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The Effect of Counseling on Anxiety Level from the Perspective of Ecological Systems Theory: A Quasi-experimental Pre-test - Post-test Control Group Study

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ABSTRACT

In this study, we aimed to examine how counseling service provided to college students, through a contextual clinical counseling model, affects the anxiety level of college students at a university in the east of Turkey. We followed a quasi-experimental with pretest-posttest and with control group design method. The experimental group comprised 205 and the control group comprised 75 college students. Seven supervisors with Ph.D. or MD degree in mental health professions provided weekly supervision to 120 counselors-in-training who provided individual counseling services to the participants. Each client in the experimental group received in average five sessions, each for 45-55 minutes. We have used an adapted version of Beck Anxiety Inventory for Turkey to examine the clients' anxiety levels. Throughout the counseling process, we have collaborated with the psychiatry department at the university when it was necessary. Additionally, in order to conduct the complex quasi-experimental study in a smooth process, we utilized the contextual clinical counseling model developed by the first author; as such models are utilized in some of the best counseling departments in the USA. The model facilitated to conduct the complex and dynamic research and providing the services with limited resources. That means optimized the resources through the model and got significant results. As a result, receiving counseling service seems significantly decreasing anxiety level for this sample. The current study meets some important gaps in mental health. We discussed the findings from an ecological systems theory perspective and suggested some implications in mental health.

Keywords:[1]
Counseling, anxiety, college, ecological systems theory, wellbeing

1. Introduction

College students spend an important part of their life time at college while getting a degree for their professional life. It is a critical period because they meet new cultures, gain individual independence, develop personal, social and emotional well-being, and experience biopsychosocial spiritual and economic changes. They are then in a transition period from adolescence to young adulthood, which may also lead to a separation from family and the necessity to balance their economic resources and needs. Uncertainties about the future, stress and problems in interpersonal relationships may cause mental health disorders such as anxiety and depression (Arslan, Mergen, Mergen Erdoğmuş, Arslan, & Ayyıldız, 2016; Deniz & Sümer, 2010; Günay et al., 2008, Özhan & Boyacı, 2018; Tanhan, 2020; Yılmaz & Ocakçı, 2010).

Moreover, the Ecological Systems Theory (EST) examines a person from a contextual perspective that is need in mental health (Arslan & Tanhan, 2019; Bostan & Duru, 2019; Eslek & Irmak, 2018; Kaynakçı & Mesutoğlu,

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2018; Tanhan, 2019). In addition to having significant effects on human psychology, contextual factors also have an impact on the process and outcome of mental health services (Brofenbrenner, 1977; Doyumğaç, Tanhan, & Kıymaz, 2020; Fikry et al., 2020; Tanhan, 2019; Tanhan & Francisco, 2019). In their study, Tanhan and Francisco (2019) and Tanhan (2020) argue that they have improved their clients' quality of life in different dimensions (e.g., individual, family, group, community) using the EST. Likewise, contextual conditions can reduce or increase the impact of mental health services (Arslan & Çoşkun, 2020; Arslan, Yıldırım, Tanhan, Buluş, & Allen, 2020) Tanhan & Strack, 2020). In other words, the impact of a psychological counselling service in a context where there are no major crises in social life may not be very visible, but the same service can be very effective in the contexts of major crises (e.g. earthquakes, economic crisis).

Major crises can appear as psychological symptoms, such as anxiety and depression. Anxiety is a condition that results in physical reactions such as chest tightness, heart palpitations, tremor, headache, or sweating caused by emotions of fear, anxiety and stress arising from an individual's feeling of being threatened in various situations (Günay et al., 2008; Tekin & Tekin, 2014; Türkçapar, 2004; Yılmaz & Ocakçı, 2010). DSM-5 (American Psychiatric Association, 2013) collected the types of anxiety under 12 headings, namely, separation anxiety disorder, selective mutism, specific phobia, social anxiety disorder (also called social phobia), panic disorder, predictors of panic attack, agoraphobia, generalized anxiety disorder, substance/medication-induced anxiety disorder, anxiety disorder due to another medical condition, defined anxiety disorder and undefined anxiety disorder.

