/10.1177/0013164495055005017

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.

Thunholm, P. (2004). Decision-making style: Habit, style or both? *Personality and Individual Differences, 36(*4), 931–944. https://doi.org/10.1016/S0191-8869(03)00162-4

Van Dongen, K., Schraagen, J. M., Eikelboom, A., & Brake, G. (2005). Supporting decision making by a critical thinking tool. *Proceedings Of The Human Factors And Ergonomics Society Annual Meeting, 49* (3), 517-521 https://doi.org/10.1177/154193120504900364

Visvalingam, S., McHardy, H.L., Norder, S.J. et al. A mixed methods study of an online intervention to reduce perfectionism. *Curr Psychol* (2022). https://doi.org/10.1007/s12144-022-02953-y

Wallen, N. E., & Fraenkel, J. R. (2013). *Educational research: A guide to the process*. Routledge. https://doi.org/10.4324/9781410601001

Walsh, J. (2013). *Psychoeducation.* In Encyclopedia of Social Work. https://doi.org/10.1093/acrefore/9780199975839.013.317

Wasarhelyi, J. N., John, B., Long, B., & Lovas, G. S. (2019). The effects of parent attachment and parenting styles on decision-making in college students [Susquehanna University]. *Journal of Student Research.* https://doi.org/10.47611/jsr.vi.639

Wenzel, A., Dobson, K. S., & Hays, P. A. (2016). *Cognitive behavioral therapy techniques and strategies. American Psychological Association*. https://doi.org/10.1037/14936-000

Wolff, J. M., & Crockett, L. J. (2011). The role of deliberative decision making, parenting, and friends in adolescent risk behaviors. *Journal of Youth and Adolescence, 40*(12), 1607–1622. https://doi.org/10.1007/s10964-011-9644-8

Yüksel-Şahin, F. (2021). A Study on Counselors' Views about the Covid-19, Performing In-Person and Online Counseling, and Receiving In-Person and Online Training. *IBAD Journal of Social Sciences, (9),* 496-522. https://doi.org/10.21733/ibad.799721

Appendices

Appendix Table 1.

Main Themes of Cbt-Based Online Decision-Making Skills Psychoeducation Programme

Sessions	Themes	Duration
Session 1	Introduction to online decision-making skills psychoeducation programme, getting acquainted and determining goals	80 minutes
Session 2	Decision-making process and decision-making styles	80 minutes
Session 3	Recognising emotions and distinguishing emotions from	80 minutes
Session 4	Automatic thoughts and their effects on decision-making	80 minutes
Session 5	Personal assumptions and their effects on decision-making	80 minutes
Session 6	Core beliefs of individuals and their effects on decision-making processes	80 minutes
Session 7	Obstacles to decision-making ability (fears and anxieties)	80 minutes
Session 8	Overcoming obstacles (coping with fears and anxieties)	80 minutes
Session 9	Priorities and responsibilities in decision making	80 minutes
Session 10	Evaluation and completion of psychoeducation programme	80 minutes

Appendix Table 2.
Participants' Views on Programme Process

Themes	Participant Statements
Function **(What are the participants' views on the functionality of the program?)**	E5: "Especially sharing others' experiences increased my own awareness of many issues." E1: "I had a lot of emotions that I thought I felt but didn't actually feel as such. I learned to stop after experiencing something and really think about how I was feeling at that moment, as I used to have automatic feelings and thoughts in the face of events and did not actually focus on what I was feeling." E6: "In fact, I learned that in the decision-making process, in my opinion, our automatic thoughts have a huge impact on us." E7: "Even though I could not associate the styles I learned with myself, I came to question my own style and my own attitude in this way." E2: "It was beneficial for us to understand what style we should have in order to make healthy decisions." E3: "It allowed me to observe what I learned in my life. For example, when I had to decide on something, it allowed me to examine what kind of path I might be following."
Content **(What are the evaluations of the participants regarding the content of the program?)**	E5: "The content was excellent, and the information about the topics and the activities were very clear." E6: "This implementation was very productive and effective. The topics in its content were exactly what I needed." E1: "The content was clear and interconnected." E8: "The content was conveyed simply and clearly enough. It was a concrete content." E3: "The implementation process exceeded my expectations. The programme content was well organised." E9: "The implementation process of the session was an adequate and good process for me."
Emotional Impact **(What are the effects of the program process on the emotions of the participants?)**	E2: "It honestly saddened me to realise how much anxiety affects my decisions, but as a result, becoming aware of this and wanting to change something excites me." E3: "In general, the process made me think about myself, which was tiring but also pleasing." E10: "The fact that there are positive differences in my priorities between the old me and the new me has had a positive effect on my feelings, because these positive changes make me happy." E5: "Ever since I made feeling good my priority, I have felt happier and better." E1: "I was surprised because I noticed and thought about some things for the first time." E9: "I am curious about the aspects of myself that I will discover as the sessions progress." E6: "Observing that I learned something from everyone who shared their opinion there motivated me more."

Appendix Table 3.
Participants' End-of-Programme Evaluations

Themes	Participant Statements
Effect **(What are the effects of the implemented program on the participants?)**	E8: "First of all, I realised the factors that are effective in making decisions and my own decision-making style, and made sense of the decision-making processes of the people around me. The sharing of ideas by the group members gave me a different perspective. The process created awareness in me." E2: "I had supposed that I was the only one with the problems I was experiencing, but I realised that I was not alone in this. Frankly, it made me happy to see others who have dealt with these problems. One of the situations I liked to see was that we understood each other even if we didn't meet face to face." E9: "It was very valuable that we were able to express ourselves comfortably and open up while feeling safe in a group environment." E7: "I think it is a nice and satisfying process to encounter new perspectives all the time and to reinterpret the concepts we know together with our advisor." E6: "When I joined this programme, I had a lot of confusion in my head and this confusion had a great impact on both the things I did in my daily life and my decision-making processes. I can say that thanks to this programme I participated in, the confusion has decreased and I can look at my life from a healthier perspective."
Learning Outcome **(What did the implemented program bring to the participants?)**	E1: "Thanks to this training, I learned what my automatic thoughts were. In addition, in this training, we often talked about the reasons for our behaviours and our feelings while exhibiting these behaviours. As someone who had unconsciously avoided this before, it confronted me with many things and taught me to question myself." E6: "In terms of making healthy decisions, it enabled me to become aware of my automatic thoughts, core beliefs, assumptions, and safe behaviours that I acquired while avoiding my anxieties, which used to affect my decisions." E2: "I can say that the programme made a lot of difference for me. First of all, I began to spend more time with myself. It helped me to place myself and my happiness at the top of my priorities in decision making. This enabled me to easily say no to people. I gradually began to let go of the safe behaviours that I used to hide behind when I was anxious. Instead of running away from my anxiety, I started to confront it." E9: "By the end of the programme, I learned where I had made mistakes while making decisions and what I should do. Now I will try to make thoughtful decisions."
Suggestion (What are the suggestions of the participants regarding the implemented program?)	E1: "There were topics related to education that were sometimes too abstract for me and that I could not get into my head. I would like those to be a little clearer." E8: "I would have expected the assignments to be action-oriented. I would like us to have real experiences and share and evaluate them in the group." E9: "It would be good if there was more emphasis on personal experiences and more concrete examples in the programme." E2: "I think it would be more productive if the programme was conducted face-to-face, because we could not see the faces of many friends online and an environment of trust could not be fully established; not everyone opened up. "