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Nonverbal Behavior Training Program: A Pilot Study on Psychological Counselors

Ahmet Metin [a*] ***& Türkan Doğan*** [b]

a Res. Asst., Erciyes University, https://orcid.org/0000-0001-6519-2523 *ametin@erciyes.edu.tr
b. Prof. Dr., Hacettepe University, https://orcid.org/0000-0002-5976-7666

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Abstract

This paper aims to develop a training program on observing and interpreting nonverbal behaviors and evaluating its effects on counselors. The Nonverbal Behavior Training Program (NOBET) consists of theoretical, observational skills development, and writing hypothesis and testing hypotheses modules. Seven counselors (M_{age}=29.57; SD=7.11) from Türkiye, one male with at least two years of experience, participated in the study to evaluate the program's effectiveness. Personal information form, JACFEE photo set, Momentary expression recognition test, and Nonverbal behavior knowledge level assessment test were used to collect the study's data. The results showed a significant difference between the participants' scores from the Nonverbal behavior knowledge level assessment test (z= -2,366, p<.05) and the Momentary expression recognition (z= -2,201, p<.05) test before and after the experiment, but no significant difference for JACFEE (z=-1.682, p>.05). In light of the findings, what is needed for the development of NOBET is discussed.

Keywords: Nonverbal behavior, nonverbal behavior training program (NOBET), counselor

Psikolojik Danışmanlar için Sözsüz Davranış Eğitim Programı Pilot Çalışması

Öz

Bu çalışmada sözsüz davranışların gözlemlenmesi, yorumlanması ve psikolojik danışmanlar üzerindeki etkilerinin değerlendirilmesine yönelik bir eğitim programı geliştirmeyi amaçlamaktadır. Sözsüz Davranış Eğitim Programı (SÖDEP), kuramsal, gözlem becerisini geliştirme, hipotez yazma ve hipotezleri test etme modüllerinden oluşmaktadır. Programın etkililiğini değerlendirmek için çalışmaya Türkiye'den en az iki yıl deneyimli biri erkek olan yedi psikolojik danışman (Mage=29.57; SD=7.11) katılmıştır. Araştırmanın verilerinin toplanmasında kişisel bilgi formu, JACFEE fotoğraf seti, Kısa Süreli İfadeleri Tanıma Testi ve Sözsüz Davranış Bilgi Düzeyi Değerlendirme Testi kullanılmıştır. Sonuçlar, katılımcıların Sözsüz Davranış Bilgi Düzeyi Değerlendirme Testi (z= -2,366, p<.05) ve Kısa Süreli İfadeleri Tanıma Testi (z= -2,201, p<.05) ön-test ve son-test puanları arasında anlamlı bir fark olduğunu gösterirken; JACFEE için anlamlı bir fark olmadığını göstermektedir (z=-1.682, p>.05). Bulgular ışığında SÖDEP'in geliştirilmesi için nelerin gerekli olduğu tartışılmıştır.

Anahtar kelimeler: Sözsüz davranış, sözsüz davranış eğitim programı (SÖDEP), psikolojik danışman

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INTRODUCTION

Nonverbal behavior is any behavior independent of verbal meaning (DePaulo & Friedman, 1998; Matsumoto & Hwang, 2013). For example, nonverbal behaviors such as pointing at an object without verbal expression, displaying emotional expressions through facial muscles, regulating interpersonal distance in the presence of another person, and choosing clothes. The definition of nonverbal behaviors includes facial expressions, nonverbal components of voice, body movements, touch, and interpersonal distance (Ambady & Weisbuch, 2010). Communicating through nonverbal behaviors is also called nonverbal communication (Ambady & Weisbuch, 2010). Another definition of nonverbal communication is "the transfer and exchange of messages in any and all modalities that do not involve words" (Matsumoto & Hwang, 2013, p. 4).

Nonverbal communication has a significant impact on human interaction. Individuals' awareness and recognition of nonverbal and verbal expressions are essential to strengthen their interactions. For example, it may be necessary to establish empathy (Rogers, 1957) to recognize the client's current emotional awareness and what they are not saying. In this regard, Ekman and Friesen (2003) state that the inadequacy of words in recognizing the clients' emotions, not being aware of how they feel, and the inability to describe their feelings may be the reasons for focusing on nonverbal behaviors. When clients feel aporetic feelings (Jurist, 2005), when they do not know what they are feeling, when the counselor realizes this situation and shares it with the client, it may contribute to the advancement of the therapeutic process. Reflecting on the client's emotions is one of the main tools in the counseling process (Hutchison & Gerstein, 2012).

