



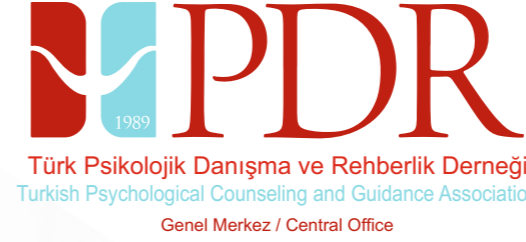
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RESEARCH

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ARAŞTIRMA

Açık Erişim

Counselors' Views About Their Training Supervision: A Qualitative Survey

Psikolojik Danışmanların Eğitimleri Sürecindeki Süpervizyona İlişkin Görüşlerinin İncelenmesi: Nitel Bir Araştırma

Hacer Yıldırım Kurtuluş , Fulya Yüksel Şahin 

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ABSTRACT

This study aims to examine counselors' views about the supervision they received during their training. It was designed according to the phenomenological approach, which is a qualitative research design. To select the study group, the researchers made simultaneous use of the criteria sampling, maximum diversity sampling, and convenience sampling methods. The main inclusion criteria for the study group required that the counselors had taken the "Individual Counseling Practicum" course during their undergraduate education and had graduated from a department of "Counseling and Guidance". Thus, 21 counselors who graduated from universities in different regions were purposefully selected to ensure maximum diversity in the research. MAXQDA software was used for data analysis to help the researcher in systematic evaluation and interpretation of qualitative texts. Based on the study results, the theme 'supervisory process' was divided into seven sub-themes, which are assessment of supervision, the methods and techniques used in supervision, frequency of supervision, focused theory of supervision, supervisor's approach and style, supervisory relationship, and focus of feedback during supervision. In addition, these seven sub-themes identified according to research results were further divided into additional categories.

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ÖZET

Bu araştırmada, psikolojik danışmanların eğitimleri sürecindeki süpervizyona ilişkin görüşlerini incelemek amaçlanmaktadır. Araştırma nitel araştırma desenlerinden olgubilim (fenomenolojik) yaklaşıma göre tasarlanmıştır. Çalışma grubunun seçilmesi için ölçüt örnekleme, maksimum çeşitlilik örnekleme ve kolay ulaşılabilir örnekleme yöntemleri bir arada kullanılmıştır. Araştırmanın çalışma grubu seçilirken psikolojik danışmanların lisans eğitimleri boyunca "Bireysel Psikolojik Danışma Uygulamaları" dersini almış olmaları ve "Psikolojik Danışmanlık ve Rehberlik" bölümü mezunu olmaları ölçüt olarak belirlenmiştir. Bu doğrultuda, araştırmaya amaçlı olarak maksimum çeşitlilik sağlamak için ayrı bölgelerden yer alan üniversitelerden mezun olan 21 psikolojik danışman katılmıştır. Verilerin analizinde, araştırmacıya nitel metinleri sistematik olarak değerlendirmesi ve yorumlaması için yardım eden MAXQDA Programı kullanılmıştır. Araştırma bulgularına göre, süpervizyon süreci teması süpervizyonun değerlendirilmesi, süpervizyonda kullanılan yöntem ve teknikler, süpervizyonun sıklığı, odaklanılan süpervizyon kuramı, süpervizörün yaklaşımı ve tarzı, süpervizyon ilişkisi, süpervizyonda geribildirimlerin odak noktası olmak üzere yedi alt temaya ayrılmıştır. Bununla birlikte, araştırma bulgularında ulaşılan yedi alt tema, kendi içerisinde kategorilere ayrılmıştır.

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Ethical Statement: Ethics committee approval was obtained from the Yıldız Technical University Social and Human Sciences Ethics Committee (Meeting No: 2019/08).

INTRODUCTION

Members of the counseling profession are expected to possess counseling skills and a professional identity (Woo et al., 2014; Yüksel-Şahin, 2018). To be able provide effective counseling services and have a professional identity, counselors should not only possess theoretical knowledge and skills, but also integrate this knowledge with practical applications (Blocher, 1983; Cormier & Nurius, 2003; Henriksen et al., 2019). In counselor training, the effectiveness of practicum courses that are offered alongside theoretical courses largely depends on the parallel implementation of the supervisory process (Davis, 1988; Little et al., 2005).

Supervision refers to an intervention that is provided by a more senior member of the counseling profession to a more junior colleague and is designed to ensure professional growth and development as well as to meet the needs for counseling knowledge and skills (Bernard & Goodyear, 2009). Since it evaluates counselors' professional development and the quality of the professional services they offer to their clients, supervision is based on a hierarchical and supervisory relationship (Meydan, 2014). Dollarhide and Miller (2006) argue that in counselor training, supervision is a means by which theory and practice are integrated and prospective counselors explore their new professional identities in preparation for induction into their profession. In the US as one of the countries where the counseling profession has flourished the most, accreditation for counselor training is provided by the Council for Accreditation of Counseling and Related Programs, which published certain standards (Council for the Accreditation of Counseling and Related Educational Programs, 2016) requiring that supervision for counselor training should be offered at the practicum and internship stages. Thus, during practicum, prospective counselors should receive a minimum of 100 hours of supervised counseling sessions throughout an academic semester which should last for a minimum of ten months and at least 40 hours out of these 100 hours of supervision should be conducted with actual clients. This should be followed by internship, during which prospective counselors should receive a total of 600 hours of supervised counseling internship, of which 240 hours should be direct service with actual clients.

A course instructor with relevant professional experience who provides practicum supervision in counselor training is called a supervisor (Atık, 2017). The role of a supervisor in the supervisory process is to ensure the clients' well-being in the counseling process and to safeguard ethical, legal, and professional standards, to help shape the counselors' professional development and practices, and to take an active role in overseeing the counselors (Association for Counselor Education and Supervision, 2011). Zeligman (2017) views supervisor behaviors in the supervisory process from the perspective of supervising professional skills, professional identity, and ethical behaviors. Corey et al. (2014) argue that the roles and responsibilities of the supervisor and the prospective counselor in the supervisory process are determined according to the supervision model, methods, and techniques employed by the supervisor. The supervision model guides the supervisor theoretically in selecting the supervision methods and techniques, organizing the knowledge and skills that the supervisee should acquire, and assessing prospective counselors (Borders & Brown, 2005). Bernard and Goodyear (2009) categorize supervision models under the models based on counseling theories that focus on the supervisor's approach in the supervisory process and how s/he manages the process, the developmental models that address prospective counselors' professional development in a detailed manner, social role models that plan the supervisory process according to the needs of prospective counselors.

The supervision method used by a supervisor changes with the number of prospective counselors involved in the supervisory process. CACREP (Council for the Accreditation of Counseling and Related Educational Programs) standards require prospective counselors to receive at least a one-hour individual supervision session and a minimum of one and a half hours of group supervision once a week during practicum stages (CACREP, 2009; Ray & Altekruze, 2000). These standards stipulate triadic supervision as an alternative to individual supervision as a requirement for accreditation. Individual supervision is defined as a supervision method whereby a supervisor and a prospective counselor meets to discuss counseling sessions for a minimum of one hour once a week (CACREP, 2016). Triadic supervision was developed as an economical alternative to individual supervision (Hein & Lawson, 2008) and is a supervision method that brings together a supervisor and two prospective counselors simultaneously (Altfeld & Bernard, 1997; CACREP, 2016). Group supervision, on the other hand, is defined as a type of supervision whereby the supervisor and a maximum number of twelve prospective counselors meet for at least one and a half hour once a week so that prospective counselors can develop a new professional understanding based on feedback obtained through their group interaction and the individual goals of each counselor (Bernard & Goodyear, 2009; Holloway & Johnston, 1985). Supervision techniques, also known as supervisory interventions, provide flow of information throughout the supervision process. Supervision techniques are classified in two categories, which are based either on verbal discussion or direct observation (Corey et al., 2014). The techniques based on verbal discussion assess the counseling skills, sessions, and professional development of a prospective counselor in a debate environment, while the techniques based on direct observation aim for assessing the practices of a prospective counselor through observation (Campbell, 2000). These techniques include verbal feedback, process notes, audio and video recordings, focused observation, role-plays, and modeling (Borders & Brown, 2005).

In addition to this supervision model, as well as the methods and techniques used by the supervisor so that prospective counselors receiving supervision can put new skills into practice, ask for feedback, and open themselves during supervision, they also need to feel themselves safe, comfortable, honest, and supported in the supervision environment (Meydan, 2019). Therefore, it is vital to build and maintain a strong supervisory relationship between the prospective counselor and the supervisor (Moldovan & David, 2013; Yılmaz & Voltan-Acar, 2015). The research in the literature demonstrates that the relationship between the prospective counselor and the supervisor is built on supportive and directive supervisor behaviors (Blocher, 1983; Holloway & Hosford, 1983; Steward et al., 2001). Supportive supervisor behaviors are defined as a supervisor's efforts to build rapport and empathize with the client-in-training (Worthington & Roehlke, 1979), while directive supervision refers to a supervisor's behaviors that question, instruct, or challenge the supervisee (Hart & Nance, 2003). Bernard (1997) conceptualizes supervisor behaviors in three distinct roles: the counselor role which emphasizes a warm, friendly, open, and supportive attitude toward the trainee, the consultant role which focuses on the tendency for being encouraging, therapeutic, and understanding toward the trainee, and the teacher role which highlights focusing on the trainee's developmental goals and configuring the process. The quality of supervision practices and the effectiveness of counselors are highly influenced by the counselor-supervisor relationship and supervisor behaviors (Fernando, 2013; Nelson & Friedlander, 2001; Pearson, 2000). In addition to the importance of an atmosphere of trust and healthy communication skills on the part of the supervisor for an effective and strong supervisory relationship (Borders & Brown, 2005), the literature also underlines the supervisor's focus on transparency and on the here and now as well as confrontation skills (Muse-Burke et al., 2001). What is expected from the supervisory process is that

trainees can attain the utmost benefit through a supportive supervisory relationship so that they can become qualified counselors (Fulton & Cashwell, 2015; Özyürek, 2009). Clearly, throughout supervisory training, the supervision process, supervisor's behaviors and attitudes all play a role in the counseling skills and competency of prospective counselors (Fernando & Hulse-Killacky, 2005). Counselors who have undergone a good training and supervision process during practicum are expected to become effective counselors with a good command of cognitive and therapeutic skills (Borders & Brown, 2005; Hodges, 2011; Yılmaz & Voltan-Acar, 2013; Yüksel-Şahin, 2018).

The literature contains research on effective supervisory process, supervisor competence and behaviors (Denizli, 2010; Worthen & McNeill, 1996; Worthington, 1984; Worthington & Roehlke, 1979); satisfaction with supervision and supervisory styles (Fernando & Hulse-Killacky, 2005; Sarıkaya, 2017); supervisory relationship (Cheon et al., 2009; Meydan & Denizli, 2018; Min, 2012); supervision models, methods, and techniques (Borders et al., 2012; Hill et al., 2016; Siviş-Çetinkaya & Kararımak, 2012); supervision opportunities and duration of supervision (Özyürek, 2009); the effects of supervision on counselors (Koç, 2013; Meydan, 2010; Meydan, 2014; Ülker-Tümlü, 2019); the role of supervision in counselor training (Kalkan & Can, 2019); and supervisor training (Koçyiğit-Özyiğit & İşleyen, 2016). The present study holistically explores counselors' views about the supervisory process they received during their undergraduate, master's, and doctoral education in relation to assessment of supervision, the methods and techniques used in supervision, frequency of supervision, focused theory of supervision, supervisor's approach and style, supervisory relationship, and focus of feedback during supervision. It is significant in that it was conducted using qualitative methods and presents detailed information about the supervisory process received during university education. Furthermore, the results are expected to contribute to the development of the counseling profession in Turkey as they reveal the problems surrounding the supervisory process in counselor training. With this aim in mind, the researchers sought answers to the question "how do the counselors view the supervision they received during their training process?"

