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ARAŞTIRMA

Açık Erişim

The Effect of Well-Star Psycho-Education Program on Wellness and Psychological Symptom

İyilik Hali Yıldızı Psiko-Eğitim Programının İyilik Hali ve Psikolojik Belirti Düzeyleri Üzerindeki Etkisi

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ABSTRACT

The aim of this study is to investigate the effects of the Well-Star Psycho-Education Program (WS-PEP) on the levels of wellness (general, physical, emotional, social, cognitive, and target-oriented and making sense of life) and psychological symptoms. A 3x3 experimental design including pre-test, post-test and follow-up measurements with experimental, placebo and control group was used. The Well-Star Scale and Brief Symptom Inventory were used to collect the data of the study. In addition, qualitative data was collected through focus group interview. The quantitative findings showed that WS-PEP had no significant effect in increasing wellness. However, the findings of the focus group interview with the six students in the experimental group have shown that students believed they acquire new skills to improve their wellness. It was also found that WS-PEP was effective in reducing the psychological symptom levels of university students and this effect continued to be observed during the follow-up process.

Article Information

Keywords

Wellness
Psychological Symptoms
Psycho-education
Well-star Model
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Anahtar Kelimeler

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ÖZET

Bu araştırmanın amacı İyilik Hali Yıldızı Psiko-eğitim Programının (İHY-PEP) iyilik hali (genel, fiziksel, duygusal, sosyal, bilişsel, yaşamı anlamlandırma ve hedef odaklı olma) ve psikolojik belirti düzeyleri üzerindeki etkilerini incelemektir. Deney, plasebo ve kontrol gruplu ön test, son test ve izleme ölçümlerini içeren 3x3'lük deneysel desen kullanılmıştır. Çalışmanın verileri İyilik Hali Yıldızı Ölçeği ve Kısa Semptom Envanteri ile toplanmıştır. Ayrıca, odak grup görüşmesi ile nitel veriler toplanmıştır. Nicel bulgular İHY-PEP'nin iyilik hali düzeyinin arttırılmasında istatistiksel olarak anlamlı bir etkisi olmadığını göstermiştir. Bununla birlikte, deney grubundaki altı öğrenci ile yapılan odak grup görüşmesinin bulguları, öğrencilerin psiko-eğitim sürecinde iyilik hallerini geliştirmek için yeni beceriler kazandıkları görüşüne sahip olduğunu göstermektedir. Ayrıca, İHY-PEP'nin üniversite öğrencilerinin psikolojik belirti düzeylerini azaltmada etkili olduğu ve bu etkinin 10 hafta boyunca devam ettiği bulunmuştur.

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INTRODUCTION

The notion of wellness, which brings a holistic view of human development, draws attention. Health has defined not only as a deprivation of any disease but also as a holistic well-being in physical, social and spiritual terms by the World Health Organization since 1946 (Roscoe, 2009). Following this new perspective on the wellness, new opinions about wellness have begun to emerge in the field. In this context, wellness is also defined as a personality in which the sense of identity, the meaning of life, and the goals of life are integrated (Banks, 2015; Jones, 2011). In addition, the state of wellness is also expressed as a structure involving self-responsibility and love (Travis & Ryan, 1988). Thus, the concept of wellness, which was used primarily to express physical health in the medical field, has been redefined to include psychological and social areas (Fullen & Granello, 2018; Myers, Sweeney, & Witmer, 2000). When these definitions of wellness are examined, it is seen that wellness is viewed from different perspectives. While wellness is defined in different forms, researchers' common sense in their view of wellness is that they emphasize that wellness includes wellbeing in terms of social and psychological wellness, as well as not having a physical illness (Adams, Bezner, & Steinhardt, 1997; Edlin, Golanty, & Brown, 2000; Frazer, 2011; Myers & Sweeney, 2005). Efforts to explain wellness that started with these definitions continued with the development of models of wellness.

Several models of wellness have been developed (Adams, Bezner, & Steinhardt, 1997; Reese & Lewis, 2019; Renger et al., 2000; Sweeney, 2019). In these models, emotional, social, intellectual, spiritual and physical wellness are common components of wellness, whereas psychological, occupational and environmental wellness are considered as separate components in some models. These models, which have many aspects in common with each other as well as different aspects, are models developed by specialized researchers in the medical field. However, since the concept of wellness is not only the well-being for the individual in medical but also has a structure that also contains psychological factors, models have also been developed in the field of mental health-related to wellness.

One of the remarkable wellness models developed in the field of mental health is the Wheel of Wellness Model (Myers, Sweeney, & Witmer, 2000; Witmer & Sweeney, 1992). A new model of wellness with five factors has emerged, called "Indivisible Self", as a result of studies on Wheel of Wellness Model (Hattie, Myers, & Sweeney, 2004). According to the Indivisible Self Wellness Model, the self is in the center of wellness. There are five main factors around the self: creative, coping, social, essential and physical self, and these five factors also have sub-factors in themselves (Myers & Sweeney, 2005). Through the development of this model, the multidimensional and holistic structure of wellness has been confirmed (Myers & Sweeney, 2004; 2005). These models, which are frequently subject to research in the literature, have been developed for American culture.

The first studies for the development of a model of wellness for Turkish culture were carried out by Korkut-Owen and Owen (2012) and the Well-Star Model was created. This model consists of five dimensions of wellness as "physical", "emotional", "social", "cognitive" and "target-oriented and making sense of life" (Korkut-Owen et al., 2016). Physical wellness has characteristics such as healthy eating habits, regular exercise and sports, avoiding risky behaviours that may threaten health, and developing health protective habits. Emotional wellness is explained as being aware of an individual's emotions, being able to control their emotions, expressing their feelings and developing a realistic perspective on life events. Social wellness involves how effective relationships can be with other individuals and the social

support they provide from important individuals in their lives. Cognitive wellness includes qualities such as being intellectually active, willingness to learn new information, being steadfast in challenging learning tasks, and having problem-solving skills. Target-oriented and making sense of life wellness involves searching and creating meaning and purpose in life and actively striving to achieve the life goals it creates (Korkut-Owen & Çelik, 2018; Korkut-Owen, Demirbaş-Çelik, & Doğan, 2017a; Korkut-Owen, Demirbaş-Çelik, & Doğan, 2017b). While developing the Well-Star Model (WSM), many models previously developed in different cultures were examined and the strengths of these models were blended with Turkish culture and the well-star model was created (Korkut-Owen & Owen, 2012). For this reason, it can be said that the well-being model contains both the universal qualities and to the qualities of Turkish culture.