Literature Review

Researches are nonverbal behaviors seems to focus predominantly on emotions (e.g., Panić et al., 2022; Staff et al., 2021). One important reason is that emotions are universal and innate (Darwin, 1872). Emotions for which there is substantial evidence to be universal and innate are happiness, anger, disgust, surprise, sadness, fear, and contempt (Ekman, 1971; Ekman & Friesen, 1971; Ekman & Friesen, 1986; Ekman & Heider, 1988; Ekman et al., 1969; Matsumoto & Ekman, 2004; Matsumoto & Willingham, 2009; Matsumoto et al., 2013). Some researchers report that there is evidence for the assumption that shame is also universal emotion (Izard, 1977; Kollareth et al., 2018). Shame is an affect that has been extensively discussed by many theorists (i.e., Izard, 1977; Schore, 1994; Tomkins, 1962). These expressions can be seen in short duration in the face. If an emotional expression occurs for longer than one second in the face, it is a macro-expression; if it occurs in less than one second, it has been defined as a micro-expression (Matsumoto & Hwang, 2013).

Recognizing emotional expressions contributes to understanding human nature (Benecke et al., 2007). This process is even more critical in situations that concern the health of individuals (Roter et al., 2006). For example, physicians who pay attention to gaze and body posture, dimensions of nonverbal behaviors, have increased their empathy levels with their patients (Brugel et al., 2015). In other words, it is easier for doctors who strengthen nonverbal communication with their patients to empathize. In education, the effect of teachers' nonverbal behaviors on students is emphasized (Babad, 2007). It has been reported that effective communication by the counselor in counseling sessions improves the client's recovery and adapts to facilitating and increasing self-awareness (Adigwe & Okoro, 2016). The basis of effective communication is counselors' verbal and nonverbal communication skills. In counseling, the interaction with the clients is communicated mainly verbally. However, when the information obtained through verbal communication is insufficient, the counselor should understand the client's nonverbal reactions (Yang, 2018). Thus, it contributes to the client's ability to formulate their problem. Observing nonverbal behaviors and raising awareness about nonverbal behaviors enrich the interaction with the client (Foley & Gentile, 2010). Studies show that focusing on and recognizing nonverbal behaviors increases therapeutic alliance and client knowledge acquisition (Dowell & Berman, 2013; Paulick et al., 2018; Philippot et al., 2003; Salazar Kämpf et al., 2021). Another important aspect of being aware of nonverbal behaviors is that it can occur unconsciously (Ekman & Friesen, 1968). For example, it is a significant finding for a counselor who observes these behaviors of a client unaware of their nonverbal behaviors in counseling. This observation can mediate the client's gaining insight (Bibring, 1957).

The Significance of the Study

Formal training to improve the ability of mental health professionals and medical doctors' ability to recognize clients' verbal and nonverbal behaviors is limited (Sheeler, 2013). In some training, it was preferred to use only training materials for recognizing emotions, such as METT and SETT (e.g., Endres & Laidlaw, 2009). The Nonverbal Behavior Training Program (NOBET) differs from METT and SETT. First, the photographs in the

training content are of people from Türkiye. According to the "in group advantage" view by Elfenbein and Ambady (2002), the content of perceiving these expressions increases if they are from the same culture as the customer views in the image. Another difference between NOBET is that it considers nonverbal communication with verbal communication. The third difference is the availability of the interpretation skill module. This module targets rooms aiming to interpret by providing assumptions with their opinions and observations.

In undergraduate and graduate education, emphasis is placed on how mental health professionals put their clients' feelings into words (verbalization). In other words, there were no lessons/courses under specific titles such as nonverbal communication and recognizing emotional expressions in Türkiye (YÖK, 2022). A study investigated the skills of counseling and guidance undergraduate students and counselors to identify emotions in facial expressions. There was no significant difference between the two groups (counseling students vs. counselors). In other words, undergraduate students and counselors do not differ according to the recognition of emotions (Hutchison & Gerstein, 2012). Therefore, training mental health professionals to recognize the nonverbal expression of emotions may facilitate their ability to formulate the client's problem in the therapeutic process. This can be possible with skill training for identifying nonverbal behaviors.