METHOD

Investigating into the views of psychological counselors about the supervision they received during their training, the study was structured according to qualitative research design. This type of research design refers to the analysis of phenomena in their natural context by trying to interpret and understand the meanings implied for people (Klenke, 2016). Qualitative research design employs qualitative data collection methods such as observation, interview and document analysis and is based on a subjective-interpretive process which involves the recognition of either already-known or unnoticed problems and a realistic handling of the natural phenomena pertaining to the problem (Seale, 1999). In this study, phenomenological design, one of the qualitative research designs, was used. Phenomenology primarily attempts to define the world experienced by individuals and explain past experiences in order to discover the common meanings underlying phenomena (Baker et al., 1992). As part of the study, the data were also collected through the semi-structured interview method.

Study Group

To determine the participants, the researchers used criterion sampling as there were a series of predetermined criteria from among purposive sampling methods, and the maximum variation sampling and convenience sampling methods in order to exhaustively define the specific dimensions of every situation included in the sample and reveal common themes that may arise among different cases (Patton,

1987). While selecting the study group, two criteria were required for psychological counselors: having a BA degree in “Psychological Counseling and Guidance” and having passed the undergraduate course titled “Individual Counseling Practicum”. Accordingly, in order to ensure maximum diversity for study purposes, the study included 21 psychological counselors who earned their degrees from universities in different geographical regions. Likewise, in order to secure maximum diversity, the study group incorporates nine psychological counselors with an undergraduate degree, six with an MA degree and six with a PhD degree. Table 1 contains information about study participants.

Table 1. Information about study participants

PD	Gender	Undergraduate	MA	PhD
D1	Male	Abant İzzet Baysal University	-	-
D2	Male	Eastern Mediterranean University	Istanbul Gelişim University	-
D3	Female	Eastern Mediterranean University	Istanbul Sabahattin Zaim University	-
D4	Female	Selçuk University	-	-
D5	Male	Ondokuz Mayıs University	-	-
D6	Female	Onsekiz Mart University	-	-
D7	Female	Uludağ University	-	-
D8	Female	Abant İzzet Baysal University	Abant İzzet Baysal University	-
D9	Female	Istanbul University	-	-
D10	Male	Sakarya University	Abant İzzet Baysal University	-
D11	Female	Akdeniz University	Akdeniz University	-
D12	Female	Marmara University	Marmara University	Yıldız Technical University
D13	Female	Yıldız Teknik University	Yıldız Technical University	-
D14	Male	Marmara University	Çukurova University	-
D15	Male	Atatürk University	Gaziosmanpaşa University	-
D16	Female	Marmara University	Marmara University	Marmara University
D17	Male	Çukurova University	Çukurova University	Çukurova University
D18	Male	Çukurova University	Çukurova University	Atatürk University
D19	Male	Karadeniz Technical University	Karadeniz Teknik University	Karadeniz Technical University
D20	Male	Sakarya University	Istanbul Sabahattin Zaim University	Sakarya University
D21	Female	Çukurova University	Çukurova University	Yıldız Technical University

As shown in Table 1, 47.6% (f=10) of the participants are male and 52.4% (f=11) are female. Likewise, Table 1 reveals that a total of 21 psychological counselors were selected from among people who earned their undergraduate, MA and PhD degrees from different universities representing the seven geographical regions of Turkey. For the undergraduate level, these provinces and universities include Abant İzzet Baysal University (Bolu), Eastern Mediterranean University (Cyprus), Selçuk University (Konya), Ondokuz Mayıs University (Samsun), Onsekiz Mart University (Çanakkale), Uludağ University (Bursa), and Istanbul University (Istanbul). To represent counselors with a BA degree, the researchers selected Marmara University (Istanbul), Abant İzzet Baysal University (Bolu), Akdeniz University (Antalya), Çukurova University (Adana), Gaziosmanpaşa University (Tokat), and Yıldız Technical University (Istanbul). As for the participants with a PhD degree, the following universities were selected: Marmara

University (Istanbul), Atatürk University (Erzurum), Yıldız Technical University (Istanbul), Karadeniz Technical University (Trabzon), Sakarya University (Sakarya) and Gazi University (Ankara).

Ethical Statement

In this research, all the rules in the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed and none of the "Actions Contrary to Scientific Research and Publication Ethics" in the second part of the directive were carried out. In addition, ethics committee approval was obtained from the Yıldız Technical University Social and Human Sciences Ethics Committee (Meeting No: 2019/08).

Data Collection Instruments

As its data collection instruments, the study employs the "Personal Information Form" and the "Semi-Structured Interview Form" developed by researchers in accordance with expert opinion. The "Semi-Structured Questionnaire" consists of the following questions:

1. How do you assess your training supervision during your education in Counseling and Guidance?
2. How and in what format did you receive training supervision during your education in Counseling and Guidance?
3. How often did you receive training supervision during your education in Counseling and Guidance (weekly, biweekly, triweekly etc.)?
4. Which theory or theories formed the basis of your training supervision during your education in Counseling and Guidance?
5. How were the attitudes and behaviors of your supervisor towards you?
6. How were you affected by your supervisory relationship with your supervisor?
7. What aspects did your supervisor emphasize in feedbacks particularly in relation to principles and techniques?

By following the Yıldırım and Şimşek's (2003) recommendations for the process of drafting the semi-structured questionnaires, we took care to include in our interview questionnaires questions that can be clearly understood by counselors and are open-ended questions that involve but do not steer toward a specific focus.

Researcher's Role

The researchers played a participatory role in the process. This kind of participatory role requires researchers to personally spend time in the field, to interview the participants, to live the participants' experiences when needed, and to use the field perspective and experiences in data analysis (Yıldırım & Şimşek, 2013). In this line, the researchers in this study played participatory roles in identifying the counselors who meet the criteria, accessing their contact info, conducting preinterviews with the counselors, informing them about the research, sending them the questionnaires, and in analyzing the collected data. Throughout the process, they assumed unbiased and objective roles so that the research assumptions and biases would not influence the processes of data collection and analysis. In addition, there is also the role of evaluating the researcher's expertise, motivation, and judgments.

Data Collection Procedure

Prior to the data collection procedure, the researchers obtained “Research Permit” from the Institute for Social Sciences at Yıldız Technical University and “Ethics Committee Approval” from the Academic Ethics Committee certifying that there is no unethical factor that hinders the study from being conducted. Once they obtained the required permits, they went on with collecting data from psychological counselors, which was performed in the digital environment.

The researchers first informed the psychological counselors about the research and obtained their informed consent. Then, semi-structured interview forms created by the researchers were sent to the psychological counselors. It was ensured that the psychological counselor filled out the form in interaction with the researcher.

Data Analysis

For data analysis, the researchers used the MAXQDA, which is a software assisting researchers to systematically assess and interpret qualitative texts. Multiple coders can easily use the software for a particular project. It is able to store and code photo and video fragments (Yakut-Çayır & Sarıtaş, 2017).

A descriptive analysis was performed for the qualitative analysis of the questionnaire responses by the selected 21 counselors. Descriptive analysis is a type of qualitative data analysis involving the summarization and interpretation of data obtained through various data collection techniques according to predetermined themes. In this type of analysis, the researcher can frequently include quotations to remarkably reflect the opinions of the interviewed or observed individuals. This analysis is mainly intended to present readers with obtained data in an abridged and interpreted form (Yıldırım & Şimşek, 2003).

To this end, the researchers first uploaded the semi-structured questionnaires to the MAXQDA software. Subsequently, the data were organized in line with the questions addressed to the psychological counselors, which was followed by the creation of subthemes about the theme supervision. Furthermore, similar opinions under each subtheme were coded to create categories. Finally, the data were depicted through figures. In order to increase the plausibility of the study, quotations were made from the participants. Personal information identifying the holders of opinions were coded in parentheses right after each opinion.

Validity and Reliability

In their recommendations for the strategies that can enhance the quality of qualitative research, Lincoln and Guba (1985) preferred to use over validity and reliability certain concepts that they perceive to be more applicable to the nature of qualitative research. So they used “credibility” instead of “internal validity”, “transferability” instead of “external validity”, “consistency” instead of “internal reliability”, and “confirmability” instead of “external reliability”. The researchers were careful in taking cognizance of the strategies suggested by Lincoln and Guba (1985) to ensure validity and reliability in qualitative research.

To ensure credibility and transferability in qualitative analysis, the researchers first performed a literature review on the research subject and built the theoretical framework for the study. They determined the qualitative research design and how the semi-structured questionnaires would be developed as the qualitative data collection instrument. For data collection, they employed criterion sampling, a purposeful sampling method, so that they could access sufficient applicable data since there were a series of

predetermined criteria and they also used maximum diversity sampling and convenience sampling to define in detail the specific aspects of all situations including sampling and to reveal the common themes among different situations. To access authentic information through the study, the participants were assured that personal identifying information would be kept confidential and the study was conducted on a voluntary basis. To avoid any data losses during data collection, the counselors were sent the questionnaires and the data were collected in written form. The data collection and data analysis processes are also explained in detail.

To ensure consistency in qualitative analysis, all the themes and codes were checked (Creswell, 2017) independently by each researcher. Furthermore, to achieve confirmability, the data from the interviews were reviewed and checked by the researchers at different times. The agreement between coders is computed using the formula $\text{Similarity: Reliability/Agreement Percentage} = \text{Agreement} / (\text{Agreement} + \text{Disagreement}) \times 100$. Between-coder agreement should be a minimum of 80 percent (Özdemir and Avcı, 2019). The agreement percentage for this research was computed to be 95 percent.

RESULTS

This section analyzes the counselor responses to the open-ended questions in the semi-structured questionnaire, and presents seven subthemes concerning the research theme of supervisory process. These subthemes include (1) assessment of supervision, (2) methods and techniques used in supervision, (3) frequency of supervision, (4) focused theory of supervision, (5) supervisor attitudes and behaviors, (6) supervisory relationship, and (7) focus of feedback during supervision.

Views of Psychological Counselors about the Supervisory Process

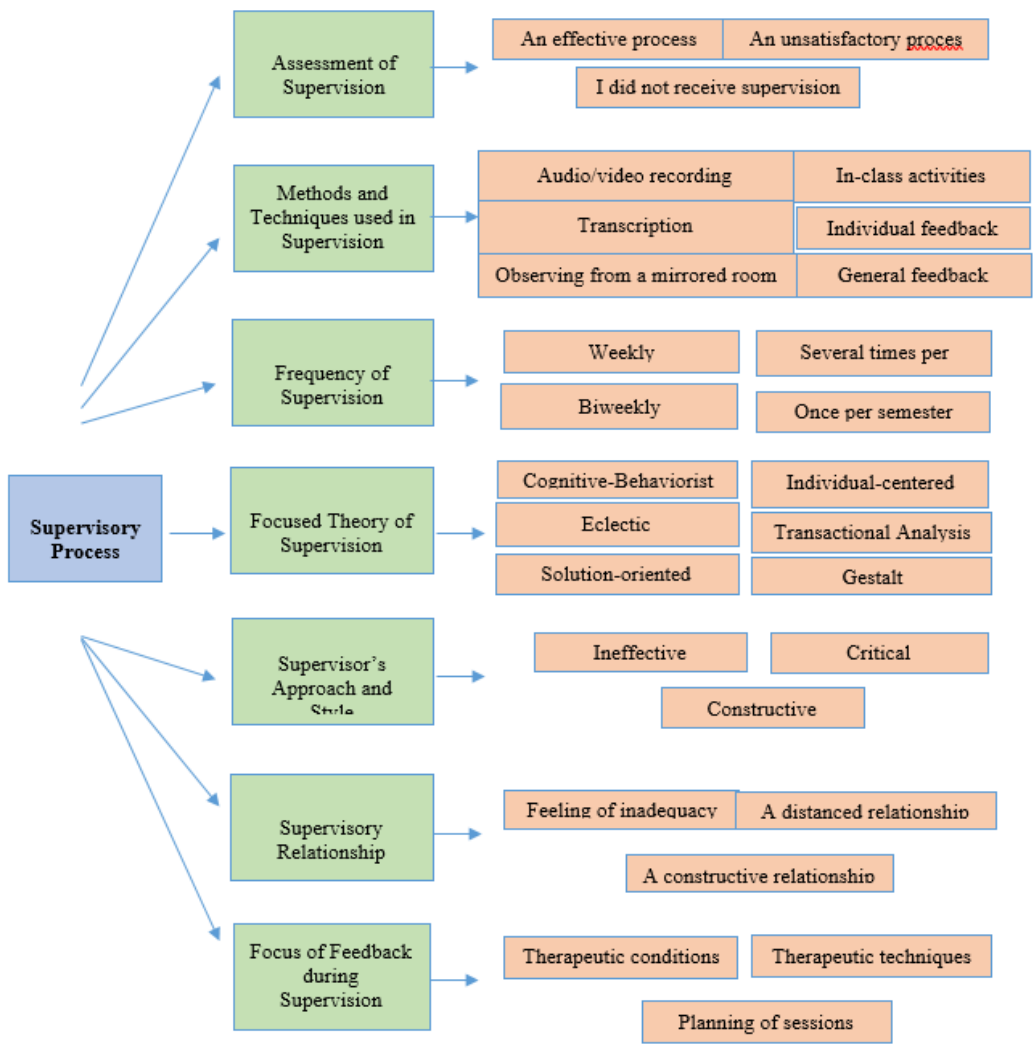


Figure 1. Subthemes and categories about the supervisory process

As seen in Figure 1, the supervisory process consists of seven subthemes. Furthermore, a total of 28 categories were created for the subthemes, which are presented below, respectively.