The metaphor of the star, which gives its name to the model, is used in the explanation and implementation of the model (Korkut-Owen & Owen, 2012). According to this, each arm of the starfish reflects a wellness dimension and when all the fields come together, a bright star can be obtained (Korkut-Owen et al., 2016; Korkut-Owen & Çelik, 2018). When all models developed about wellness are examined, it can be seen that all models have a multidimensional and holistic structure in accordance with the characteristics expressed in the definitions of wellness. In the framework of these models developed to facilitate understanding of wellness, researchers have begun to work on how to improve wellness of individuals.

There are various programs in the literature prepared to improve wellness of the individuals. It has proven that programs developed in this framework have increased levels of wellness among elementary school students (Perepiczka, 2009; Tuuri, et. al., 2009), college students (Christianson, et. al., 2018; Oğuz-Duran, 2006; Stalnaker-Shofner & Manyam, 2014) teachers (Harris, Jennings, Katz, Abenavoli, & Greenberg, 2016; Parker, 2019), adults and older adults (Fullen, 2016; Tanigoshi, Kontos, & Remley 2008). In addition, courses taught to improve wellness in the universities are also seen to increase levels of wellness (Askegaard, 2000; Conley, Travers, & Bryant, 2013; Kuruganti, 2014; Wharf-Higgins, Lauzon, Yew, Bratseth, & McLeod, 2010). In recent years, studies reviewing the wellness program, it is emphasized that the wellness programs improve wellness and provide serious savings on health care costs (Beauchemin, Gibbs, & Granello, 2018; Ott-Holland, Shepherd, & Ryan, 2019; Saliba & Barden, 2017). As a result, it is seen that many programs to improve wellness increased the level of wellness of the individuals.

Another thing that comes to mind when considering the success of programs to improve wellness is that secondary benefits can also be achieved by increasing levels of wellness among individuals. For example, when an individual's level of wellness increases, anger (Ağaoğlu, 2012), violence tendencies (Guerra, 2003), anxiety and stress (Özü, 2010) levels may decrease. Therefore, it can be said that with the increase of the level of wellness, the elements that threaten the physical and mental health can be eliminated (Doğan, 2008). Psychological symptoms, which are considered to be the opposite of being mentally healthy in this respect, may be reduced by increasing the level of wellness (Feldman, 2009). As a matter of fact, in a study that examines the relationship between wellness and psychological symptoms, wellness was found to be negatively related to somatization, depression, anxiety and anger /aggression (Doğan, 2008). In addition, psychoeducational program based on wellness reduced psychological symptoms such as depression, anxiety and perceived stress (McGuire, Stojanovic-Radic, Strober,

Chiaravalloti and DeLuca, 2015). These findings support the idea that improving wellness may contribute to reducing psychological symptoms that threaten mental health.

The years spent at university are one of the critical periods in terms of protecting and improving mental health. The university education years are considered as an important life period for transition from adolescence to adulthood. For this reason, in order to ensure that university students get through this important life period in a healthy way, as emphasized in the field of mental health, the use of the potential power of the individuals to develop themselves will strengthen them to cope with possible developmental problems in transition to adulthood. Indeed, with the promotion of the development of the positive aspects of human nature, it has emerged as a widely accepted view that the symptoms threatening mental health will disappear by themselves (Seligman & Csikszentmihalyi, 2014; Sheldon & King, 2001). In addition, it is not possible to distinguish between mental health and physical health, and the importance of treating them together is emphasized both in the psychology field (Myers & Sweeney, 2008) and in the medical field (Adams, Bezner, & Steinhardt, 1997). In this sense, researches on wellness have gained importance. In addition, this research seems to be important in terms of being the first study applying the well-star model. In order to improve wellness of individuals, it is necessary to first determine the needs of individuals to improve their wellness and to develop intervention programs that can improve wellness. In this context, in this research, it was aimed to develop a psycho-education program in the framework of the Well-Star Model and to investigate the effects of this program on the wellness and psychological symptom levels of university students in line with the needs of university students to improve their wellness.

METHOD

Research Model

In the study, a 3x3 experimental model including pre-test, post-test and follow-up measurements with experimental, placebo and control group was used. According to this design, 10 sessions of Psycho-education program based on Well-Star Model were applied to the experimental group; 10 sessions of group Counseling based on interpersonal interaction were applied to the placebo group and no treatment was done to control group within this 10-week period. In the study, pre-test measurements were taken one week prior to experimental treatment and placebo treatment, post-test measurements were taken two days after the experimental treatment and placebo treatment and the follow-up measurements were taken 10th week following the end of the experimental treatment and placebo treatment.

Study Group

The subjects of the study consisted of 36 volunteer students studying at the faculties of Pharmacy, Education, Science and Health Sciences of Anadolu University in the fall semester of 2016-2017 academic year. Subjects participating in the study were assigned to the groups in an unbiased manner and care was taken to ensure that the students were evenly distributed in terms of gender and class levels. Accordingly, each of the experimental, placebo and control groups consisted of 12 students. During the experiment, one female subject from the experimental group and two male subjects and one female from the placebo group decided to quit the study. Additionally, one female subject from the control group could not be contacted. Therefore, data on these members were not included in the analysis. Descriptive statistics on gender distribution and age of the groups are given in Table 1.