Recent research (Dilbaz, 2000; Gazelle & Rubin, 2019; Koçak & Ertuğrul, 2012; Nelemans et al, 2019; Sevinçok, 2007; Spence & Rapee, 2016; Van Oudenhove et al., 2016) has been based on epigenetics, genetics and effects of the ecological factors interacting with these two on anxiety. In scientific studies, environmental and genetic factors have been found to be effective at different rates. For example, the effect of genetic factors in different anxiety disorders varies between 25-60% (McGrath, Weill, Robinson, MacRae & Smoller, 2012). On the other hand, genetic factors for panic disorder, for which the effect of heredity is considered the highest, account for generally between 3% and 48% (Öztürk & Uluşahin, 2014), while familial genetic effect is found to be 30-40% in generalized anxiety disorder (Fisher, 2007).

Anxiety disorders usually begin at an early age. The riskiest period for emergence is between 10-25 years. Symptoms occur before the age of 35 in 80-90% of the cases (Öztürk & Uluşahin, 2014). For university students, this is a very important period, when levels and symptoms of anxiety are observed to be high. For instance, in a study conducted by Deniz and Sümer (2010), the anxiety levels of students were found to be 35%.

While reviewing the literature, a limited number of studies were found having effect of various therapy interventions on the anxiety level of individuals. The most commonly used psychotherapy methods are cognitive behavioural therapy, group therapy, and behavioural therapy (Üneri, Yıldırım, Tanıdır, & Aytemiz, 2016). In addition, Demir and Yıldırım (2017) found that the art therapy program in young adults had a significant positive effect on mental disorders as well as anxiety and depression levels. Another experimental study investigated the effect of mindfulness-based cognitive therapy Program on anxiety levels of university students. The results of the study showed that the applied therapy model significantly reduces the anxiety levels of university students (Demir & Yıldırım, 2017; Demir, 2017). Therapy programs applied in similar studies have been helpful in reducing anxiety levels in individuals (Saatçioğlu, 2001; Tanhan, 2019; Tekinsav-Sütçü & Sorias, 2010). A few researchers recommended utilizing Acceptance and Commitment Therapy (ACT) with people in Turkey (Tanhan, 2019; Tanhan et al., 2020) and especially college students in Turkey (Uğur, Kaya, & Tanhan, 2020).

There are two important aims of the current study. First, we aimed to apply and test the contextual clinical counseling model, which was developed by the first author, to see how it is effective considering limited resources in the context of Turkey. Our second purpose was to examine the effect of psychological counselling services given under supervision that consist of five sessions in average on the anxiety levels of the clients who applied to the psychological counselling unit at the university where the study was carried out. The procedures explained in details in the following sections (e.g., utilizing counselors-in-training,

supervision, matching clients and counselors) are steps of the proposed contextual clinical counseling model for Turkey.

2. Method

A pre-test and post-test (2x2) design with a quasi-experimental control group was utilized to examine the effects of individual counselling service on the college students' anxiety.

2.1. Participants

The universe of this research is composed of 350 clients studying at a university in the east of Turkey and who applied to the counseling department at the university to receive individual counseling service. The sample of the study consisted of 300 clients who voluntarily agreed to participate in the study. For the research, the pre-tests and post-tests were given to the clients, and the total number of 280 clients who completed them formed the final number of participants. The participants were studying at 20 different departments at the university. The main demographic information about the participants included the following: The experimental group consisted of 205 students (104 females and 101 males). Of these, 140 participants were studying in the fourth (final) year of the university, while the remaining were studying in the first, second and third years of university. In the control group, there were 75 students (55 females and 20 males) who did not receive psychological counselling; and 30 of them stated that they were in the fourth (last) year of university while the remaining stated that they were studying in the first, second and third years of university. In this study, 110 CPCs, who were in the last year of the Department of PCG, provided psychological counselling service. In this process, seven supervisors with Ph.D. or MD degree in mental health professions provided weekly supervision to 120 counselors-in-training who provided individual counseling services to the participants.