The Subtheme “Assessment of Supervision” and its Categories

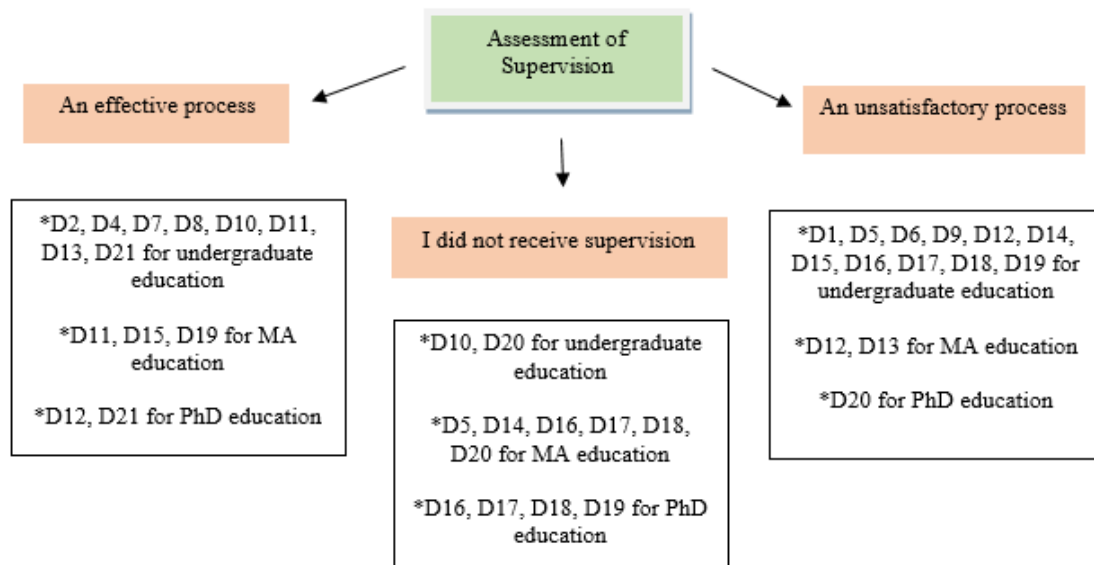


Figure 2. The subtheme “assessment of supervision” and its categories

As seen under the subtheme “assessment of supervision” given in Figure 2, two of the counselors at undergraduate level (D10, D20) indicated that they received no feedback from their supervisors, eleven of them (D1, D5, D6, D9, D12, D14, D15, D16, D17, D18, D19) indicated their belief that the supervision offered during undergraduate training was unsatisfactory, and eight of them (D2, D4, D7, D8, D10, D11, D13, D21) indicated their belief that supervision is an effective process. Below is a sample statement by counselor with a bachelor’s degree:

D5: “For me, the counseling supervision I received during my undergraduate education at university was a sort of training that was given at a minimum level and was underrated when compared to all the other undergraduate courses, whose importance the students could not appreciate enough” (Male, Bachelor’s degree).

At master’s level, six of the counselors (D5, D14, D16, D17, D18, D20) indicated that they had not received any supervision during their MA training, two of them (D12, D13) said that the supervision they received was unsatisfactory, and three (D11, D15, D19) mentioned their belief in the effectiveness of the supervision they received. The following is an excerpt from a sample statement by counselor with an MA degree:

D14: “I simply received an individual counseling course during my undergraduate education but did not receive such a course and supervision during my MA education. A non-tenured instructor taught our undergraduate counseling course and a student who did not take the course came to our class every week to serve as a client. So the client changed and another one of us acted as the counselor every week. The instructor helped the students with our counseling process with the client. I was shy so I always assumed the role of an observer. I never felt happy about receiving supervision as an observer as part of that course. That was why I decided to receive supervision training from an independent institution. But that was really expensive for me, so I wish I had received a better supervision training” (Male, Bachelor/MA Degrees).

At PhD level, four of the counselors (D16, D17, D18, D19) indicated that they never received supervision during their PhD education; one of them (D20) found the supervision unsatisfactory, and two of them (D12, D21) believe in the effectiveness of the supervision they received. Given below is a sample statement by a counselor with a PhD degree in counseling:

D12: “The supervision we received during my undergraduate education as part of the course on Individual Counseling Practicum was not an actual supervision. The course instructor used to come to a class of 90 students every week to read aloud a presentation for about 15-20 minutes, which was mostly irrelevant to the course content. And we used to converse during the rest of the course session. In addition, the instructor asked us to find a client for ourselves, conduct six weekly sessions with him or her, record each session, and make a brief summary of what we talked each week, which we were supposed to submit as an assignment at the end of the term. We received no feedback for our assignments. Most of my classmates submitted empty CDs and still passed with high course grades. During my MA studies, I again took the individual counseling practicum course from the same instructor. Although we were about 10-12 students in this MA course, the teaching was still based on our weekly presentations. This time, we were not asked to submit any counseling assignments. I was terrified on the first day of my individual counseling course and that was when I noticed that I had no knowledge of counseling. For that reason, this course turned out to be a challenging process for me. The course and the supervision process were highly elaborate and productive” (Female, Bachelor’s/MA/PhD Degrees).

The Subtheme “Methods and Techniques used in Supervision” and its Categories

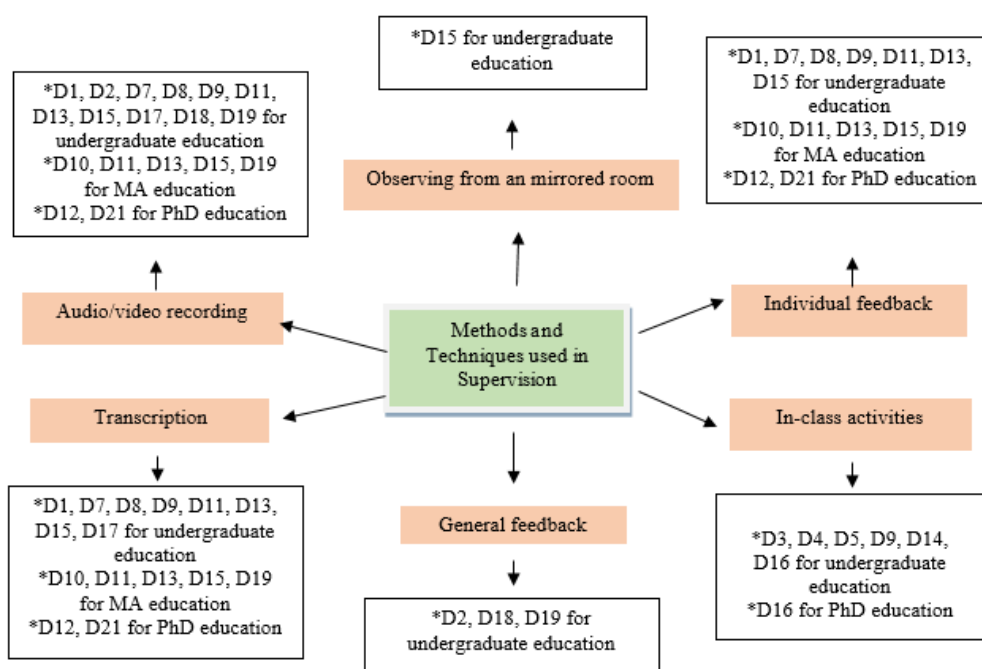


Figure 3. The Subtheme “Methods and Techniques used in Supervision” and its Categories

Figure 3 shows that under the subtheme “methods and techniques used in supervision”, six of the counselors with a bachelor’s degree (D3, D4, D5, D9, D14, D16) indicated that they had a supervision process with in-class activities without actual clients during their undergraduate training; two of them (D6, D12) had their supervision process with actual clients but without feedback; three of them (D2, D18, D19) received supervision with actual clients, recordings, in-class feedback methods and techniques; six (D1, D7, D8, D9, D11, D13) had supervision with actual clients, recordings, transcriptions, and individual feedback methods and techniques; one (D17) had supervision using actual clients, in-class role-plays, recordings, transcriptions, and general in-class feedback methods and techniques; and one (D15) received supervision using actual clients, recordings, transcriptions, observing from a mirrored room, and

individual feedback methods and techniques. Below is a sample statement by a counselor with a bachelor's degree:

D6: *"We needed to be given supervision as part of the individual counseling practicum course. And each of us as students found three clients and conducted a total of 15 counseling sessions; i.e., five sessions with each client. We recorded each session on audio and sent the recordings to our supervisor; yet, we did not receive any supervision either before or after the sessions. Because our instructor told us that she did not have time for that!"* (Female, Bachelor's degree).

At MA level, five of the counselors (D10, D11, D13, D15, D19) received supervision using actual clients, recordings, transcriptions, process planning, and individual feedback methods and techniques during their MA studies. A sample statement by a counselor with an MA degree is as follows:

D15: *"During my counseling supervision course that I took for my undergraduate training, we had special rooms for our counseling sessions. Throughout the course, I personally conducted individual sessions in these rooms twice to receive supervision. Then, I came out of the session and received critical feedback from the jury. In other sessions, I was followed by my instructor through the portfolios I drafted (including audio recordings, transcriptions, etc.); yet, the feedback here was not detailed enough. During my MA studies, we created files for each counseling session we conducted as part of the counseling supervision we received and sent these files to the instructor/supervisor. My supervisor closely followed up on my audio and video recordings, transcriptions, the plans for the next counseling session before each session, and the session summary after counseling. She performed all the follow-up on my files, sent me the revisions she deemed necessary, and also expressed her criticisms after sessions. This way, she guided my other sessions"* (Male, Bachelor's/Master's Degrees).

At PhD level, one of the counselors (D16) indicated that she had a supervision process with in-class activities during PhD education; two of them (D16, D20) received supervision with actual clients but without feedback; and two (D12, D21) had their supervision with actual clients, recordings, transcriptions, individual and in-class feedback methods and techniques. Below is a sample statement by a counselor with PhD degree:

D20: *"I did not receive any supervision during my undergraduate and master's education. During my PhD studies, we were asked to conduct individual counseling sessions as an assignment. I tried to conduct these individual counseling sessions on my own. And we were not given any supervision for this assignment. Our instructor simply answered our questions about our clients if we had any during class. Yet, we did not receive any individual feedback about the counseling sessions we conducted* (Male, Bachelor's/Master's/PhD Degrees).