The Aim of the Study

Based on all these, no comprehensive training on nonverbal behaviors with proven validity has been found in Turkish culture. The studies discussed psychoeducational programs for recognizing emotions and training to improve knowledge about nonverbal behaviors. However, no training has been found for writing and testing hypotheses by considering both a training program and nonverbal behaviors. Therefore, the current study aims to improve counselors' skills of recognizing and using nonverbal behaviors in their professional practice.

Research Questions

The hypotheses are as follows:

1. NOBET improves counselors' knowledge level about nonverbal behaviors.
2. NOBET improves the counselors' ability to recognize macro-expressions.
3. NOBET improves the ability of counselors to recognize momentary emotional expressions

METHOD

Research Design

This research used a poor experimental design among quantitative research methods (Fraenkel et al., 2012). Experimental designs can be examined in two categories true experimental and poor experimental. The model of the study was a single-group pre-test-post-test design. This model is seen in Table 1.

Table 1. The poor experimental design of this study

Pretest	Process	Posttest
JACFEE photo set	Nonverbal Behavior Training Program (NOBET)	JACFEE photo set
Momentary Expression Recognition Test		Momentary Expression Recognition Test
Nonverbal Behavior Knowledge Level Assessment Test		Nonverbal Behavior Knowledge Level Assessment Test

Participants

The participants of the study are seven specialist counselors. Six participants were female, and one was male (M_{age}=29,57; SD=7,11). Two participants have been working for two years, two for five years, one for six years, one for seven years, one for eight years, and one for twenty years. In addition, two participants are Ph.D. candidates in the counseling department. Participants were included in the study according to the following criteria:

1. To be working in the field of counseling and guidance undergraduate.
2. To have a master's degree in counseling and guidance or at least two years of professional experience.
3. Actively seeing clients/patients (counseling, psychotherapy, and interviews other than these).

4. Not to have received any training besides undergraduate or graduate/specialty education through non-verbal communication.

Data Collection

JACFEE photo set. Japanese and Caucasian Facial Expression of Emotion (JACFEE), developed by Matsumoto and Ekman (1988), is one of the most frequently used photo sets in the literature. In this study, 56 stimuli were selected by selecting an equal number for seven emotions and neutral expressions (i.e., happiness, sadness, surprise, fear, disgust, anger, contempt, and neutral) from the 130-photo version of JACFEE. All stimuli were reliably coded (r = .91) with the Facial Action Coding System (Ekman & Friesen, 1978). The score obtained from this screening tool is related to whether the participants recognize the emotions in the stimulus. The true response for each stimulus is 1, and the false response is 0. Therefore, the score that can be obtained from the scale varied between 0-56. Since the photos in this photo set are universal, it has not been adapted to Turkish culture.

Momentary Expression Recognition Test (MOERT). Researchers developed this test to evaluate expressions of less than one-second duration. Halberstadt's (1986) method was used to develop the test. Thus, it is aimed to increase the ecological validity of the test. This method asks subjects to re-experience an emotional event and talk about it. By the way, a task was given by the researcher so that the subjects could feel the emotions. This task is, for example, "I want you to remember an event or situation that disgusts you. You may or may not share this event with me. I'm only asking you to bring to your mind a memory that you are disgusted with." When the task was given, the subjects' face was video recorded. After asking the participants about universal emotions (Ekman, 1971; Izard, 1977; Tomkins, 1962), the researcher analyzed video recordings frame by frame. The facial action coding system developed by Ekman and Friesen (1978) was considered in the analysis of the videos. According to this coding system, each action is called an action unit (AU). Muscle movements are numbered. For example, raising the inner eyebrows is described as AU1. As a result of the analysis, it was determined that fear and surprise did not show basic facial movements. One reason for this, for example, for the surprise, may be that the facial expression signals of the surprise do not occur because there is no natural situation in which the person is surprised; that is because he remembers the event later. In this regard, Ekman (2007) states that if momentary emotions such as surprise occur slowly, these emotions will not be triggered. As a result of these analyses, the stimuli in the test show six emotions: happiness, anger, disgust, sadness, contempt, and shame. The stimuli showing these emotions comprised 14 subjects, nine females and five males.