Table 1. Descriptive statistics of groups by gender and age

	Gender		Age	
	Female	Male	Mean	Standard deviation
Experiment group	6	5	20.09	1.22
Placebo Group	5	4	20	1.41
Experiment group	5	6	20.09	1.22

Table 1 shows that the gender distribution in the groups is balanced. In addition, the mean age and standard deviation of age of the subjects in the groups were found to be almost the same. Attention was also paid to the inclusion of subjects from all class levels and from different disciplines in each group in the formation of groups. In this context, at least one student from the social science, science, health sciences, and fine arts and students at all class levels was also present in the three groups. Thus, the participation of the students with different profiles to the groups was ensured and homogeneous groups were tried to be formed in terms of subject profiles.

Ethical Statement

This research was completed in accordance with the Helsinki Declaration. In accordance with this, the study was examined and allowed by Anadolu University Scientific Research and Ethical Review Board (REF: 28299). Furthermore, instruments in the study were just appropriated to volunteer participants. All participants provided informed consent. Additionally, participants were informed that they could drop out from the study at any time during data collection.

Data Collection Tools

Well-Star Scale (WSS). WSS was developed by Korkut-Owen et al. (2016) to determine the wellness levels of individuals based on the Well-Star Model. The WSS consists of five subscales and 24 items rated on a 5-point Likert scale. These subscales are named as "physical", "emotional", "social", "cognitive" and "target-oriented and making sense of life" wellness. High scores indicate that the level of wellness increases. According to the results of exploratory factor analysis conducted with university students, a five-factor structure with a factor load ranging between .40 and .76 emerged. According to confirmatory factor analysis results conducted with a different group of university students, the adaptation wellness indexes were calculated as $\chi^2 (239, N=156) = 490.28, p < 0.01, CFI = .90, IFI = .90, RMSEA = .082$ and $SRMR = .085$ and the factor loads of the articles ranged from .47 to .91. In addition, Healthy Lifestyle Behaviours Scale (HLBS) was used for the similar scale validity of the scale. As a result of these analyses, a significant positive correlation was found between the WSS and the HLBS at a level of .76 (Korkut-Owen et al., 2016). Internal consistency coefficient was calculated as .84 for the total score of scale, .57 for physical, .60 for emotional, .65 for social, .72 for cognitive, .83 for target-oriented and making sense of life.

Brief Symptom Inventory (BSI). BSI was developed by Derogatis (1992). BSI was adapted to Turkish culture by Şahin and Durak (1994) As a result of the analyses made on the Turkish version of BSI, it was found that the scale had 5 factors including anxiety, depression, interpersonal sensitivity, somatization and hostility. The scale consists of 53 items rated on a 4-point Likert scale. High scores indicate that the level of psychological symptoms increases According to the analyses performed to determine the criterion-dependent validity of BSI, the general symptom level and the symptom levels of all subscales had significant correlation ranging from -.14 and -.34 with Social Comparison Scale; .16 and

.42 with Submissiveness Scale; .24 and .36 with Stress Audit 4.2-OS; .34 and -.57 with Offer Loneliness Scale; .13 and .36 with UCLA Loneliness Scale; .34 and .70 for Beck Depression Scale. The general symptom score obtained from BSI and internal consistency coefficients calculated in two different samples were found to be .95 and .96. In addition, internal consistency coefficients for subscales of BSI were calculated as .88 for depression, .87 for anxiety, .75 for somatization, .76 for hostility and .87 for negative self (Şahin & Durak, 1994).

Personal Information Survey. The Personal Information Survey created by the researchers was created to collect information about the subjects such as gender, age, class level, faculties and departments. The survey also included a timeline in which students can mark the appropriate days and times to attend group work. Focus group interview form. Ten weeks after the end of the group work, a focus group interview to assess their wellness levels was conducted with six subjects who participated in the experimental group. The focus group interview form prepared for this purpose comprised of seven questions. The form included questions on what skills they generally used to maintain and improve their wellness (e.g. What are you currently doing about improving your wellness?) and how they benefited from group work (e.g. Which of the activities and sharing processes over the course of our group sessions were good for you /beneficial to you most?).

Process

Pre-Experimental Procedures: Firstly, in order to determine the needs of the university students the literature was reviewed with regard to wellness and semi-structured personal interviews were conducted with 14 students (8 females, 6 males), using "Wellness Interview Form" consisting of 16 questions. Invitations for the students to participate in the interview were made in the classroom by the first author. These students were studying in the field of sciences (2 students), social sciences (4 students), health sciences (4 students) and fine arts (4 students). Before conducting the interviews, in order to ensure that the students participated in the study willingly, they were asked to sign a consent form stating that the data collected would be used for only scientific purposes. In addition, the participants were informed that there would be audio recording but that all audio records would be deleted after the research was reported, that no information to expose their identities would be included in the research report and that they had the right to leave the study at any point. During these interviews, the voice recordings were taken with the permission of the participants and voice recordings were transcribed. Investigators who studied the transcripts in detail with the NVIVO program produced various themes on the wellness of university students.

Coding was conducted according to the themes related to the physical, emotional, social, cognitive and target-oriented and making sense of life dimensions of the WSM. Information on the main themes of good memory, wellness improvement, willingness to participate in group counseling practices, and lifestyle were also coded in the first stage besides the dimensions of the WSM. Following the coding of main themes, the researcher created subthemes by thoroughly examining the main themes.

Physical wellness was examined under three main themes: sports, nutrition, and health check-ups. Emotional wellness was examined through seven main themes: mental health protection and coping with stress, problematic areas, conflict resolution, emotional expression, emotional control, self-perception, and emotional intensity. Social wellness was examined through five main themes: family relations, friendship, emotional/romantic relationships, contribution of social relations to wellness, and

improvement of social relations. Cognitive wellness was evaluated through three main themes: academic skills, free-time activities, and attitudes toward acquiring new knowledge. Wellness dimensions of target-oriented and making sense of life were discussed in two main themes based on the values adopted by students and their participation in artistic activities. Therefore, detailed views and needs of university students about wellness were evaluated and then the study proceeded to the program development stage.