The Subtheme "Frequency of Supervision" and its Categories

As shown in Figure 4 concerning the subtheme "frequency of supervision", at undergraduate level, nine of the counselors (D1, D3, D4, D7, D8, D11, D13, D17, D21) indicated that they received supervision weekly; three of them (D1, D2, D19) received supervision biweekly; four (D5, D9, D15, D18) several times per semester; and two (D6, D14) received it only once per semester as part of their undergraduate studies. A sample statement by a counselor with bachelor's degree is given below:

D7: *"We were about 15 people in our supervision group. We had class once a week, in which we watched videos of all of us. We received group supervision in that course. And we could visit and ask our supervisor whenever we had questions. We did not receive any individual supervision outside the class"* (Female, Bachelor's degree).

At master's level, four of the counselors (D10, D11, D15, D19) received supervision once a week and one (D13) received it once every two weeks during their MA studies. Below is a sample statement by a counselor with an MA degree:

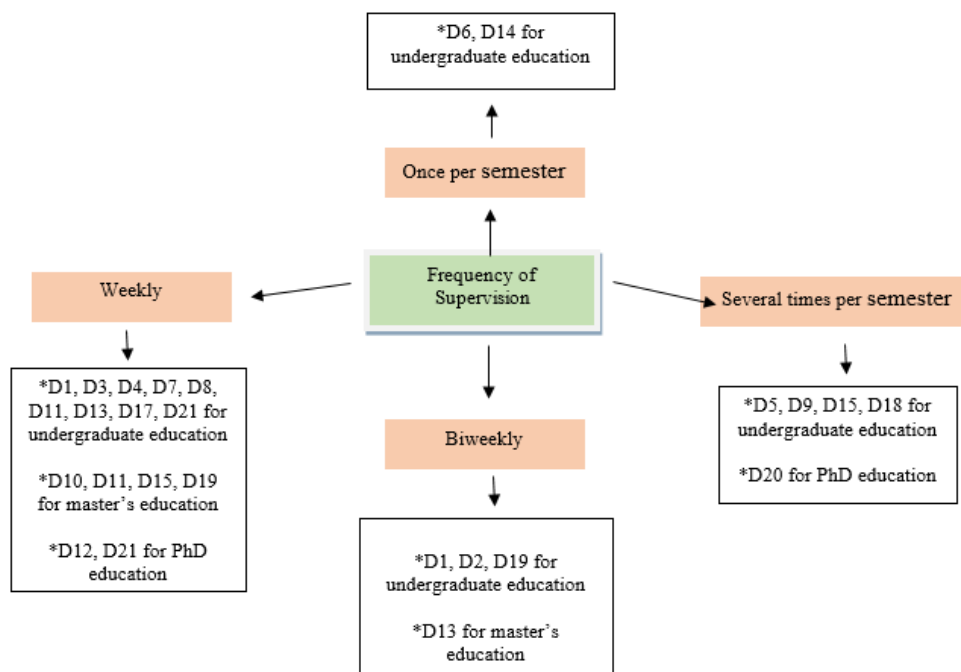


Figure 4. The subtheme “frequency of supervision” and its categories

D13: “During my undergraduate education, I conducted more than 40 individual counseling sessions and my supervisor gave me regular weekly feedback in this process. I could reach my supervisor in emergencies or when I had a question. Thanks to the supervision I received, I was always ready for the next session and the process progressed very effectively. During my master’s education, on the other hand, I conducted 10 individual counseling sessions and 10 group counseling sessions under the guidance of another instructor, from whom I received feedback a total of five times and all very late. I was already conducting my 4th session when I was given feedback for my first week. Thus, the process was problematic and I was not able to manage the process properly. Honestly, I have no idea how well I managed the process” (Female, Bachelor’s/Master’s degrees).

At PhD level, two of the counselors (D12, D21) received weekly supervision, while one (D20) received it several times per semester. A sample statement by a counselor with a PhD degree is as follows:

D20: “I did not receive any supervision throughout my undergraduate and master’s studies. During the course period of my PhD studies, we did not receive individual supervision for our counseling sessions but we could ask our questions about our clients and counseling sessions during class hours and could get feedback that way” (Male, Bachelor’s/Master’s/PhD degrees).

The Subtheme “Focused Theory of Supervision” and its Categories

As seen in Figure 5 concerning the subtheme “focused theory of supervision”, supervision was based on the cognitive-behaviorist theory for nine of the counselors (D1, D6, D7, D8, D14, D15, D16, D19, D20); on the eclectic theory for seven counselors (D3, D10, D11, D12, D13, D19, D21); on the solution-oriented theory for five counselors (D2, D5, D9, D14, D15); on the humanist theory for three counselors (D4, D17, D18); on the transactional analysis for one counselor (D16); and on Gestalt theory for one counselor (D2). Below are sample statements by some of the counselors:

D16: “During my PhD studies, I received supervision based on Transactional Analysis and Cognitive-Behaviorist theories. But receiving supervision based on these theories was not my choice. And these were not actually theories specific to supervision methodology, but rather approaches used by the supervisor in his own counseling sessions. So we did not receive a theory-

based supervision. Such supervision is not known in Turkey so it is not used” (Female, Bachelor’s /Master’s/PhD Degrees).

D5: “Although I am not sure exactly which theory the limited supervision I received during an undergraduate course was based on, I recall that it was mainly based on short-term solution-oriented counseling” (Male, Bachelor’s degree).

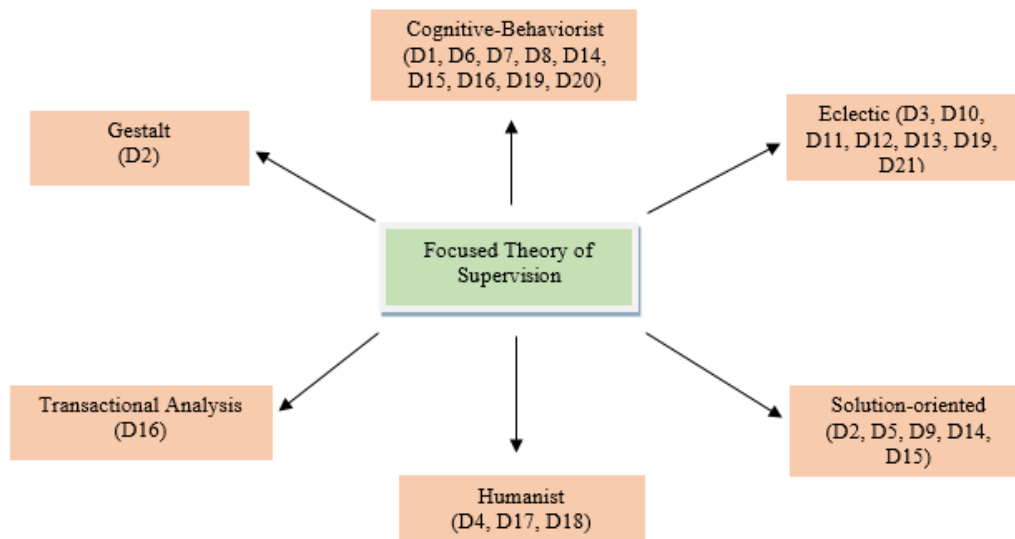


Figure 5. The Subtheme “Focused Theory of Supervision” and its Categories

The Subtheme “Supervisor’s Approach and Style” and its Categories

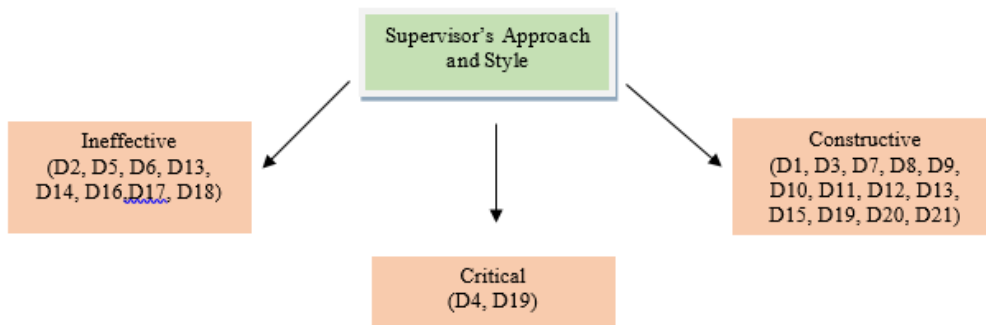


Figure 6. The Subtheme “Supervisor’s Approach and Style” and its Categories

As seen in Figure 6 concerning the subtheme “supervisor’s approach and style”, eight of the counselors (D2, D5, D6, D13, D14, D16, D17, D18) found the approach and style of their supervisors ineffective; two (D4, D19) found it critical; and thirteen (D1, D3, D7, D8, D9, D10, D11, D12, D13, D15, D19, D20, D21) found it constructive. Below are sample statements by some of these counselors:

D5: “I do not think that our instructor of the counseling practicum course displayed a professional approach in his relationship with us. His approach in this course was the same as his other courses. We did not build any kind of relationship. The course was taught at once to all the students and there was no individual communication, which was the main reason why we did not care about our supervision training” (Male, Bachelor’s degree).

D4: “Our supervisor was highly critical in the process. She helped us with finding solutions but she could be very harsh in her criticisms” (Female, Bachelor’s degree).

D15: “My supervisor in my master’s education was an instructor who could discipline us without raising her voice, could teach, motivate, follow, and provide timely feedback; she challenged us but became a dear teacher for me in the end. Her feedback was very detailed, very frequent, and effective. I am so glad to know her” (Male, Bachelor’s/Master’s Degrees).

The Subtheme “Supervisory Relationship” and its Categories

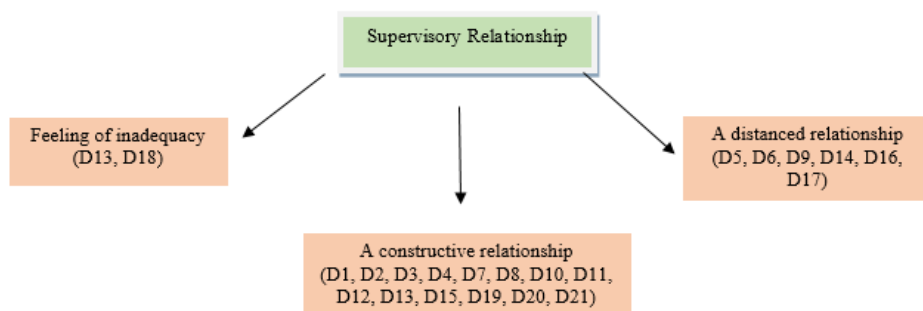


Figure 7. The subtheme “supervisory relationship” and its categories

As shown in Figure 7 concerning the subtheme “supervisory relationship”, two of the counselors (D13, D18) believe that their relationship with their supervisors gave them a feeling of inadequacy; six (D5, D6, D9, D14, D16, D17) believe it was a distanced relationship; and fourteen (D1, D2, D3, D4, D7, D8, D10, D11, D12, D13, D15, D19, D20, D21) described it as a constructive relationship. Sample statements by some of the counselors are given below:

D18: “I was adversely affected by my relationship with my supervisor during the supervision I received as part of my undergraduate studies. It made me feel inadequate. I was negatively affected since the course was taught ineffectively” (Male, Bachelor’s /Master’s/ PhD Degrees).

D9: “I can only feel cold and distant toward a kind of supervision that involves no face-to-face meetings. This method was used probably because it was a crowded class of 60 students. But supervision is one of those areas in university education that needs improvement the most” (Female, Bachelor’s Degree).

D1: “We had a positive relationship with our supervisor and I was positively influenced by this relationship. She was always there to help us and would guide us by her many individual comments such as “look, this is not right”, “you should have said this here”, “you were unresponsive at this point” or “you were too silent or you talked too much”” (Male, Bachelor’s Degree).