Nonverbal Behavior Knowledge Level Assessment Test (NOBEKLAT). Researchers developed this test to evaluate the theoretical module of NOBET. The test aimed to determine the level of understanding of the subjects in the theoretical module of NOBET. This framework has 25 multiple-choice questions in the test, with four options. A question has one correct answer. Therefore, the more correct answers are given in the test, the higher the participant's score will receive. In other words, the increase in correct answers in the test indicates that the level of theoretical knowledge is high.

The process of the Nonverbal Behavior Training Program

NOBET has been developed considering the modular training program design (Demirel, 2021). Its theoretical foundation is based on the research of Ekman (2007), Izard (1977), Mehrabian (1972), Frijda (1986), and Hall (1966). The content of NOBET, which consists of three modules, is explained below:

1. Theoretical training
    a. Introduction to nonverbal behavior science
    b. Emotion and its neurobiology
    c. The facial expression of emotions
    d. Eye movements and gaze
    e. Voice
    f. Gestures and body movements
    g. Touch behavior
    h. The perception of the environment
    i. Interpersonal distance

j. Nonverbal behavior and behavior analysis in routine and private settings

2. Skills training
    a. Observation skills
    b. Skills to recognize emotional expressions
3. Interpreting training
    a. Writing hypotheses
    b. Testing to hypotheses

The first theoretical training module aims to teach basic knowledge about nonverbal behavior and communication. In this process, NOBET – Handbook was developed by the researcher. One of the aims of this Handbook, which includes current studies, is to provide the participants with theoretical knowledge about nonverbal behavior.

The second module aims to increase the participant's observation skills in the light of theoretical knowledge. The skill module is divided into the ability to observe and recognize emotional expressions. In the observation skill, the participants were allowed to observe the environment, person, or objects in detail by watching the video recordings prepared by the researcher. Recognizing expressions aims to increase the ability to determine the stimuli's emotions in the video recordings prepared by the researcher. A total of 200 momentary expressions videos were studied throughout the training. In other words, it aims to improve the ability to recognize momentary expressions.

The last module aims to increase the participants' interpretation skills by combining theoretical knowledge and knowledge from the skill training. For this, the video recording of the interviews prepared by the researcher was watched, and the participants were divided into small groups to observe each other and interpret their behaviors. For example, it aims to develop the ability to hypothesize the nonverbal behaviors they see in the video according to the context and how to test this hypothesis. Scientific research methods were used to develop this skill. For example, when a gesture that occurs during a speech is detected in the video, many hypotheses were written together by the counselors by asking what the meaning of this gesture could be in the context. Later, a discussion was created by the researchers about how these hypotheses could be tested. In other words, the individual's behavior was analyzed with the same method as scientific research should be conducted. After completing the three modules, the participants could video-record an average ten-minute interview with a volunteer. The researcher supervised participants who had videos. In this way, the participants were supervised in recognizing nonverbal behaviors (i.e., facial expression, voice, body posture, etc.) in the video records, writing hypotheses, and testing hypotheses.

After the design of NOBET was completed, opinions were received from two experts in the field. Various revisions were made per the suggestions, and the program was planned to last 56 hours. However, in the pilot study, it was determined that 48 hours might be sufficient. During the pilot study, the researchers discussed possible revisions of NOBET in the development process by receiving feedback from the participants in each session. In evaluating the effectiveness of NOBET, the first module was assessed with NOBEKLAT, the second with JACFEE and MOERT, and the third with supervision.

Procedure

The personal information form, JACFEE, Momentary Expression Recognition Test, and Nonverbal Behavior Knowledge Level Assessment Tests were applied by online interviews with each participant. Subsequently, a two-month training with the participants was planned for NOBET. The training was conducted online. At the end of two months, the relevant screening tools were carried out again. The pretest and posttest results of the participants were analyzed.

Data Analysis

Wilcoxon signed-rank test was used to analyze the pretest and posttest data with SPSS 25.0 package program. Analysis results are seen in the results section.

Research Ethics

Before starting the research, necessary permissions were obtained from Ethics Committee. The informed consent form was presented to the participants by the researcher. Participants' names were kept anonymous.