Process of Creating the Program: It was decided to create a psycho-education program with 10 sessions in the course of the creation of the program. In this context, while the contents of the program were being created, the general objectives of the program and the specific objectives of each session were first determined in order. Activities to be carried out in each session were then planned in accordance with these objectives. Well-Star Model, Cognitive Behavioural Psychology Approaches, group Counseling principles were taken as a basis while planning activities and psycho-dramatic activities were utilized. Also, the information obtained from personal interviews with 14 students was utilized in the creation of the program. Thus, a draft program with 10 sessions was prepared.

The draft program was presented to five faculty members in the field of Counseling and sent to the researcher who developed the WSM by e-mail and expert opinions were obtained. In line with these opinions taken from the experts, the program was rearranged and made ready for pilot study. In line with expert opinion, new procedures to improve the clarity of instructions given for activities, to better motivate group members to participate and to make the order of sessions more cohesive were followed. Pilot study was completed in 6 weeks in total with the participation of 10 university students. As a result of the pilot study, the program was rearranged and finalized. After the pilot study, changes were made to the program regarding the duration of the activities. Thus, Well-Star Psycho-Education Program (WS-PEP) was created. The final content of the program is summarized in Table 2.

Table 2. Content of WS-PEP

Season	Issues	Purpose of Season
Season 1	Meeting, Introduction of WS-PEP, Evaluation of wellness level	To ensure that members get to know themselves in a physical, emotional, social and cognitive wellness as well as in terms of being able to make sense of life and become goal-oriented.
Season 2	Physical Wellness	To help members develop their skills of improving physical wellness (including exploring nutrition, playing sport and having regular check-ups) and to comprehend the relationship between physical and other aspects of wellness.
Season 3	Emotional Wellness	To help members develop skills of improving their emotional wellness (including expressing and controlling emotions, developing realistic beliefs and engaging in stress management.)
Season 4		
Season 5	Social Wellness	To help members develop skills for improving their own social wellness (including developing good relationships with family, friends and other individuals, improving on the capacity to express oneself and being aware of available sources of social support.)
Season 6		
Season 7	Cognitive Wellness	To help members develop skills for improving cognitive wellness (including fulfilling academic responsibilities, organizing leisure activities, remaining mentally active and improving time management skills.)
Season 8		
Season 9	Target-oriented and making sense of life Wellness	To help members develop skills for improving their wellness state of making sense of life and being goal-oriented (including considering the meaning of life, participating in art activities and recognizing the values they adopt when questioning the meaning of life)
Season 10	Evaluation of group process and termination	To encourage group members to maintain the life they lead in order that they can continue to improve their wellness after the group sessions have ended.

Determination of Subjects and Assignment to Groups: During the process of determining the students to participate in the experimental study, the information about the purpose of the research was verbally explained by the first author in the Faculty of Education, Science, Health Sciences and Pharmacy of Anadolu University and the scale set consisting of WSS, BSI and Personal Information Form was applied to the volunteer students. A total of 497 students were reached during the implementation of the scale set.

A separate file was created for the data of the students who indicated that they would voluntarily participate (149 students) in the experimental study with the group within the scale set, and this file was used to create the groups. For the gender distribution to be equal in the groups to be formed, the women and men were divided into two groups and sorted from the highest to the lowest according to the scores obtained from the WSS. First, pre-interviews were held starting from the students with the lowest score. Thirty-six students, who did not have a psychiatric diagnosis, did not use psychiatric medication, and did not have any conditions that could prevent them from attending group sessions, were determined. After the preliminary interview, the subjects were randomly assigned as 12 members in each of the experimental, placebo and control groups. Before starting the group studies, during pre-interviews, each member of both experimental and placebo groups was informed about the nature of group sessions, taught the basic principles of group Counseling and told that they were permitted to leave the study whenever they wanted to, with approval forms being provided. It was also recorded that this information had been shared with the members. Control group students were informed during pre-interviews that

information would be collected from them through scale sets and that they would be taken into the group study during the 2016-2017 spring academic term.

After the groups were formed, the scores they obtained from the scale sets that the group members completed in the course of identifying the subjects were accepted as pre-test and they were examined as to whether they were equal in terms of wellness and psychological symptoms. According to the Kruskal Wallis H Test, it was understood that the experiment, placebo and control groups did not show any significant difference in terms of total scores of wellness, scores of wellness dimensions, and scores of psychological symptoms.

Experimental Procedures: Ten sessions WS-PEP was applied to the experimental group. Psychological Counseling with group of 10 sessions was applied to the placebo group based on interpersonal interaction. For the control group, no procedure was performed during this 10-weeks period.

Post-Test Procedures: It is recommended to use non-parametric tests for data analysis when the number of participants is below 30 (Erkuş, 2009). For this reason, non-parametric tests were used in the analysis of the data to be collected because the experimental, placebo and control groups in the study would be composed of 12 students. In this frame of study, the Freidman Rank Test, Wilcoxon Signed-Rank Test, Kruskal Wallis H Test and Mann Whitney U Test were used. Besides these, descriptive statistics were used in the research. In addition, observed power values and effect size indices (Epsilon square and Kendall's W) were reported.

There was one subject loss in the experiment group, three in the placebo group and one in the control group in the experimental treatment process. For this reason, the data related to these students were excluded from the research. After removing these data from the study, pre-test scores were compared again to determine whether there was a difference between groups in terms of wellness and psychological symptom levels. As a result, it was also found that the experimental, placebo and control groups were equal in terms of wellness and psychological symptom levels before the experimental procedure.