2.2. Ethical Approval Prior to Implementation

Participants were given a consent form and written information about the research. In addition, all persons, units and institutions participating in the process as counselors-in-training and supervisors, etc. were informed besides obtaining application and research approvals. Both at the beginning of the research and during the process, it was emphasized that participation in the research was on a voluntary basis and ethical rules were regularly mentioned.

2.3. Measures

In this study, the Beck Anxiety Scale was used to measure the anxiety level, and a demographic form was used to obtain information about the participants (e.g., gender, year, department of study).

2.4. Beck anxiety scale. The measure was developed by Epstein, Brown and Steer (1988) in order to determine the frequency and intensity of anxiety symptoms of individuals. Ulusoy, Şahin and Erkmen (1998) confirmed the validity and reliability of the Turkish version of the scale. The scale consists of 21 items, and each item has a score of 0-3, and the highest score one can get from the instruments is 63. The score of 0-7 indicates minimal, 8-15 mild, 16-25 moderate, while 26-63 indicates high level of anxiety. The high total score indicates the intensity of anxiety experienced by the individual. Cronbach's alpha internal consistency score is 0.93 (Ulusoy et al., 1998). Cronbach Alpha reliability scores obtained in the present study were 0.96 for the pre-test and 0.94 for the post-test. Since the number of people in the control group was small, the values were calculated together for the experimental and control groups.

2.5. Experimental and Control Groups

The applicants were able to apply to the counseling department for the counselling service and they were informed about the research, service, counseling process, and the proposed contextual clinical counseling model. Normally, we started providing the service to those who applied earlier. However, the clients who applied and yet were in risk (e.g., clients who were suicidal or had self-mutilating behaviour, or those in severe cases of crisis for some other reasons, or similar emergencies) whether we recognized through pre-tests or the clients verbally expressed were matched with a counselor-in-training regardless of the client's order of application. We did not put these clients in the waiting list meaning in the control group. The main reason for giving priority to these clients and not including them in the control group was that it would not be ethical to keep them waiting.

The practice continued during one school semester, during which the control group received five sessions (45-55 minutes each) of psychological counselling service with an average of one- or two-weeks intervals. The sessions were held utilizing the university counseling center. By the end of the term, 75 clients had not yet received the counselling service, forming the control group in the study. The clients in the control group were informed that they could receive psychological counselling during the break or the next term. Whether these clients later benefited from this service was not followed because it was beyond the scope of this study.

In addition, we worked in coordination with the department of psychiatry at the university from the beginning of the research design process, and in particular, a psychiatrist visited the unit on certain days to follow the study. During this process, approximately 28 clients, who were suicidal or who could not make good use of psychological counselling sessions because of their high level of anxiety, were referred to the psychiatrist. Taking the psychological counselling service into account, the psychiatrist implemented an appropriate treatment plan, talked to the clients about the psychological counselling service and encouraged them to continue receiving the service.

2.6. Counselling Sessions

The first researcher explained the proposed contextual clinical model to the counsellors-in-training that means how services, research, matching client and counselors, counselors' role, counseling department's faculty role, supervision process etc. are working and flowing. Following that, the first researcher matched each client with a counselor based on some principles (e.g., not being familiar, not living at the same addresses, clients' preferences to see a male or female counselor). The seven supervisors gave theoretical courses to the counselors in their own group for two to three weeks on psychological counselling practices (e.g., theories, basic skills, content-emotion reflection, goal-setting). Each candidate then called his/her own client on the phone to make an appointment for the appropriate time and room in the university counselling center. Each client was interviewed for an average of five sessions (each session consisted of 45-55 minutes). The first session usually included informing the client about the process and the explanation of the client about the reason for applying to the unit. Based on the client's voluntariness, the candidate psychological counsellors recorded each session on video or audio, and shared it with the supervisor. Accordingly, each counsellor received feedback from his supervisor on his/her session and prepared for the next session.

2.6.1. Supervision Process

Supervision process was carried out by the seven supervisors. The counsellors were equally distributed to these seven supervisors, and supervisors regularly interviewed with the candidate counsellors individually or in groups after each session. Different approaches (transcripts, groups, summary forms) were used in the supervision process, though not very different from each other. The most important common feature of the supervisors is that they emphasized the importance of the counselors following a person centered approach (e.g., reflections of feelings, content, giving space to the clients, facilitate the process so that the clients decide in the process). Weekly supervision was provided to the counselors for each of their clients during the entire counselling session.