The Subtheme “Focus of Feedback during Supervision” and its Categories

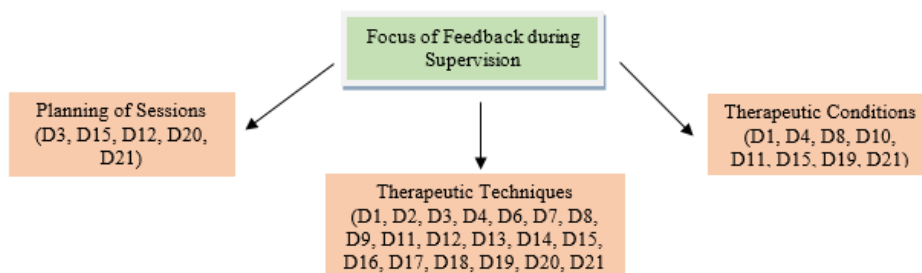


Figure 8. The Subtheme “Focus of Feedback during Supervision” and its Categories

As seen in Figure 8 which deals with the subtheme “focus of feedback during supervision”, five of the counselors (D3, 15, 12, 20, 21) indicated that they focused on the planning of sessions during supervision; eight (D1, D4, D8, D10, D11, D15, D19, D21) said they focused on therapeutic conditions during supervision; and nineteen (D1, D2, D3, D4, D6, D7, D8, D9, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21) said they focused on therapeutic techniques during supervision. Below are sample statements by some of the counselors:

D21: *“My supervisor was very careful about building a sound therapeutic relationship between the client and the counselor and establishing therapeutic conditions (unconditional acceptance, respect, empathy, sincerity, and transparency) throughout the counseling process. Particularly during the earlier sessions, he provided feedback by taking care to use the early-level techniques in a healthy way. He was careful about providing feedback on using the techniques appropriately in their proper place. In the later sessions, we received feedback on how and where to employ the advanced techniques and used them in line with our client’s needs”* (Female, Bachelor’s /Master’s/ PhD Degrees).

D8: *“We progressed with the skills required for becoming an effective counselor. We focused on empathetic understanding, authenticity, correct intervention, and grasping the key points”* (Female, Bachelor’s /Master’s Degrees).

D19: *“During my undergraduate supervision, my supervisor particularly focused on the principle of here and now, body language, and projection of emotions and content. In addition, we also focused on principles such as unconditional acceptance of the client and observing empathy, respect, and privacy. In my master’s-level supervision, my supervisor similarly focused on techniques such as the principle of here and now, body language, and projection of emotions and content. Examining all the techniques required by Cognitive-Behaviorist Therapy and Gestalt Therapy and feedback were important issues in this process. We also focused on principles such as unconditional acceptance of the client and observing empathy, respect, and privacy”* (Male, Bachelor’s /Master’s/ PhD Degrees).

DISCUSSION

This study sought to answer the question “how do the counselors view the supervision they received during their training process?” As a result of the study concerning the supervision given during undergraduate education, 2 of the counselors indicated that they had not received any supervision at all; 11 indicated that the supervision they received turned out to be an unsatisfactory process; and 8 mentioned the effectiveness of their supervision process. As for the supervision process in master’s education, 6 of the counselors did not receive any supervision, while 2 expressed their belief in the unsatisfactory quality of the supervision they received and 3 described their supervision as an effective process. For the supervision process in PhD education, 4 counselors did not receive any supervision; 1 believes that the supervision they received was unsatisfactory; and 2 believe in the effectiveness of their supervision process. Özgüven (1990) conducted a study in which he examined how the counseling and guidance activities have flourished in Turkey and found that the practicum and supervision experiences offered to undergraduate students are inadequate. In their study with professional counselors, Tuzgöl-Dost and Keklik (2012) reported that 30.5% of the counselors found their internship, practicum, and supervision experiences at university unsatisfactory. Moreover, 25 percent of the counselors feel themselves incompetent in their professional knowledge and skills. In his research on the supervision opportunities provided to trainees in Turkish universities, Özyürek (2009) concluded that the supervision offered in practicum courses is insufficient as it is given by inexperienced instructors to crowded student groups. Clearly, supervision practices provided in over-crowded environments is one of the factors that diminishes the quality of supervision activities in Turkey. According to CACREP (2001) standards, an

academic staff member providing supervision should have a maximum of 5 students for individual supervision and a maximum of 10 students for group supervision. In a similar vein, Borders (1991) argued that the number of students per supervisor should be between three and six so that the quality of supervision opportunities can be maintained.

According to the results of the present study concerning the supervision process in undergraduate education, the counselors who had received supervision indicated that their supervision process involved the following methods and techniques in order of frequency: with in-class activities but without actual clients; with actual clients but without feedback; with actual clients, recordings, and in-class feedback; with actual clients, recordings, transcriptions, and individual feedback; with actual clients, in-class roleplays, recordings, transcriptions, and general in-class feedback; and finally, with actual clients, recordings, transcriptions, observing from a mirrored room, and individual feedback. As for the supervision process in master's education, the counselors who had received supervision indicated that their supervision process involved actual clients, recordings, transcriptions, process planning, and individual feedback, in order of frequency of the methods and techniques used. And the counselors who had received supervision during their PhD studies indicated that the following methods and techniques were used in their supervision process in order of frequency: with in-class activities; with actual clients but without feedback; and with actual clients, recordings, transcriptions, individual and in-class feedback. These results suggest that the methods and techniques used for supervision in Turkey are not supported by certain standards and do not differ between universities and according to education levels. Similarly, in a study on the processes through which counselor trainees acquire counseling knowledge and skills, Meydan (2014) concluded that there is no clear specification as to which supervision methods should be used for supervision offered in Turkey. The author also noted that regardless of the supervision model and interventions used for the supervision given as part of the individual counseling course in Turkey, it would be difficult to train counselors who are highly competent in supervision through a supervision process that only lasts for one semester, usually through sessions with a limited number of clients and with feedback provided for a limited time period. CACREP (2009) standards underline that in-class practices are employed in the prepracticum stage to help prospective counselors acquire counseling knowledge and skills and give them a counseling experience. Here, an environment is created for counselors where they practice counseling with one another under the supervision of the course instructor. At the practicum stage, counselor trainees are expected to start working with actual clients. Supervision provided at this stage should involve individual or triadic supervision sessions that last for one hour a week on average, plus group supervision of one and a half hours a week. As demonstrated by the research findings, supervision practices in Turkey are offered either in individual sessions or in classroom groups and some of these practices involve actual clients, while some are based on classroom activities. It has been observed that the counseling training in Turkey is not guided by a common understanding for practicum courses and supervision; counselor trainees undergo an inadequate process of supervision and do not see themselves as competent enough when graduating; some of them do not receive any supervision while very few of those who do only receive individual supervision; and a large part of them receive supervision in crowded environments. However, Starling and Baker (2000) highlight the fact that group supervision experiences provided for counseling students at the beginning of practicum in addition to individual supervision will reduce their anxiety, increase their self-confidence, and help them clarify their goals, and also getting feedback from different people will enrich the supervision process.

The study results on the frequency of supervision received at undergraduate level demonstrate that the counselors received supervision weekly, biweekly, several times per semester, and once per semester in order of frequency. As for the frequency of supervision in master's education, the counselors indicated that they had received supervision weekly and biweekly, in order of frequency. And for the frequency of supervision in PhD education, the counselors indicated that they received it weekly and several times per semester, in order of frequency. Our findings suggest that there is no standard for the hours of supervision in Turkey. Özyürek (2009) conducted a survey about the counseling and guidance practices and supervision opportunities offered to undergraduate students in Turkish universities. He found that most of the university students could not receive supervision regularly and for a sufficient duration in their practicum courses. His results also revealed that some of the students did not form groups when receiving supervision, the instructors had ten to fifteen students under their supervision, half of the supervising instructors had not completed their PhD studies, about 30 percent of these instructors could attend the weekly two-hour classes (group supervision), and less than a quarter of the students received individual supervision. Borders (1991) recommends that in counseling training, the supervisor and the counselor should meet for supervision weekly or biweekly for sessions ranging between one and a half hours and three hours. As a matter of fact, counselor training in the US is provided at master's level (Borders & Drury, 1992) and on top of theoretical courses (prepracticum), the practicum stage involves 100 hours of supervision and internship stage involves 600 hours of supervision experience (CACREP, 2001). In these supervision practices, the counselor and supervisor are advised to meet every week for one hour for individual or triadic supervision and also for one and a half hours for group supervision. In a study on counselor training in the US, Prieto (1998) found that the counselors and supervisions in most counseling programs meet once a week for about three hours.

Our study also revealed that the counselors received supervision based on cognitive-behaviorist theory, eclectic theory, solution-oriented theory, humanist theory, transactional analysis theory, and Gestalt theory, by their order of frequency. All of the participants indicated that they had received supervision according to models based on counseling theories. In these supervision models, the counseling conditions required by the theory that the supervisor focuses on in counseling also form the basis for his or her supervision (Meydan, 2014; Neukrug, 2012). In addition to these models, the literature also defines developmental supervision models and social role models of supervision. Borders and Brown (2005) argue that the supervision model used by the supervisor theoretically guides their selection of specific supervision methods and techniques, how they organize the knowledge and skills for prospective counselors to learn, and also their assessment of the prospective counselors.

The study results demonstrate that the counselors who had received supervision find the approach and style of their supervisors ineffective, critical, and constructive, respectively in order of frequency. The literature on supervisor behaviors recommends supervisors to start their relationship with counselor trainees with an empathetic and supportive approach and continue with a confrontational and evaluative approach in the later stages (Borders et al., 1991). Daniels and Larson (2001) argue that supervisor might discourage supervisees when they give them feedback through an unsatisfactory and overly-critical approach. Ronnestad and Skovholt (1993), who examined the supervision carried out with the beginning and advanced graduate students of counseling and psychotherapy, concluded that it would be more useful for the professional development of counselors if the supervisors provide their feedback to novice counselors through an endorsing approach and the teacher's role rather than being corrective and directing. The researchers also found that the beginning students need a more structured and didactic

supervision and a supportive and constructive approach from the supervisor in the process. In another study, Larson (1998) highlights the positive impact of a constructive and encouraging supervisor approach and performance-oriented supportive feedback in the supervision process upon the professional development of prospective counselors. In a similar vein, Lorenz (2009) also stresses the contribution of the supervisor's constructive approach, the quality of the supervisory relationship, and supervisor behaviors to the self-efficacy of counseling students.

In our study, the participants described their relationships with their supervisors as one that gave them a feeling of inadequacy, a distanced relationship, and a constructive relationship, in order of frequency. In the supervision process, a connection is established between the supervisee and the supervisor that forms their relationship. How this connection unfolds depends on the mutual trust between the parties, their collaboration, sharing, and the time spent together (Beinart, 2004; Renfro-Michel, 2006). Leddick and Bernard (1980) underline the importance of a counselor's rapport with his or her supervisor and the supervisor's warm, encouraging, and accepting attitudes to receive the maximum benefit from the supervision process. In another study on the counseling training in the US, Prieto (1998) found that students need a close, constructive, facilitative, and respectful supervisory relationship for maximum benefit from the supervision environment. Worthington and Roehlke (1979) also concluded in their research on the supervision process that counselors need a sincere and constructive supervisory relationship in this process. Büyükgöze-Kavas (2011) studied student views about their supervision process and noted that if counselors can build a constructive, motivating, sincere, and objective relationship with their supervisors, then this would positively affect and facilitate the supervision process.

The counselors in our study indicated that their supervision feedback had been focused on the planning of sessions, therapeutic conditions, and therapeutic techniques, respectively. In similar to our findings, Worthington and Roehlke (1979) found that prospective counselors receiving supervision expect the focus of feedback should be on how the counseling process is structured and the use of therapeutic techniques. Barletta (2007) also emphasized the importance of supervisor's feedback about therapeutic conditions and therapeutic techniques in the supervision process. In addition, the author recommends supervisors to use these skills in group supervision to teach them to prospective counselors by acting as a model. On the other hand, Campbell (2000) focuses on the quality of the supervisor's skills to provide feedback rather than on what he or she attaches importance to in feedback. Tangible and clear feedback that is oriented toward certain goals and does not involve generalizations play a crucial role in counselors' professional development.