After the experimental process, a focus group interview was conducted to gather quantitative information as well as information on how the students who participated in the experimental group viewed themselves in terms of wellness and how they benefited from the psycho-educational process. Six (3 females, 3 males) volunteer group members participated in this interview. Thus, by taking advantage of the in-depth knowledge about the research topic of the interview technique, attempts were made to obtain detailed information about the effect of the WS-PEP on the wellness levels of the students (Heppner, Wampold, & Kivlighan, 2008; Merriam, 2013; Seggie & Bayyurt, 2015). Qualitative data were analysed using content analysis method. Content analysis was carried out by the authors and common opinions were reached. Then, content analysis results were evaluated by a Counseling field expert in terms of the suitability of the themes and the final form of the analysis was given. The information obtained from these interviews was presented in the results.

Power Limitation

Power analysis was conducted with G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) to see the number of subjects necessary to obtain a statistical power of 0.80 at an alpha level of 0.05. It was seen that in order to reach a moderate effect size (i.e., partial eta squared of 0.06 or above; Huck, 2012) a total

of 90 subjects were required. As seen, the results of power analysis indicate that it is appropriate to conduct the research with at least 90 subjects. However, this study was conducted with 31 students due to the ideal number of members for psycho-educational groups being 10-15 (Brown, 2018), the requirement that students with low levels of well-being be selected as group members and subject losses in the experimental process.

RESULTS

Results Related to Wellness

Intragroup and intergroup comparisons were made in the 3x3 experimental design frame used in the research. In this context, the findings obtained from the intragroup and intergroup comparisons of the total wellness scores and the wellness subscale scores obtained by the WSS are summarized in Table 3.

Table 3. Findings related to the levels of wellness

INTRAGROUP	General W	Physical W	Emotional W	Social W	Cognitive W	TOML W
Experimental	NSD	NSD	NSD	NSD	NSD	NSD
Placebo	NSD	NSD	NSD	NSD	NSD	NSD
Control	NSD	Pre=Post<Fo	NSD	NSD	NSD	NSD
INTERGROUP						
Experimental-Placebo	NSD	NSD	NSD	NSD	NSD	NSD
Experimental-Control	NSD	Experimental post >Control post	NSD	NSD	NSD	NSD
Placebo-Control	NSD	-	NSD	NSD	NSD	NSD

W=Wellness, TOML= Target-oriented and making sense of life, Pre=Pre-test, Post= Post-test, Fo= follow up test, NSD=There is no significant difference.

According to the results of the Friedman Rank Test as seen in Table 3, regarding the experimental group, there was no significant difference among the general wellness ($x^2 = .61, p > .05$), physical wellness ($x^2 = 1.60, p > .05$), emotional wellness ($x^2 = 1.59, p > .05$), social wellness ($x^2 = 1.59, p > .05$), cognitive wellness ($x^2 = 1.59, p > .05$) and target-oriented and making sense of life wellness ($x^2 = 1.59, p > .05$) pre-test, post-test and follow-up test scores. At the same time, according to the analysis results, regarding the placebo group, there was no significant difference among the general wellness ($x^2 = .51, p > .05$), physical wellness ($x^2 = 1.69, p > .05$), emotional wellness ($x^2 = 1.88, p > .05$), social wellness ($x^2 = .19, p > .05$), cognitive wellness ($x^2 = 1.41, p > .05$) and target-oriented and making sense of life wellness ($x^2 = .42, p > .05$) pre-test, post-test and follow-up test scores. And, according to the analysis results, regarding the control group, there was no significant difference among the general wellness ($x^2 = 2.36, p > .05$), emotional wellness ($x^2 = 2.88, p > .05$), social wellness ($x^2 = 2.71, p > .05$), cognitive wellness ($x^2 = .81, p > .05$) and target-oriented and making sense of life wellness ($x^2 = 1.85, p > .05$) pre-test, post-test and follow-up test scores but there was a significant difference between the physical wellness pre-test, post-test and follow-up test scores of the control group ($x^2 = 8.27, p < .05$).

According to the results of the Wilcoxon Signed Ranks Test conducted to determine in which measures the difference between the physical wellness pre-test, post-test and follow-up test scores of the

control group was, there was no significant difference between the pre-test and post-test scores of the control group's physical wellness. ($z = 1.84, p > .05$). On the other hand, the control group's physical wellness pre-test and follow-up test ($z = 2.50, p < .05$) and post-test and follow-up test ($z = 2.05, p < .05$) scores were significantly different.

The post-test and follow-up test scores of the experimental, placebo and control groups at the group level were compared with each other. In this context, regarding the Kruskal Wallis H Test, there was no significant difference between the scores of the general wellness ($\chi^2 = 2.661, p < .05$), emotional wellness ($\chi^2 = .856, p < .05$), social wellness ($\chi^2 = 1.612, p < .05$), cognitive wellness ($\chi^2 = 1.245, p < .05$) and target-oriented and making sense of life wellness ($\chi^2 = .536, p < .05$) post-test. On the other hand, the post-test scores of the physical wellness of the groups differed significantly ($\chi^2 = 6.719, p < .05$). Man Whitney U test results were used to determine the difference between these groups, and the experimental and placebo groups ($U = 24, z = 1.963, p > .05$), and placebo and control groups ($U = 42, z = .582, p > .05$) were not significantly different in terms of physical wellness post-test scores. On the other hand, when the post-test scores of the experimental and control groups were compared, there was a significant difference between these scores ($U = 25, z = 2.351, p < .05$). When the averages of the ranks were examined, it was seen that the physical wellness post-test score (14.73) of the experimental group was higher than the physical wellness post-test score of the control group (8.27).

According to the Kruskal Wallis H Test performed for comparison of the follow-up test scores of the experimental, placebo and control groups, there was no significant difference in terms of the scores of the general wellness ($\chi^2 = 1.588, p > .05$), physical wellness ($\chi^2 = 3.243, p > .05$), emotional wellness ($\chi^2 = .408, p > .05$), social wellness ($\chi^2 = 1.001, p > .05$), cognitive wellness ($\chi^2 = 1.596, p > .05$) and target-oriented and making sense of life wellness ($\chi^2 = .696, p > .05$) post-test. Results of focus group interview.