2.7. Data Collection

An ID number was assigned to each client by the unit to compare the anxiety scores of the clients and to keep the identity of the clients confidential. That number was generated from ordinary numbers (between 500 and 1000), which were in no way associated with them, and the clients used this ID number instead of their full name when filling the pre-test and post-test. The pre-test and post-test links were completed by the clients in three different ways: (1) requesting the center to send the link as an email or message to their phone, and thus answering the scale from their personal electronic device; (2) filling the scale by clicking on the link on the desktop of one of the three computers set aside with internet connection in the unit for the purposes of the research; (3) finally, filling out printed forms at the center or taking it home to fill and return them at an appropriate time. Most clients chose to complete the form on the computers at the unit, while others completed the paper form. Pre-test scores were collected before the first session. Post-test scores were collected for 15 days after the last session. The responses of the clients who had used the paper form were recorded into the electronic system as they arrived the unit so that the answers did not get lost.

2.8. Data Analysis

Whether or not the data was filled in completely was checked, and the data of the clients who did not complete the pre-test and post-test were excluded from the study. The subsequent analysis process was carried out in two stages. Firstly, the assumptions regarding loss and extreme values and analyses were examined. By means of the frequency values of the variables, the data set was cleared of incorrect and missing data. In order to examine the extreme values, the pre-test and post-test scores of the clients were converted to z values. The values were found to be within the range of ± 3.19 and acceptable (Tabachnick & Fidell, 2007). The normality hypothesis was tested via the Kolmogorov-Smirnov test. Finally, descriptive statistics regarding pre-test and post-test scores were examined. In the next stage, covariance analysis (ANCOVA) was performed to test the effectiveness of the counselling service on anxiety scores, provided that assumptions were met.

3. Results

In this study, the change in anxiety symptoms of the clients after taking the counselling service was investigated. ANCOVA was used to detect the differences in response variables. Assumptions were examined before proceeding with the analysis process. Firstly, it was examined whether the measures relating to anxiety variable showed normal distribution for the pre-test and post-test scores of the experimental and control groups. The results of the analysis conducted on the assumption of normality are given in Table 1.

Table 1. *The Results on the Assumption of Normality*

		Kolmogorov-Smirnov			Shapiro-Wilk		
Anxiety	Group	*Z*	*SD*	*p*	*Z*	*SD*	*p*
Pre-test	Experimental	.136	165	.000	.915	165	.000
	Control	.260	73	.000	.820	73	.000
Post-test	Experimental	.286	165	.000	.649	165	.000
	Control	.268	73	.000	.800	73	.000

The findings about normality showed that Kolmogorov-Smirnov z values of experimental and control group pre-test and post-test scores were significant at .05 level. These results showed that the anxiety pre-test and post-test scores of the experimental and control groups did not meet the assumption of normality. Although one of the important assumptions about the analyses was normality, Green, Salkind and Akey (2000) stated that if the number of participants is 15 and above, the assumption of normality can be ignored and the analysis process can be continued. Participants' pre-test scores for the control and experimental groups were included in the analysis as covariate variable. Considering the number of participants in the study groups, the analysis process continued. A linear regression slope and variance equation are important assumptions about covariance analysis (Tabachnick & Fidell, 2007). The results of the regression slope and variance equation showed that the p-values were not statistically significant, thus the slope of the regression lines (F 1-138 = 3.452, p= .065) and the assumptions of variance equation were met (Levene F 1-140 = .533, p= .467). After testing the necessary assumptions, covariance analysis process was initiated.