Implications

This study explored counselors' views about the supervision process, effective counselor characteristics, professional pride, and job satisfaction. The qualitative data demonstrated that counselors' professional pride and job satisfaction is influenced by supervision, supervisor behaviors, and effective counselor characteristics, as well as the problems they encounter in their professional practice. We suggest that further research may explore counselors' professional problems using quantitative and qualitative methods. Furthermore, the present research and most of the research in the literature have been conducted with school counselors. Future research may focus on the supervisor behaviors, effective counselor characteristics, professional pride, and job satisfaction of counselors working in different institutions through qualitative data.

We suggest conducting research on how to enhance the professional pride and satisfaction for counselors in their practice and to explore the problems they might encounter in their professional practice. In line with this purpose, workshops may be organized where counselors may meet their colleagues. Also, in-service trainings such as therapy training and supervision may be offered to enhance effective counselor characteristics in counseling practice.

We believe that the “individual counseling practicum and supervision” course should be compulsory in counselor training at undergraduate, master’s, and PhD levels.

In the results obtained from the research, it was seen that there is no standard in supervision training in Turkey. In order to achieve this standard, it can be suggested that the faculty members in the field of guidance and psychological counseling agree on a joint supervision program they have developed. It is essential to consider the supervision hours included in the CACREP standards in this supervision program that is proposed to be established. In addition, it can be suggested to policy makers to carry out studies on standardization in the number of faculty members and their qualifications.

Conclusion

In line with the data obtained from the research, it is seen that the supervision training given in psychological counseling and guidance programs in Turkey is insufficient. According to the research findings, the reason for this situation is that the supervision period is short, the number of students per faculty member is high, the number of faculty members is low, the faculty members do not have sufficient experience in individual psychological counseling and supervision, psychological counseling rooms, mirror rooms, camera systems in universities. This is explained by the limited physical facilities and the lack of a common understanding among universities.

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Author Contribution

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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RESEARCH



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ARAŞTIRMA

Açık Erişim

The Effect of Childhood Traumas on Psychological Symptoms: The Sequential Mediating Roles of Self-Concept and Being Exposed to Dating Violence

Çocukluk Çağı Travmalarının Psikolojik Belirtiler Üzerindeki Etkisi: Kendilik Algısının ve Flört Şiddetine Maruz Kalmanın Ardışık Aracılık Rolü

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ABSTRACT

It was demonstrated in various studies that childhood traumas also affected many psychological symptoms in adulthood. Also, it was reported that being exposed to dating violence and negative self-concept are related to various psychological symptoms. The purpose of the present study is to examine the sequential mediating role of self-concept and being exposed to dating violence in the relationship between childhood traumas and psychological symptoms. A total of 512 participants including 232 men, 280 women, filled the scales online. Regression analysis by PROCESS and SPSS 23 were used for predictive relationships and sequential mediating effects. The results are consistent with the hypotheses, self-concept and being exposed to dating violence play a sequential mediating role in the relationship between childhood traumas and psychological symptoms ($\beta = 0.11, p < .05$).

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ÖZET

Çocukluk çağı travmalarının yetişkinlikte de birçok psikolojik belirtiyi etkilediği çeşitli çalışmalarda gösterilmiştir. Ayrıca flört şiddetine maruz kalmanın ve olumsuz kendilik algısının çeşitli psikolojik belirtilerle ilişkili olduğu bildirilmiştir. Bu çalışmanın amacı, çocukluk çağı travmaları ile psikolojik belirtiler arasındaki ilişkide kendilik algısının ve flört şiddetine maruz kalmanın ardışık aracılık rolünü incelemektir. Ölçekleri 232 erkek, 280 kadın olmak üzere toplam 512 katılımcı online olarak doldurmuştur. Yordayıcılık ilişkileri ve ardışık aracılık etkileri için PROCESS ve SPSS 23 programlarının regresyon analizleri kullanılmıştır. Sonuçlar hipotezlerle uyumludur, kendilik algısının ve flört şiddetine maruz kalmanın, çocukluk çağı travmaları ile psikolojik belirtiler arasındaki ilişkide ardışık aracılık rolü bulunmaktadır ($\beta = 0.11, p < .05$).

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INTRODUCTION

Dating relationships during young adulthood and adulthood allow the individual to get to know the other person and establish a special communication before marriage. We can observe violent behaviors in dating relationships as well as martial relationships. Although the prevalence of exposing at least one of the emotional, physical or sexual violence among young adults during dating period may vary in various studies, it has been reported that it may increase to 37.2% in women and 21.8% in men, and these rates may increase during adolescence and may be seen up to 70% (Taquette & Maia Monteiro, 2019; Garthe et al., 2019; Jennings et al., 2017).

Interpersonal violence affects the lives, psychological and physical health of individuals in heterogeneous forms and can shape their behaviors and relationships throughout life starting from their childhood period. Being a victim of emotional/psychological, physical and sexual violence since infancy may affect important vital functions such as personality structure, self-concept, behavioral patterns and chronic diseases (Öztürk, 2020). Interpersonal violence experienced during infancy/childhood is childhood traumas. Interpersonal violence can also be seen as dating violence, spousal violence, gender-based violence or violence against elder. (Lewis & Fremouw, 2001). Therefore, the theorists and researchers state that the ongoing violence in adolescence/young adulthood also has a mediating effect on the fact that early exposing violence affects the psychological health in adulthood (Herman, 2007; Perry, 2009). Similarly, they assume that exposing abuse during dating in adolescence frequently increases the risk of becoming a victim of domestic violence in adulthood and continues the cycle of domestic violence and may have effect on the psychological health (Herman, 2007; Widom et al, 2008). In a retrospective study, it was determined that those who were exposed to dating violence in young adulthood were more exposed to violence during their adolescence than those who were not exposed to dating violence in young adulthood (Smith et al., 2003).

Being Exposed to Dating Violence and Childhood Traumas

There are studies indicating that being exposed to dating/intimate partner violence is related to childhood abuse (Gobin et al, 2013; Borges & Dell' Aglio, 2020; Kim et al, 2014). Many types of abuse experienced in childhood increase the risk of victimization, perpetration and mutual violence (McMahon et al, 2015). According to a systematic review study, the risk factors of dating violence in youth and young adulthood include smoking, suicide attempts, using violence against peers, depression, low education level, problematic relationships with family and peers, psychosocial functionality problems, substance abuse, low self-confidence and negative self-concept, high number of partners, alcohol abuse, anger control problem, too much exposure to pornography in media, exposure to violence in childhood, witnessing violence between parents, tension, sibling violence, relationship dissatisfaction and low socioeconomic level (Jennings et al., 2017).

Children who grow up seeing violence in their families as a form of communication often use anger in their own relationships in a dysfunctional way. Their conflict resolution skills are low, as they see many examples of dysfunctional use of anger in intimate relationships. Stressed out and overreacting parents give inconsistent feedback about their child's behavior. When these children are compassionate, harmonious and social, parents cannot give appropriate reactions due to the stress they experience and the child cannot reinforce positive behaviors (Reyes et al., 2012). Young people, who experience negative experiences in family relationships, learn that relationships are unreliable. One of the reasons for this is

that parents, who have been exposed to violence in their own families, feel low satisfaction from their own children. The child perceives the dissatisfaction of his/her parent as shame and rejection of his/her entire existence (Herman, 2007). Constant rejection negatively affects the child's self-concept. Young people, who are rejected by their parents and form a negative self-concept, get more involved in close relationships where there is mutual violence. They are both aggressive towards their partners and choose partners who are aggressive (Daş, 2009; Öztürk, 2020). This pattern brings with it an insecure attachment style, which is affected by the experiences of rejection by the parents, and sensitivity to rejection in dating relationships. In addition to the influence of the family, being in a relationship with friends who are familiar with dating violence can also affect the presence of violence in one's own dating relationship. The reason for this may be that the norms of the adolescent witnessing dating violence regarding the relationships between peers, with whom he spends more time than his family, are negatively shaped. (Ehrensaft & Cohen, 2012; Reyes et al., 2012).

Being Exposed to Dating Violence and Psychological Symptoms

It has been reported that exposure to dating violence is associated with various psychological symptoms. Studies conducted with university students shows that dating violence causes symptoms of depression, anxiety and stress. It was determined that the anxiety levels of the women who were exposed to emotional/verbal violence and the anger levels of the women who were exposed to psychological and physical violence were higher than control groups (Choi et al., 2017). A study conducted with young adult women reported that most individuals, who were exposed to various forms of dating violence, experienced shame associated with helplessness and self-blame, which is the focus of general self-concept (Ismail et al., 2007). There are studies showing that people who are exposed to or who use dating violence have worse psychological health than those who do not have a history of dating violence. In a study conducted with university students, being exposed to dating violence was found to be related to relationship satisfaction and psychological problems. Men normalized violence more compared to women, while women reported more relationship satisfaction and more psychological problems. Women who were victims of dating violence but accepted men's violence against women reported low relationship satisfaction as a result of their victimization. Men who were victims of dating violence but accepted women's violence against men had symptoms of depression, anxiety and somatization. (Kaura & Lohman, 2007).

Childhood Traumas and Psychological Symptoms

It was demonstrated in many studies that childhood traumas also affected many psychological symptoms in adulthood (Gobin et al., 2013). In a study conducted by Dias et al. (2017) it was reported that those who were exposed to traumatic events during adulthood and those with PTSD were also exposed to childhood traumas at a significantly higher rate in the past. 79.5% of the participants, who stated that they were exposed to moderate and intense childhood trauma, also reported traumatic events during adulthood. Childhood traumas may be associated with psychological outcomes later in life, such as depression and bipolar disorder. A study of patients with major depression found that exposure to childhood abuse directly predicted the severity of depression (Hayashi et al., 2015). A meta-analysis study investigating the relationship between depression and subtypes of childhood traumas states that the strongest relationship is with emotional abuse. Verbal or nonverbal abuse by the person closest and most powerful to the child is associated with shame in childhood and depression in adulthood. Neglect, defined as the inability of caregivers to meet the child's basic emotional and physical needs may lead to low self-

esteem and depression in the future (Infurna et al., 2016). Schalinski et al. (2016) states that all childhood traumas are associated with PTSD symptoms, and trauma type and timing are more associated with dissociation and depression. Accordingly, physical neglect at the age of 5 and emotional neglect at the age of 4-5 are associated with increased symptoms of dissociation, while emotional neglect at the age of 8-9 is associated with increased symptoms of depression. From this point of view, it can be said that the pre-school and pre-adolescent periods are critical and sensitive points that provide the ground for physical and emotional neglect. Considering the relationship of psychological symptoms with childhood traumas and dating violence in adulthood it is hypothesized that being exposed to dating violence has a mediating role between childhood traumas and psychological symptoms (Öztürk, 2020).

Relationships of Variables with Self-Concept

According to Rosenberg's (1965) theory of self-esteem, self-concept is the sum of an individual's thoughts and feelings. According to Turner's theory of the self, one's self-concept may be ambiguous, but in the best moments it is a perception of how one is, and the courage and effort required to believe in being successful (Turner & Oakes, 1989). According to Carl Rogers, self-concept includes individual characteristics that a person believes he has control over and is aware of. There is a basic need to preserve and develop the self (Rogers, 1959).

In a study investigating the relationship between childhood traumas and self-concept, self-efficacy and the motivation to stay away from substances in substance addicts, childhood traumas have negative correlations with all variables. It has been found that there is a mediator role of self-concept between trauma and the motivation to stay away from the substance (Lu et al., 2017).

Research demonstrates that childhood trauma is a significant predictor of negative self-concept and submissive behavior. Also, there are negative correlations between self-concept and physical abuse, sexual abuse, emotional abuse and neglect (Berber-Çelik & Odacı, 2012). Cederbaum et al. (2020) conducted a study that aims to understand the role of self-perception in the association between childhood trauma and romantic relationships during adolescence and young adulthood. Childhood trauma was associated with lower self-perceptions in romantic relationships. Behavioral and scholastic self-perceptions predicted later positive romantic relationships. In addition, behavioral self-perception has a significant mediator effect.