In the focus group interview, information was gathered on how the students benefited from the WS-PEP to improve their wellness levels. Two main themes have emerged in the framework of this information: "wellness behaviour" and "therapeutic conditions". Sub-themes were created under these two main themes. In this context, the main theme of wellness behaviours is based on the sub-dimensions of the WSM and it is assessed how the students acquire skills in order to improve their physical, emotional, social, cognitive and target-oriented and making sense of life wellness levels.

Wellness Behaviour

According to the findings obtained from the focus group interview, the students believed that improved their behaviour in terms of physical wellness, eating regularly, doing sports regularly and sleep patterns. In emotional wellness, students have gained the ability to empathize, motivate themselves for putting into practice the plans they postponed, recognize their emotions, express their feelings, control their emotions and change their unrealistic thoughts. In terms of social wellness, students have developed skills such as improving friendship relationships, empathizing and adapting to new social environments. In terms of cognitive wellness, students have learned to manage their own strengths and weaknesses, acquire behaviors such as self-management, participating in the activities that they enjoy but they have mental difficulties, ensuring developments academically as a result of their increased interest in their lessons. Lastly, in terms of understanding target-oriented and making sense of life wellness, students stated that they tend towards artistic activities they liked like poetry and music.

Given these findings, the opinion of the students was that they were improving their wellness levels in all wellness dimensions. In this regard, students stated that they were engaging in conscious behaviors such as doing physical exercises, thinking about their emotions, trying to understand and improve their relationships with others, attending courses to enhance their academic skills, and being involved in arts such as poetry and music to maintain and improve their wellness levels.

Therapeutic Conditions

In the study, information about the effect of the WSPEP on the wellness of university students was also obtained through a focus group interview. In the focus group interview, the students also provided information on therapeutic conditions as to how they benefited from the group process in order to improve their wellness. Within this framework, under the main theme of the therapeutic conditions, self-awareness, gaining different perspectives, trusting others and accepting them were established. If these themes are to be explained briefly; the students said that they realized the aspects they did not notice until now, that they developed new perspectives from the sharing of the other group members, they accepted that their own shares were being heard by the other members and that they were accepted because they were not judged by other members and they developed confidence in the other members. Given these findings, therapeutic conditions such as trust, acceptance, self-knowledge, and awareness have been established throughout the implementation of the group program. In this context, it can also be said that students think that these conditions contribute to the improvement of their wellness levels.

Results Related to The Psychological Symptom

In addition to the level of wellness in the research, the effects of WS-PEP on psychological symptom levels of university students were also examined. In this context, findings obtained from intra-group and inter-group comparisons of psychological symptom scores obtained with BSI are summarized in Table 4.

Table 4. Findings related to psychological symptoms

INTRAGROUP	Psychological Symptoms
Experiment	Pre-test > Post-test = follow-up test
Placebo	NSD
Control	NSD
INTERGROUP	
Experiment -Placebo	NSD
Experiment -Control	Experimental post-test < Control post-test Experimental follow-up test < Control follow-up test
Placebo-Control	Placebo follow-up test < Control follow-up test

NSD = There is no significant difference.

When Table 4 is viewed, it is seen that there are some differences in psychological symptom levels as a result of intra-group and inter-group comparison. According to this, Friedman Ranks Test results showed that there was a significant difference between pre-test, post-test and follow-up test scores of the psychological symptom level of the experiment group students ($\chi^2 = 11.49$, $p < .05$, Kendall's $W = 0.61$). According to the results of Wilcoxon Signed Ranks Test, which is used to determine the difference between these measurements, the post-test scores of the experimental group students ($z = 2.847$, $p < .05$) and follow-up test scores ($z = 2.845$, $p < .05$) seem to be significantly lower than the pre-test scores. There was no significant difference between post-test and follow-up test scores ($z = .877$, $p > .05$). In addition,

there was no significant difference between the general symptom level pre-test, post-test and follow-up test scores of students in placebo ($x^2 = .889, p > .05$) and control group ($x^2 = .605, p > .05$).

According to the Kruskal Wallis H test results in the context of the group comparison of psychological symptom levels, the psychological symptom level post-test scores ($x^2 = 6.969, p < .05, \epsilon^2 = 0.23$) of the experimental, placebo and control groups were significantly different from each other. According to Man Whitney U Test results, there was no significant difference between the general psychological symptom post-test scores of the experiment and placebo groups ($z = .608, p > .05$). A significant difference was found between the psychological symptom post-test scores of the experimental and control groups ($z = 2.992, p < .05$). Accordingly, when the average of the groups was examined, it was seen that the students of the experimental group (7.95) had psychological symptom levels significantly lower than control group students (15.05) at the end of the experimental process. When the psychological symptom level post-test scores ($z = 1.749, p > .05$) of the placebo and control group students were examined, it was found that these students did not significantly differ in the psychological symptom levels at the end of the experimental process.

It was found that the scores of psychological symptom level follow-up test ($x^2 = 10.675, p < .05, \epsilon^2 = 0.36$) in experimental, placebo and control groups were different according to the results of Kruskal Wallis H Test. According to the Man Whitney U Test results for determining which groups this difference is between, there was no significant difference between the psychological symptom follow-up test scores of the experimental and placebo groups ($z = 1.709, p > .05$). A significant difference was found between the psychological symptom follow-up test scores of the experimental and control groups ($z = 2.922, p < .05$). Accordingly, when the average of the groups was examined, it was found that the psychological symptom levels of the experimental group (7.45) after 10 weeks from the experimental process were significantly lower than the psychological symptom levels of the control group (15.55). When the psychological symptom level follow-up test scores of the placebo and control group was examined ($z = 2.922, p < .05$), it was seen that the psychological symptom levels of these groups after 10 weeks from the experimental process were significantly different. In this context, the psychological symptom follow-up test scores of the placebo group (7.44) were significantly lower than the psychological symptom follow-up test scores of the control group (13.00).