Table 2. *ANCOVA Results for Repeated Measurements*

Source	Sum of Squares	*SD*	Mean of Squares	*F*	*p*	η^2
Model	2995.702	1	2995.702	42.361	.000**	.234
Anxiety	1172.688	1	1172.688	16.583	.000**	.107
Group	1379.211	1	1379.211	19.503	.000**	.123
Error	9829.790	139	70.718			
Total	22590.000	142				

***p*<.001

Table 2 shows the findings related to covariance analysis. The results of the analysis showed that the process used for anxiety symptoms of the participants in the experimental group receiving psychological counselling service had a significant effect (F 1-139 = 19.503, p= .000). Furthermore, it was found that there was a significant decrease after the procedure in the anxiety symptoms of the individuals who were in the experimental group, that is, those who received psychological counselling. Additionally, post-test mean scores of the experimental group were significantly lower than the participants in the untreated control group (see Table 3). These results suggest that the psychological counselling service creates a significant differentiation on the anxiety symptoms of the clients. In addition, the results of the analysis showed that being in the experimental group or in the control group accounted for 12% (η2= .123) of the variability in anxiety post-test score. According to Cohen (1988; 2013), this value indicates a moderate effect size.

Descriptive statistics showed that the mean anxiety score in the experimental group was 20.279 for the pre-test and 7.468 for the post-test. On the other hand, the mean pre-test anxiety score for the control group was found to be 9.451 and the mean score for the post-test was 13.193. The adjusted mean post-test scores for anxiety level were 6.992 for the experimental group and 14.899 for the control group. Figure 1 shows the line graph for the change of anxiety based on pre-test and post-test scores of the experimental and control groups.

Table 3. *Descriptive Statistics of Experimental and Control Groups*

	Pre-test		Post-test		Adjusted Mean
Group		*SD*		*SD*	
Experimental	20.279	15.420	7.468	9.052	6.992
Control	9.451	9.545	13.193	8.142	14.899

Figure 1 shows that the pre-treatment anxiety symptom level of the participants in the experimental group receiving psychological counselling decreased significantly after the treatment. When the control group is examined, the mean scores of pre-treatment anxiety levels do not seem to decrease significantly and tend to increase after the treatment. These results show that the psychological counselling service is effective in reducing anxiety symptoms.

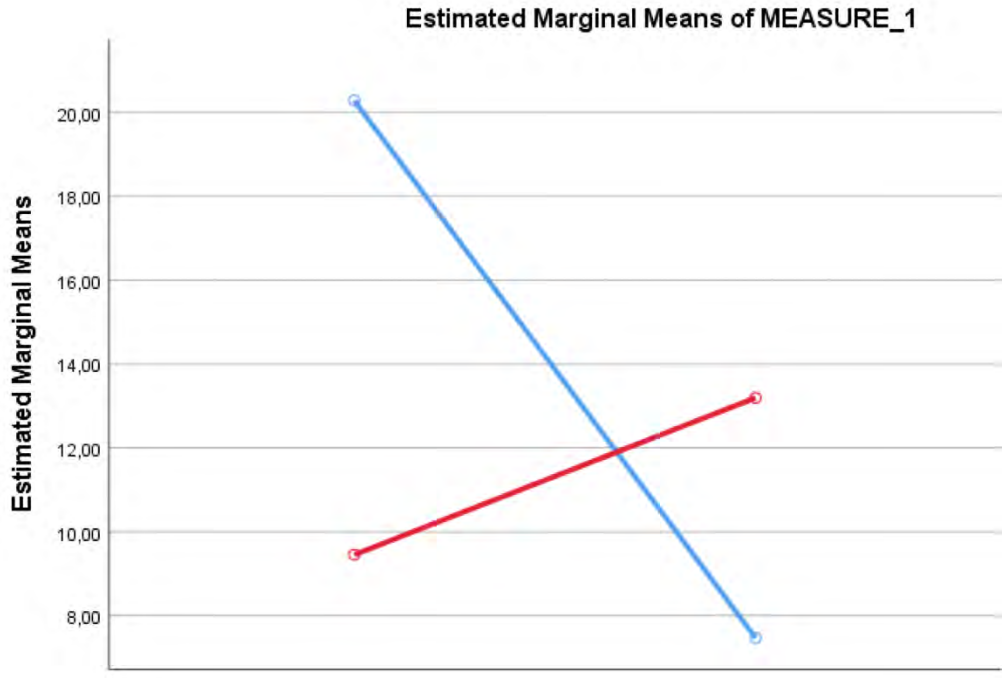

Figure 1. Variations in the Mean Pre-test and Post-test Scores on Anxiety Levels: Red line represents the control group and the blue line represents the experimental group.