FINDINGS

This section analyzes the participants' JACFEE photo set, Momentary expression recognition test, and Nonverbal behavior knowledge level assessment test pretest and posttest scores. Table 2 shows the average and standard scores of the relevant screening tools. In addition, Figure 1 shows the participants' percentage of pretest and posttest mean scores. According to Figure 1, participants' JACFEE scores increased by up to 5%, MOERT scores by up to 13%, and NOBEKLAT scores by up to 16%.

Table 2. Descriptive statistics on pretest and posttest results

Variables	n	x̄	SD
Pretest			
JACFEE	7	49,14	3,80
MOERT	7	12,85	4,18
NOBEKLAT	7	16,14	1,95
Post-test			
JACFEE	7	51,85	1,67
MOERT	7	16,71	3,40
NOBEKLAT	7	20,14	1,57

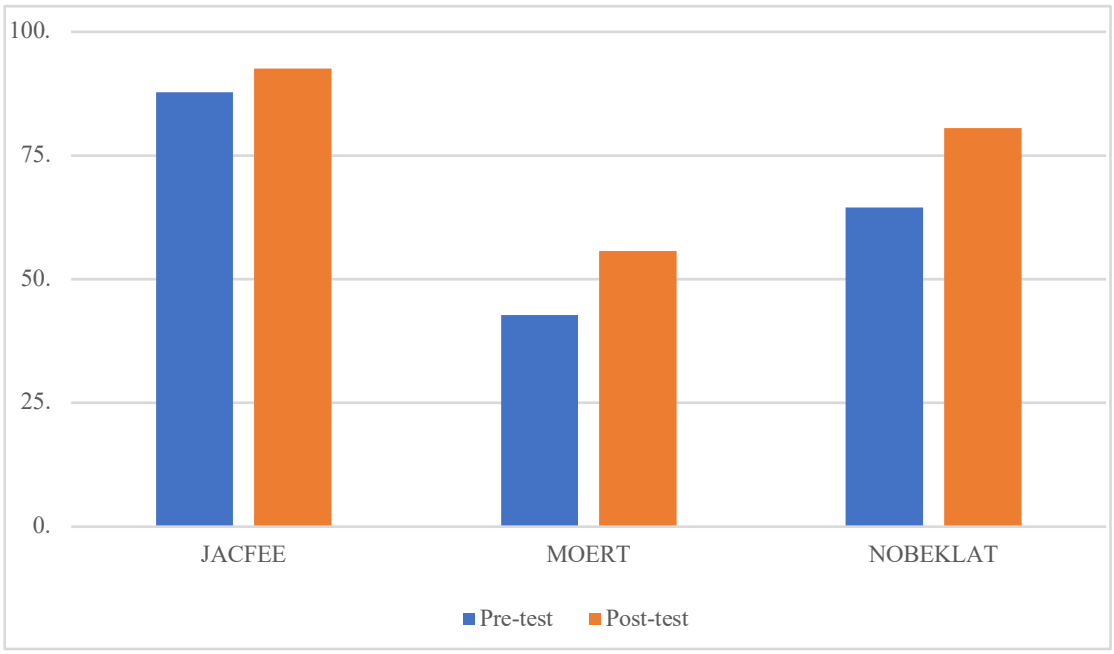

Figure 1. *Percentage (%) of pretest and posttest mean scores*

Table 3 shows the data analysis results before and after the nonverbal behavior training program. According to the Wilcoxon Signed Ranks Test results, the training scores of the participants from the Nonverbal behavior knowledge level assessment test (z= -2,366, p<.05) and the Momentary expression recognition test (z= -2,201, p<.05) before and after the program are between there is a significant difference. There is no significant difference between the participants' JACFEE pretest and posttest scores (z=-1.682, p>.05). According to these findings, it can be said that the pilot study increased the participants' knowledge levels of nonverbal behavior and their ability to recognize momentary expressions.

Table 3. Poor experimental study's Wilcoxon Signed Ranks test results

Variables	n	Mean Rank	Sum of Rank	z	*p*
Posttest/Pretest JACFEE					
Negative Ranks	2	2,50	2,50	-1,682	.09
Positive Ranks	5	3,70	18,50		
Posttest/Pretest MOERT					
Negative Ranks	1	1,00	1,00	-2,201*	.02
Positive Ranks	6	4,50	27,00		
Posttest/Pretest NOBEKLAT					
Negative Ranks	0	,00	,00	-2,366*	.01
Positive Ranks	7	4,00	28,00		

Note: *$p<.05$

DISCUSSION AND CONCLUSION

In this paper, a training program for analyzing nonverbal behaviors was developed, and the effectiveness of NOBET was evaluated as a pilot study. The findings showed that NOBET increases the knowledge level of participants' nonverbal behaviors and their ability to recognize momentary expressions. However, there was no significant effect on the recognition levels of macro expressions.