DISCUSSION, CONCLUSION & SUGGESTIONS

According to the findings of the study, the level of wellness of the students in the experimental group increased in comparison with the placebo and control groups in terms of pre-test, post-test and follow-up test scores between themselves and in the inter-group comparison. However, it seems that this increase is not statically significant. The pre-test, post-test and follow-up test scores of the experimental, placebo and control groups were found to be not significantly different from the control group except for physical wellness scores. In this context, according to the quantitative findings of the research, it is shown that the WS-PEP is not effective in increasing the wellness levels of the university students.

There are some studies that show that wellness programs are effective in increasing wellness in general, though not in terms of all aspects of wellness (e.g. Askegaard, 2000; Christianson, et. al., 2018; Fullen, 2016; Oğuz-Duran, 2006; Stalnaker-Shofner & Manyam, 2014). However, quantitative findings of this study show that there is not a significant difference in terms of improvement of the wellness of university students by the wellness program. When the findings of the study were viewed, it was observed

that the experimental group had some increase in the level of wellness, but this increase was not significant. This can be attributed to the fact that some of the students in the experimental group showed a significant increase in the level of wellness and some showed a slight increase or decrease. Therefore, some students may benefit less and some students may benefit more from WS-PEP in terms of improvement in the context of the specificity of wellness. This may be due to the fact that wellness is unique to every individual (Corbin, Lindsey, & Welk, 2000). In other words, the individuality of wellness may result in different variations in students participating in the same program.

The effectiveness of WS-PEP on the wellness of university students was examined through focus group interview. Findings from the focus group interview show that students believed they have new skills in recognizing their feelings, expressing their emotions, controlling their emotions, empathizing, developing friendship relations, performing mental activities, realizing their strengths and weaknesses, regular nutrition, sleeping and doing sports. Moreover, students expressed that they mostly used the Emotions Prohibited, Tangram, Self-management and ABC Model activities in WS-PEP about how they have acquired these new skills. In conclusion, it can be said findings from focus group interviews have shown that WS-PEP is effective in gaining new skills and thus improving levels of wellness for students.

Considering the new gains of the students in improving the wellness levels with the findings from the focus group interview, the content of the WS-PEP seems to meet the needs of the university students in terms of improving their wellness. In this context, if the content of WS-PEP is viewed, it is seen that the program focuses on (1) the nutrition, sport and health promoting behaviours for the improvement of the physical wellness (regular health checks, alcohol and tobacco use, etc.), (2) on the awareness of emotions and relationships between feelings, thoughts and behaviours for the improvement of emotional wellness, (3) on social relationships network and social awareness, providing social support and receiving social support for the improvement of social wellness, (4) on being mentally active and time/self-management for the improvement of cognitive wellness, and (5) on the recognition and improvement of adopted values for understanding the target-oriented and making sense of life wellness. Therefore, it can be stated that university students have various needs in terms of improving themselves in terms of all wellness areas and that they have improved their level of wellness when appropriate environments are provided for meeting these needs.

According to the findings of the research, it has been revealed that there is no placebo effect in increasing the wellness levels of university students. This finding is similar to the findings of another researcher in the literature (Özü, 2010). Therefore, it can be said that there is a need for structured psycho-education or group Counseling programs to increase the level of wellness of university students.

When the pre-test, post-test and follow-up test scores of the control group were compared, it was found that there was no significant difference in terms of wellness regarding general, emotional, social, cognitive and target-oriented and making sense of life sub-dimensions. On the other hand, there was no significant difference in terms of the physical wellness pre-test and post-test scores of the control group, but the follow-up test scores were found to be significantly higher the pre-test and post-test scores. Thus, this finding, which is contrary to other research findings in the literature (Oğuz-Duran, 2006; Chappelle et. al., 2000; Özü, 2010), can be considered that in the 10-week period after the end of the experimental process in the research period, the physical wellness levels of the control group students changed due to environmental variables that could not be controlled in the study and /or maturation.

In this context, it is suggested that as a maturation effect, the level of importance and motivation of the control group students in relation to regular nutrition and sports is increased and environmental influences may be due to the fact that the spring is approaching and the weather is getting hotter, and the students may have been able to regulate these habits with the influence of the social circle, especially by increasing the sports activities in the natural environment and establishing friendships with people who have regular eating and sports habits.

There was no significant difference between the physical wellness pre-test and post-test scores of the control group students and when the physical wellness post-test scores of the experimental and control group students were compared, the physical wellness levels of the experimental group were found to be significantly higher than the control group students. However, since the control group students showed an increase in maturity and/or uncontrollable environmental effects at week 10 following the end of the experimental program, the change in favour of the experimental group students in terms of post-test scores was not observed in terms of follow-up test scores. Therefore, it can be said that WS-PEP is effective in increasing the physical wellness levels of university students when there is no change according to maturation and/or environmental factors.

In summary, although quantitative research shows that WS-PEP is not effective in improving the wellness of university students, qualitative findings obtained from the students of the experiment group by focus group interviews indicate that WS-PEP can be effective in improving the wellness levels of university students. As a result, when all the findings of the research are considered together, it can be said that WS-PEP can meet the needs of university students to improve their wellness levels and increase their wellness levels.

When the findings of the pre-test, post-test and follow-up test scores in the experimental, placebo and control groups were compared in terms of psychological symptom levels, the psychological symptom levels of the experimental group students at the end of the experiment and at the 10th week after the experiment were significantly lower than before the experiment. In addition, both the placebo and control group students' psychological symptom levels at the end of the experiment and at the 10th week after the experiment did not show a significant change compared to the psychological symptom levels before the experiment.