4. Discussion

College students in Turkey experience mental health issues (Altun, 2020; Doyumğaç et al., 2020; Tanhan, 2020; Tanhan et al., 2020; Uğur et., 2020). Therefore, mental health professionals should collaborate from a comprehensive perspective to understand the students from a psychopathology and positive psychology perspective. According to the results of our study, the individual psychological counselling reduces the anxiety levels of the clients and related literature supports our study. The literature shows that there are almost no studies conducted with similar quasi-experimental pre-test and post-test control groups among university students. For example, a study by Demir and Yıldırım (2017) consisted of eight sessions including conscious awareness, art and therapy using a semi-experimental design in a single group, without pre-test and post-test control groups. The positive effect on reducing anxiety levels observed on nine high school students participating in the study supports our study. The limited number of similar studies is restricting the comparison of our results with those found in the literature. On the other hand, psychological counselling is believed to create positive results as stated in a variety of studies conducted with different samples, approaches and techniques, though not quasi-experimental (Altıparmak, 2007; Aydın, Tekinsav-Sütcü & Sorias, 2010; Cenkseven Önder & Sarı, 2012; Demir, 2018; Gülcan & Nedim Bal, 2014; Öngider, 2013; Recepoğlu, 2013; Tanhan, 2019). These studies support our study as far as their results are concerned. Nevertheless, our study is comparable to the studies conducted according to different variables, but it should be remembered that although there is psychological support at the basis of the described studies, the sample / methods are different.

Tanhan & Francisco (2019) argue that contextual incidents (e.g., social, economic and political) in such environments where individuals, groups, and large societies affect man, if not more, than internal processes, but are generally ignored in mental health services all around the world. In other words, contextual factors affect individuals, groups and societies positively or negatively at least as much as their internal processes (e.g., genetic, emotional and intellectual processes). Therefore, it is important how the intervention used in this present study (i.e. the weekly psychological sessions) is influenced by contextual factors present in the study environment, and better results will be obtained if the findings are interpreted accordingly.

Although it is impossible to include all; anxiety related to both education and future (as most of the 280 clients, both in the experimental group and the control group were in the final year), relationship problems among peers, economic stres and local incidents might function as possible contextual factors. When these contextual factors are considered, the fact that the anxiety scores of individuals in the control group have increased and the anxiety scores of the participants in the experimental group decreased, have revealed the effect of contextual factors and mental health services on anxiety scores experienced and reported by clients.Future research that investigating these contextual factors will be helpful to beter understand the relation between psychological counselling and contextual factor related anxiety.

In the literature review, as we have observed in the present study as well, there are counseling departments with resources (e.g., counselors-in-training, faculty members, clients seeking services), and yet there is lack of models or systems to run all these together to maximize the resources (Tanhan, 2018, 2020; Tanhan et al., 2020). This seems to contribute to lack of empirical studies on anxiety in mental health. The main reasons for this may be listed as the lack of attention paid to the counseling departments and the fact that there is too much workload on faculty members working in this field as well as the inadequate supervision provided for the counselors (Pamuk & Yıldırım, 2016; Tanhan, 2018). In particular, the fact that clinical applications are almost never performed, and that conducting such clinical studies as in the present study are sometimes criticized even by counseling departments' faculty (Tanhan, 2018). Tanhan stresses that this situation prevents the counselors and the counseling departments from developing and progressing in Turkey. This might contribute the counselors, in particular, lag behind with respect to clinical practices and research, and, ultimately, it affects large masses of people in need of counselling services. Tanhan also stated that because of all these factors, the counsellors should receive more effective theoretical and practical training, and provide counselling services to larger masses of people, and that all of these should be followed by empirical studies and models as in this present study.