The significant relationship between intimate partner violence and self-concept occurs with both physical and psychological violence and less direct subtypes of violence, such as threat, verbal violence and violence committed through third parties or relational (Cava et al., 2015). In the study of Penado-Abilleira and Rodicio-Garcia (2017), it was demonstrated that girls whose ages between 16-17 are the most vulnerable group in terms of physical self-concept among the girls and boys aged between 14-19.

Collin-Vézina et al. (2006) state that female adolescents in the child protection system, who are victims of dating violence, including injury, have negative self-perceptions. Because these adolescents see themselves more negatively, they have more problems in regulating their emotions, have more symptoms that are psychological and have lower professional and educational goals. Researchers report that these results are compatible with adult women who experience depression, anxiety, PTSD symptoms, helplessness, hopelessness and who are victims of physical violence.

A research states that anxiety disorder is associated with a more negative self-concept, and individuals with anxiety disorder experience more anger. In addition, according to the findings, the life dissatisfaction

and negative interpersonal relationships relate to negative self-concept and intensive use of negative communication styles (Şahin et al., 2011).

Present Study

Childhood trauma disrupts normal self-development. The attention of abused children to threats distracts them from the developmental task of creating a self-perception and a positive self-concept (Harter, 2015). Childhood maltreatment places individuals on a trajectory of repeated victimization that affects interpersonal and close relationships (Laporte et al., 2011). It is quite possible for the individual to relate with a partner who treats them as their parent(s). Negative self-concept is the key factor at this point. Because the individual can be limited to a negative self-concept and cannot have a broad perspective on other possible positive characteristics such as self-worth, self-confidence, and independence. The partner may treat the individual in a way that disrupts the individual's exploring process of his/her positive self-concept through psychological and/or physical violence. Dating violence is a factor that reinforces the negative self-concept in terms of the violence cycle (Herman, 2007; Ehrensaft & Cohen, 2012; Daş, 2009; Widom et al., 2008). Therefore, the self-concept is the first and being exposed to dating violence is the second mediator between the relationship of childhood trauma and psychological symptoms in this study.

Research findings showed that childhood traumas are associated with psychological symptoms in adulthood and being exposed to dating violence and self-concept are related to both childhood traumas and psychological symptoms. From this point of view, a sequential mediator model was tested in the present study to explain the mechanism of being exposed to dating violence and self-concept in the relationship between childhood traumas and psychological symptoms. Therefore, we propose the following hypotheses:

Hypothesis 1, self-concept will mediate the relation between childhood traumas and psychological symptoms.

Hypothesis 2, being exposed to dating violence will mediate the relation between childhood traumas and psychological symptoms.

Hypothesis 3, self-concept and being exposed to dating violence may play a sequential mediating role in the relation between childhood traumas and psychological symptoms.

In the literature there are many studies in the subject of being exposed to dating violence in the ages under 18 (Gobin et al., 2013; Borges & Dell' Aglio, 2020; Kim et al., 2014; Reyes et al., 2012), there is a gap about young adulthood dating relationships. One of the most important benefits of this study is to manifest some results about adulthood dating relationships. Another strength of this study is to demonstrate sequential mediation effect of self-concept in the first order and being exposed to dating violence in the second order between the relationship of childhood trauma and psychological symptoms. Also, there is not a broad literature about the self-concept. With this research, it is aimed to contribute to the literature on self-concept.

METHOD

Participants and Procedure

The population of this research study is adult women and men who are unmarried but in a dating relationship. For sampling purposes unmarried men and women participants aged 18-35 who have been romantically involved for at least 6 months were included. Excluding criteria is being under 18 and over

35 years old, not having a relationship currently, having a relationship for less than 6 months, being married. These participants are not related with each other. A total of 512 participants completed all scales between August 2017 and September 2018. 280 of the participants who completed the scales were women and 232 were men. Mean age was $24,85 \pm 4$. Education level was mostly university with 90.4%.

Ethical Statements

All procedures performed in studies involving human participants were in accordance with the ethical standards of Istanbul University Cerrahpaşa Faculty of Medicine Ethics Committee (approval number is 59491012-604.01.02) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Data Collection Process

Data were collected online with informed consent of participants. It was collected via social media groups (Facebook, WhatsApp, Instagram). There were not any participants declared any psychiatric disorders.

Measures

Childhood Trauma Questionnaire (CTQ). It was developed by David P. Bernstein in 1995. It was adapted by Şar, Öztürk and İkikardeş in 2012. There is no age limit in application, and it consists of 28 items. The scale covers five sub-dimensions in relation to childhood abuse: sexual, physical, emotional abuse and emotional and physical neglect and all items are evaluated as 5-point Likert type. By using this scale, a total score is obtained with five sub-scores including childhood sexual, physical, emotional abuse and emotional and physical neglect. The minimum total score that can be taken from the scale is 28 and the maximum total score is 140; as for the sub-scales, the minimum score that can be taken from each sub-scale is 5 and the maximum score is 25. The Cronbach alpha internal consistency value of the scale was found to be 0.93 for the group consisting of all participants (N=123) (Sar et al. 2012). In the sampling of this study, Cronbach alpha internal consistency coefficient (N=512) of the scale was found to be 0.85.

Symptom Check List (SCL-90-R). It was developed by Derogatis in 1977 to determine the distribution and severity of psychological symptoms. It is a self-report scale consisting of 90 items and 10 sub-units. The nine sub-units of the scale are called as: Somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid thinking and psychoticism. Validity and reliability study of the scale was conducted by Dağ (1991). Cronbach alpha internal consistency coefficient was calculated as 0.97. All sub-scales of the scale demonstrated high-level and significant correlations ranging between 0.45 and 0.91. The minimum score that can be taken from the sub-scales and general symptom average is 0 and the maximum score is 4 (Dağ, 1991). In the sampling of this study, Cronbach alpha internal consistency coefficient (N=512) of the scale was found to be 0.98.

Romantic Relationship Assessment Scale. It was developed by Kılınçer and Tuzgol-Dost (2014) with the aim of determining the perceived abuse in romantic relations. It consists of 70 items and mostly contains items related to emotional/psychological abuse. "He/she interferes in my personal plans", "He/she puts the pressure on me to make his/her opinions accepted", "He/she belittles my abilities" are some examples for items. The increase in the scores obtained from the scale refers to that the abuse perceived in the romantic relationship has increased. In the validity-reliability study of the scale, the statistics testing the compatibility of the data to the factor analysis were examined to evaluate the results of the explanatory factor analysis. Kaiser-Meyer-Olkin (KMO) statistics, which were used to determine

whether the number of data was sufficient for factor analysis, were examined and found to be 0.94. It was determined that the Cronbach alpha reliability coefficient of the RRAS (Romantic Relationship Assessment Scale) was 0.97. It was evaluated that the scale was one-dimensional, had a high internal consistency and therefore had a higher reliability (Kılınçer, Tuzgol-Dost, 2014). In the sampling of this study, Cronbach alpha internal consistency coefficient (N=512) of the scale was found to be 0.97.

Social Comparison Scale. The Social Comparison Scale (SCS) evaluates how people perceive themselves compared to others. The original form of SCS was developed by Gilbert and Trent in 5 items. The scale's adaptation was carried out by Şahin and Şahin (1992) with the addition of some items. In the last form of the scale, 18 bi-polar items are evaluated on a 6-point dimension. High scores refer to a positive self-schema, on the other hand, low scores refer to a negative self-schema. Cronbach alpha reliability coefficient was found to be 0.79. It was reported that the correlation of scale with Beck Depression Scale was $-.19$ ($p < .001$) and that it capable of successfully differentiating between depression low and high groups. Hisli-Şahin et al. (2002) also found that the correlations between the SCS and the sub-scales of the Brief Symptom Inventory ranged from $r = -.21$ (somatization) to $r = -.40$ (negative self). In the sampling of this study, Cronbach alpha internal consistency coefficient (N=512) of the scale was found to be 0.93.

Statistical Analysis

A sequential mediator's model was tested in the present study to explain the mechanism of being exposed to dating violence and self-concept in the relationship between childhood traumas and psychological symptoms by SPSS macro-PROCESS. This research had been approved by Istanbul University Cerrahpaşa Faculty of Medicine Ethics Committee.

PROCESS (model 6) and SPSS 23 were used for predictive relations and mediating effects. Descriptive data were obtained. There is not any missing data. There is normal distribution in data. Skewness and kurtosis values of all scales and sub-scales are between -3 and $+3$ (Brown, 2006). Pearson test was used for correlation analyses. The predictive and mediating relationships between the variables were evaluated through the hypotheses.

RESULTS

Preliminary Analyses

280 of the 512 people who participated in the study were women and 232 were men. The mean age was 24.83 ± 4.06 and the age range was 18-35. The mean age of women participants was 24.7 ± 3.89 , on the other hand, the mean age of men participants was 25.01 ± 4.27 . Relationship duration of all participants ranged from 6 months to 204 months; the average duration was found to be 26.18 ± 26.73 months. The descriptive data on the scales are shown in Table 1; correlations between variables are shown in Table 2.

Table 1. Descriptive data on scales

	N	min.	max.	\bar{X}	sd
RRAS	512	70	210	95.24	24.84
CTQ total	512	35	94	49.58	11.36
Physical abuse	512	5	23	6.28	2.66
Emotional abuse	512	5	25	7.91	3.48
Sexual abuse	512	5	24	6.61	3.23
Physical neglect	512	5	21	7.08	2.66
Emotional neglect	512	5	25	12.51	5.59
SCL-90 GSI	512	0	3.01	.85	.66
SCL-depression	512	0	3.85	1.09	.87
SCS	512	18	108	72.11	21.59

RRAS: Romantic Relations Assessment Scale, CTQ: Childhood Trauma Questionnaire, SCL: Symptom Control List, SCS: Social Comparison Scale

Table 2. Interrelations among all the observed variables

Variables	M	sd	1	2	3	4
1. RRAS	95.24	24.84	1			
2. CTQ total	49.58	11.36	.246**	1		
3. SCL-90	.85	.66	.513**	.318**	1	
4. SCL-depression	1.09	.87	.478**	.252**	1	
5. SCS	72.11	21.59	-.14*	-.158**	-.18**	-.19**

N = 512. **p<.001, *p<.05

RRAS: Romantic Relations Assessment Scale, CTQ: Childhood Trauma Questionnaire, SCL: Symptom Control List, SCS: Social Comparison Scale

Pearson correlations were conducted to examine bivariate associations among all research variables before testing our hypotheses. Table 2 presents the means, standard deviations, and correlations for all the observed variables. As hypothesized, childhood traumas were positively associated with being exposed to dating violence ($r = .246, p < .001$), psychological symptoms ($r = .318, p < .001$), and negatively associated with self-concept ($r = -.158, p < .001$). Self-concept was negatively associated with being exposed to dating violence and psychological symptoms ($r = -.14, p < .05$). Being exposed to dating violence was positively associated with psychological symptoms ($r = .513, p < .001$).