When the results of the study were examined, it was found that there was no significant difference between the post-test and follow-up test scores of the experimental and placebo group students. There is, however, a significant difference between the follow-up test scores of the control group and the placebo group. On the other hand, it was found that there was a difference between the post-test and follow-up test scores of the students in the experimental and control groups in favour of the experimental group as expected. According to these findings, it was seen that the psychological symptom levels of the experimental group students at the end of the experiment and at the 10th week after the experiment were significantly lower than the psychological symptom levels of the control group students. Also, the psychological symptom levels of the placebo group students at the 10th week after the experiment were significantly lower than the psychological symptom levels of the control group students.

When all the findings related to the psychological symptoms are taken into account, it can be said that WS-PEP is effective in lowering psychological symptom levels of university students and this effect lasts for 10 weeks. Because the WS-PEP is a psycho-education program based on the improvement of

wellness, the effect of reducing the psychological symptom levels of the program can be considered as an indirect effect based on the improvement of wellness. How this indirect effect emerged can be explained by the content of WS-PEP. In this context, activities and shares in group sessions to recognize and express emotions in order to improve the level of emotional wellness of students may have contributed to the reduction of psychological symptoms especially related to emotions. As a matter of fact, it is stated that the psychological symptom levels of individuals with a high level of alexithymia, which is explained as emotions and expressed as a strong, are also high (Durak-Batıgün & Büyükaşahin, 2008).

It was tried to increase the level of utilization of the social support resources of the students in WS-PEP. In this context, it can be said that social support may also be effective in reducing psychological symptoms in terms of stress (Cohen, Sherrod, & Clark, 1986), post-traumatic stress disorder (Feder et.al., 2013), suicidal tendency (Kleiman & Liu, 2013), prevention effect in coping with psychological problems (Cohen, 2004). Study findings showing that there is a negative relation between social support and psychological symptoms and, family support are negatively predicted depression, anxiety and anger/aggression symptoms (Doğan, 2008) also support our findings. In this context, it can be said that the social support activities applied to improve wellness in WS-PEP are effective in reducing psychological symptom levels.

Within the framework of the improvement of physical wellness, in WS-PEP, it was tried to make students gain habits to overcome these obstacles and improve their physical wellness levels by recognizing the obstacles they set against themselves providing nutrition, sports and sleeping order (Hall, 2015). Regular nutrition (Republic of Turkey Ministry of Health, 2016) and sports (Hall, 2015) are important factors for health promotion and improvement. In this context, it can be thought that regular nutrition and sports are useful for psychological health as well as physical health. Indeed, research findings that malnutrition leads to physical disturbances and reduces the morale of the patients in terms of healing (Soeters, et. al. 2017; Stenvinkel et al., 1999) and findings showing that regular physical activity increases quality of life (Genç et al., 2011; Vatansever et al., 2015) also suggest that regular nutrition and physical activity are important in terms of improving mental health.

For the improvement of cognitive wellness, WS-PEP includes content to help students become mentally active in their own lives and to identify their weaknesses and strengths, especially in time/self-management. In the focus group interview, the students stated that they developed problem solving skills. Psychological symptom levels decrease when university students increase their confidence in problem solving skills (Başa, 2011). In this context, it can be considered that the fact that the students of the experimental group developed problem solving skills that was effective in reducing the psychological symptom levels. There is also content in the program about how to make sense of life and improve being target-oriented, and to understand what the meanings of these values in their lives are. Spiritual wellness in the frame of the meaning of life and purpose are the negative predictors of depression, which is among the psychological symptoms, at a significant level (Briggs & Shofner, 2006; Graybill & Esquivel, 2012). From here it can be said that the students' awareness of the meanings and values of their lives helped to reduce the psychological symptom.

Significant differences between the scores of the post-test and follow-up test of the experimental and placebo groups students indicate that there may be a placebo effect in reducing psychological

symptom. However, the lack of significant differences between the pre-test, post-test, and follow-up test scores of the placebo group students suggests that the possible placebo effect may be a limited effect. A study in the field shows that there is no placebo effect in reducing psychological symptom (Akdoğan, 2012). In addition, the pre-test scores of post-test and follow-up test scores of the experimental group were significantly lower, indicating that WS-PEP is more effective than the placebo effect in reducing the psychological symptom of university students. The fact that the follow-up test scores of the placebo group students are significantly lower than the follow-up test scores of the control group students indicates that there is a change in the psychological symptom levels of these two group students after the experiment. It may be thought that this change is due to personal or environmental factors that cannot be controlled in the post-test period, rather than the placebo effect, since the change developed in the period after the experiment process has been completed, without any intervention in the group members.

According to the quantitative findings of the research, it is shown that the WS-PEP is not effective in increasing the wellness levels of the university students. On the other hand, qualitative findings of the research showed that students in experimental group believed they improved their wellness level and gained new skills such as recognizing their feelings, expressing their feelings, controlling their feelings, empathizing, developing friendship relations, being in mental activities, realizing their strengths and weaknesses, regular nutrition, sleeping and doing sports. Therefore, while effects of the WS-PEP on wellness investigate it will be useful to use qualitative methods. Furthermore, some findings of the research indicate that there is a placebo effect in reducing psychological symptoms, but this effect appears to be limited. In this respect, it can be said that WS-PEP is effective in reducing psychological symptoms.

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ARK, Research idea and design, literature review, data collection and analysis, interpretation of findings and writing of the manuscript.

AAC, Research idea and design, interpretation of findings, final review of the research report, supervise the first author in all processes of the research.

Conflict of Interest

It has been declared by the authors that there is no conflict of interest.

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Ethical Statement

This research was completed in line with the Helsinki Declaration. In line with this, the study was investigated and permitted by Anadolu University Scientific Research and Ethical Review Board. Additionally, data tools in the study were only distributed to volunteer participants. All participants provided informed consent. Additionally, participants were informed that they could withdraw from the study at any time during data collection.

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