From a more contextual and recent perspective with COVID-19 pandemic, the researchers found college students facing many biopsychosocial spiritual and economic issues while having some strengths as well

(Tanhan, 2020; Tanhan et al., 2020). The researchers found their counseling clinic, which the current study was conducted in, served many people, primarily the college students through online or phone-based mental health services. The researchers utilized the contextual counseling clinic model used in this current study during the pandemic. Therefore, the model seems to promise even more robust evidence that it can be utilized both during crisis (e.g., pandemics, endemics, wars, conflict, natural disasters) when it is relatively very difficult to meet people in face.

Limitations

We have some limitations in this study. First, the sample of study consists of a total of 280 university students and generalization may be limited to similar samples. In addition, the age and education levels of the sample are similar, but the effects of variables such as gender, socio-economic levels, living conditions, family education levels and homelands have not been statistically assessed. The participants received five counselling sessions in average and monitoring sessions were not conducted.

Implications

The findings from the present study have implications for four main areas: research, practice, supervision in mental health education, and active social advocacy. First, future researchers could expand the sample and apply it to different age groups in order to evaluate the effectiveness of the counseling. Second, mental health providers who provide counseling sessions might collaborate with other mental health providers like psychiatrists to increase the effectiveness of the services. Third, mental health educators could focus on the utilized contextual clinical counseling model to train their students, enhance quality of clinical supervision, provide more comprehensive services, and conduct more thorough research. Fourth, mental health professionals as providers, educators and/or researchers can use the results to have an active social advocacy at all levels of EST as other researchers stressed (Tanhan, 2020; Tanhan & Strack, 2020). They suggested utilizing innovative research methods including online photovoice to conduct more effective research and improve mental health and other educational services. Related to that, Tanhan (2019, 2020) suggested utilizing Acceptance and Commitment Therapy (ACT) from a contextual perspective to serve people during normal and difficult (e.g., pandemic, endemic) times. Finally, the number of experimental studies in the mental health field is so few in Turkey (Buluş & Şahin, 2019; Tanhan, 2020; Tanhan et al., 2020) that the current study could be repeated utilizing the contextual clinical model utilized in the quasi-experimental study. Therefore, it is worth to conduct similar studies online or phone-based utilizing the clinic model.

Conclusion

This study includes the students as clients who study at a university located in the eastern part of Turkey and who have applied to the psychological counselling unit at the same university to receive psychological counselling service. The clients have been provided with psychological counselling services by the counselors-in-training at the counseling department at the same university. The study analyses the impact of the counselling service provided on the anxiety levels of clients by utilizing a pre-test - post-test design (2x2) along with the contribution of a quasi-experimental control group. This study can be considered to fill an important gap in the national literature. When the results obtained are evaluated from a contextual perspective, it is visible that the psychological counselling service provides a statistically significant decrease in anxiety symptoms for the clients in the experimental group. Since there are not very similar studies in the literature, it is consistent with other similar studies (Bilici et al., 2013; Demir, 2017) and this comparison is limited. This quasi-experimental study seems to add a significant value in the field of mental health for future research, practice, and education when some specific factors are considered such as the need for more mental health services in Turkey, the lack of mental health professionals and the fact that the counseling departments has so far been neglected (e.g., the number of candidate psychological counsellors), despite having a great potential, besides the underutilization of the counselors-in-training in the field of mental health. Finally, this present research indicates that the contextual clinical model can be utilized during normal and other difficult (e.g., wars, conflicts, natural disasters, pandemic, endemic) times because other researchers utilized it from an interdisciplinary and from a contextual perspective during COVID-19 providing mental health services to many people and founding significant and meaningful results (Tanhan, 2020; Tanhan et al., 2020).

Notes:

1) The authors translated this manuscript to Turkish considering the context of the country. The primary results of this study were presented at 9th international congress on psychological counseling and guidance in higher education. Istanbul, Turkey, 15-17 November 2019.

2) The Turkish version of this manuscript is available through the first authors' research platforms, e.g., Google Scholar https://scholar.google.com/citations?user=N3zDgFQAAAAJ&hl=en ResearchGate: https://www.researchgate.net/profile/Ahmet_Tanhan/contributions and Academia https://adiyaman.academia.edu/AhmetTanhan

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