Training programs for recognizing emotions enable individuals to improve emotion recognition skills quickly (Chen et al., 2018; Endres & Laidlaw, 2009). It is known that individuals with psychological problems show a deficit in recognizing emotions (Gao et al., 2021; Griffin et al., 2021; Krause et al., 2021). Emotion recognition training materials aim to improve these individuals' emotion recognition skills (Russell et al., 2006). Therefore, it is used for various purposes to improve emotion recognition skills. The ability to recognize momentary expressions, such as micro-expressions, develops quickly with training materials (e.g., METT, SETT). Our preliminary study showed that counselors' ability to recognize momentary emotional expressions is improving. Therefore, this finding is consistent with previous research (Endres & Laidlaw, 2009). When the pretest and posttest scores of the skills to recognize momentary expressions are considered, it is seen that it has increased from 40% to 55%. However, we expected it to be at least around 80%. One of the reasons it was not what we expected could be the inability to devote a full day, or eight hours, to the module on momentary expressions. As well as it may take, an additional practice could not be conducted to improve the practice of recognizing momentary expressions to the participants. Most short-term stimuli (micro-expressions) developed as training material only allow use during NOBET. However, it was thought that after the second module with the participants participating in NOBET, a practice could be done with the researchers at the beginning of each lesson. This is one of the revisions in NOBET.

There is no supporting finding supporting our other hypothesis that NOBET improved the counselors' ability to recognize macro expressions. Although the JACFEE mean score of the group increased when the arithmetic averages in the pretest and posttest were considered, this difference was not statistically significant. One of the reasons for this may be that the ability to recognize emotions in facial expressions is higher in mental health groups that require human relations than in other occupations (Arpita, 2012). Since the study participants had at least two years of professional experience, their experience observing clients may have improved. Another reason there was no significant difference may be that one of the study participants received training on emotions.

When the pretest and posttest scores of the relevant participant were examined, it was determined that he had an accuracy score of over 90%. For this reason, it can be mentioned that the participant's skill affects the research results. Another reason there is no statistical difference may be the small sample size.

Finally, we found that it supports our hypothesis that NOBET improved the knowledge level of counselors about nonverbal behavior and communication. The achievement test measured the evaluation of the first module, in which the theories and research related to nonverbal communication science were comprehensively discussed. This finding is significant because sufficient time has been devoted to each lesson in the theoretical module. Therefore, the level of nonverbal behavior knowledge of the participants improved.

Implications

This pilot study has evidence supporting that the ability to recognize and analyze nonverbal behaviors is a feature that can be improved (increasing the level of knowledge and recognizing macro and micro-expressions). Due to the methodological difficulties of directly measuring NOBET's other dimensions, such as voice, body posture, and gestures, could not be evaluated with a quantitative research design. The evaluation of these dimensions was carried out through the supervision given by the researchers. In addition, using qualitative research methods can provide important data in evaluating the effectiveness of NOBET. Therefore, mixed designs can be used to evaluate the effectiveness of NOBET. Implementing the training on relatively larger sample groups can provide significant findings in determining the efficacy of NOBET.

No comprehensive training has been found for recognizing nonverbal behaviors and improving the ability to read people's behaviors. This study is aimed to fill this gap in the literature. NOBET, developed and tested for effectiveness, is the first pilot study to be comprehensively discussed in Türkiye.

Limitations

This pilot study has limitations. First, it is not to generalize the research findings because the poor experimental design was preferred. Second, the sample size of the study was small. Third, since NOBET was developed for the first time, the shortcomings of NOBET will be applied to the next training.

Statements of Publication Ethics

This study is based on the first author's Ph.D. thesis (in progress). Ethical approval was obtained from Hacettepe University Ethics Committee (Date: 04.12.2022).

Researchers' Contribution Rate

The first author contributed to writing, analyzing, and applying the training program of the paper. The second author contributed to writing and supervising the paper.

Conflict of Interest

None.

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