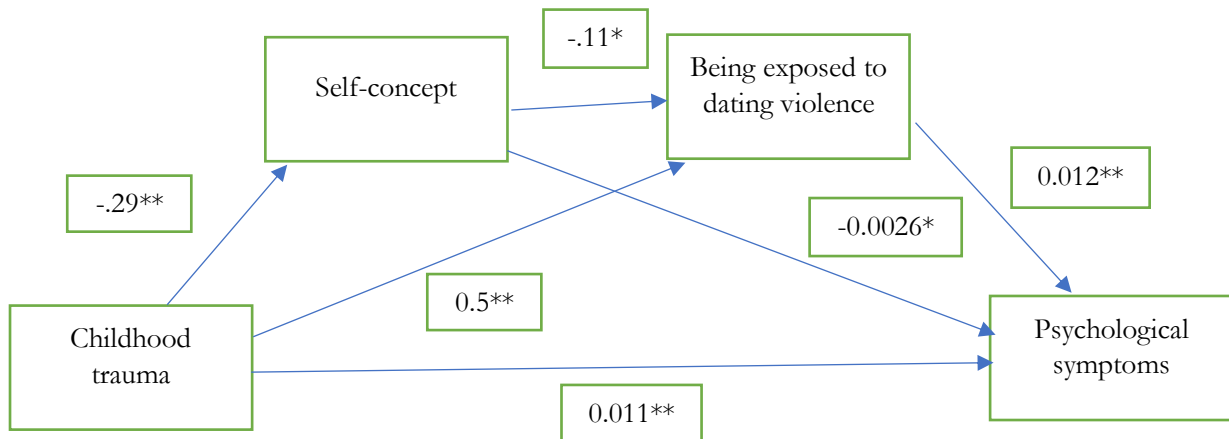
Testing for the Proposed Model

Table 3. Indirect effect of childhood trauma on psychological symptoms

	β	BootSE	BootLLCI	BootULCI
Total	0.007	0.0016	0.0044	0.0106
Self-concept	0.0008	0.0004	0.0001	0.0018
Being exposed to dating violence	0.0061	0.0015	0.0033	0.0093
Self-concept -> being exposed to dating violence	0.0004	0.0002	0.0001	0.001

Unstandardized regression coefficients were reported. Bootstrap sample size = 5000

LL low limit, CI confidence interval, UL upper limit



N = 512. **p<.001, *p<.05

Figure 1. The sequential mediating model

Total effect of childhood trauma on psychological symptoms is determined as $\beta = 0.018$, $SE = 0.0025$, $t = 7.58$, $p < .001$ ($R = .31$, $R^2 = .1$). As it is seen in Figure 1, direct effect of childhood trauma on psychological symptoms is less than total effect. Thus, it can be said that self-concept and being exposed to dating violence together has a sequential mediation effect between childhood trauma and psychological symptoms.

As shown in Fig. 1, when we put the mediation variables (self-concept and being exposed to dating violence) in the regression equation of psychological symptoms to childhood trauma, the direct link between childhood trauma and psychological symptoms became significant ($\beta = 0.011$, $p < .001$) however has lower effect than total effect ($\beta = 0.018$, $p < .001$). Childhood trauma was significantly associated with decreases in self-concept ($\beta = -0.29$, $p < .001$), which in turn had a significant negative effect on psychological symptoms ($\beta = -0.0026$, $p < .05$). These results indicated that childhood trauma could affect psychological symptoms through the mediating role of self-concept. Hypothesis 1 was supported. Besides, childhood trauma was also significantly associated with increases in being exposed to dating violence ($\beta = 0.5$, $p < .001$), which in turn had a significant positive effect on psychological symptoms ($\beta = 0.012$, $p < .001$). These results indicated that being exposed to dating violence could also mediate the relationship between childhood trauma and psychological symptoms. Hypothesis 2 was supported. Moreover, the prediction of self-concept on being exposed to dating violence was significant ($\beta = 0.11$, $p < .05$). These results indicated that childhood trauma could also affect psychological symptoms through the sequential mediating roles of self-concept and being exposed to dating violence. Hypothesis 3 was supported.

Furthermore, to test the significance of the indirect effect, we used the SPSS macro-PROCESS suggested by Hayes (2013) to estimate the 95% bootstrapped confidence intervals of these indirect effects. The results showed that these three mediating effects were all statistically significant as 95% bootstrapped confidence intervals of these indirect effects did not include zero. Moreover, we calculated the effect size of each mediating effect by dividing the mediating effect by the total effect of childhood trauma on psychological symptoms separately. The effect size of the mediating effect of self-concept was 11.42%, while the effect size of sequential mediating effect of self-concept and being exposed to dating violence was 5.71%, and the effect size of the mediating effect of being exposed to dating violence was 87.14%.

DISCUSSION

This study examined that the sequential mediator role of self-concept and being exposed to dating violence in the relationship between childhood trauma and psychological symptoms. Many researchers reveal that childhood trauma cause many problems related to psychological health in adulthood (Jennings et al. 2017; Huh et al. 2017). Exposure to childhood trauma predicts the individual's negative self-concept and the self-concept predicts psychological symptoms; self-concept is a mediator between childhood trauma and psychological symptoms. In addition, childhood traumas predict re-victimization in later life and also affects being exposed to dating violence; being exposed to dating violence is a mediator between childhood trauma and psychological symptoms (Ehrensaft & Cohen, 2012; Reyes et al., 2012). Widom et al. (2008) state that their study results show dramatically the extent of traumas and victimization experiences suffered by abused and neglected children throughout their lives as well as considerable trauma and victimization in the lives of the matched controls. As a result of the current study, it is revealed that childhood traumas are related to psychological symptoms through the sequential mediator role of self-concept and exposure to dating violence.

When it is looked at the meaning of the order of two mediators, self-concept predicts being exposed to dating violence. It can be thought that also being exposed to dating violence may predict the negative self-concept. The individual would have negative thoughts about himself/herself due to the psychological/physical dating violence. However, when we look at the roots of these thoughts and “fixed gestalts” (becoming rigid in the approach to the environment and losing flexibility in meeting the actual need in the situation here-and-now), we can see that these are the patterns that based on early childhood experiences. For example, the individual as a child, learns to do everything to be loved by the significant other and does everything that the parent wants in a repeated way, he/she easily can repeat this pattern when being in a dating relationship in young adulthood. In this example, the core negative thought might be “I have to do everything that my partner wants, this is the only way to be loved”. When he/she is a victim of dating violence, this preexisting negative self-concept might inhibit the individual's abilities to explain and defend himself/herself in a healthy way and in time, these psychological difficulties may cause to psychological symptoms (Yontef & Jacobs, 1989; Korb et al., 1989; Roubal, 2007).

Considering that the correlation between depression and being exposed to dating violence, it is demonstrated in the literature that negative thoughts about self may emerge together with helplessness, guilt, concept of insignificance and feeling insecure. These concepts and negative thoughts can both make it difficult to maintain the relationship and effect the person's functionality in various areas, as well as raising difficulties in ending the problematic relationship (Daş, 2009; Korb et al., 1989). The person who is aware that she is being harmed may withdraw and cannot be in action and conduct different and new behaviors if she sees herself in a negative self-concept such as being incapable, worthless, incompetent, unsuccessful, coward, insecure, unlovable, which may increase the violence she is exposed to (Matheson et al., 2015).

One of the practical implications that is made based on the results of this study is to alleviate the negative self-concept and self-confidence of individuals which might be related with depressive symptoms. The studies conducted on preventing violence in intimate relationships offer recommendations such as re-evaluation of beliefs about the relationship, ensuring anger control and improving communication skills (Whitaker et al., 2007). In addition, it is emphasized that it is important to put awareness and self-worth at the center in the psychotherapy process so that individuals gain awareness about themselves and their

self-worth, increase their self-confidence and take action in the process. With a positive self-concept and self-esteem, one can take action when necessary and unleash the strength to let go of a close relationship that has become harmful to them.

Limitations

The limitations of this study can be stated as the fact that a scale assessing the sub-dimensions of dating violence could not be used and the relation between sub-dimensions of childhood traumas and sub-dimensions of dating violence could not be examined. The scale that evaluates being exposed to dating violence consist of emotional abuse items mostly. This might cause overlooking other abuse types. Data can be collected from different socioeconomic groups and cultural backgrounds in future studies. The participants in this study do not declare any psychiatric disorders; clinical and non-clinical groups can be compared in future studies. In addition, since both the effect size of sequential mediating effect of self-concept and being exposed to dating violence and the effect size of the mediating effect of self-concept were relatively low, the applicability of these results should be cautious. This study tested each hypothesis with data collected in cross-section. The most important limitation is the inability to draw causal conclusions.

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Authors Contributions

This study was conducted by all the authors working together and cooperatively. All the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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Ethical Statement

The study was approved by the Istanbul University Cerrahpaşa Faculty of Medicine Ethics Committee on May 02, 2017 (No: # 59491012-604.01.02 / 2017-5-2). In addition, consent forms were obtained from all participants included in the study.

Ethics Committee Name: Istanbul University Cerrahpaşa Faculty of Medicine Ethics Committee

Approval Date: 02.05.2017

Approval Document Number: # 59491012-604.01.02 / 2017-5-2

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ARAŞTIRMA

Açık Erişim

Turkish Adaptation of Basic Psychological Needs For Energy Conservation: Reliability and Validity Study

Enerji Tasarrufu İçin Temel Psikolojik İhtiyaçlar Ölçeğinin Türkçe'ye Uyarlanması: Güvenilirlik ve Geçerlik Çalışması

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ABSTRACT

In this study the Basic Psychological Needs for Energy Conservation Scale developed by Sweeney, Webb, Mazzarol and Sautar (2014) was adapted to Turkish by ensuring its validity and reliability. Pilot study and main study were conducted with two different samples. Pilot study consists of 172 preservice science teachers and main study consists of 1136 preservice science teachers. While adapting the scale to Turkish, content and construct validity along with back-to-back translation were achieved. In terms of construct validity exploratory factor analysis and confirmatory factor analysis were applied to different samples to test the structure of the scale. Both analyses revealed that the scale has two factors: autonomy/competence and relatedness. The desired goodness of fit values was attained for CFA. In order to address the reliability of the scale, item analysis, Cronbach Alpha reliability and item-total correlation analysis were conducted. All these analyses confirmed the reliability of the scale. All of the validity and reliability analysis revealed that Turkish version of Basic Psychological Needs for Energy Conservation Scale is valid and reliable, and it can be used for further studies.

Article Information

Keywords

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ÖZET

Bu çalışmada; Sweeney, Webb, Mazzarol ve Sautar (2014) tarafından geliştirilen Enerji Tasarrufu İçin Temel Psikolojik İhtiyaçlar Ölçeği'nin Türkçe'ye uyarlanması geçerlik ve güvenilirlik çalışmasının yapılarak gerçekleştirilmiştir. İki farklı örnekleme pilot çalışma ve ana çalışma gerçekleştirilmiştir. Pilot çalışma 172 fen bilgisi öğretmen adayından, asıl çalışma ise 1136 fen bilgisi öğretmen adayından oluşmaktadır. Ölçeğin Türkçe'ye uyarlanması sırasında "back to back translation" ile birlikte içerik ve yapısal geçerlik analizleri yapılmıştır. Yapısal geçerlik çalışmaları kapsamında ölçeğin yapısını test etmek için farklı örneklemlere açıklayıcı faktör analizi ve doğrulayıcı faktör analizi uygulanmıştır. Her iki analiz de ölçeğin iki faktöre sahip olduğunu ortaya koymuştur: özerklik/yeterlilik ve ilişkililik. İstenilen uyum iyiliği değerleri DFA'da ortaya konmuştur. Geçerlik çalışmaları, ölçeğin geçerli bir ölçme aracı olduğunu göstermektedir. Ölçeğin güvenilirliğini sağlamak için madde analizi, Cronbach Alpha güvenilirliği ve madde-toplam korelasyon değerlerine bakılmıştır. Tüm bu bulgular ölçeğin güvenilirliği yüksek bir ölçme aracı olduğunu doğrulamaktadır. Bütün geçerlik ve güvenilirlik analizleri Enerji Tasarrufu için Temel Psikolojik İhtiyaçlar Ölçeği'nin (ENTAPI) Türkçe versiyonunun geçerli ve güvenilir olduğunu ve daha sonraki çalışmalarda kullanılabileceğini ortaya koymuştur.

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INTRODUCTION

From the beginning of industrial period, energy production has been a main concern of nations for economic growth. The dependence on energy has been increasing dramatically, and how to generate energy is a critical issue for the environment. The main energy resource is still fossil fuels for many countries, and excess use of fossil fuels leads the increase of CO₂ concentration in the atmosphere, which causes climate change problem in global scale (Muller, 2012; Huang, Zhang, Zhang, Guan, Wei, & Guo, 2020). Climate change is accepted as one of the most critical threats for humanity today (Intergovernmental Panel on Climate Change, 2014). In order to deal with this problem, all societal actors need to be involved in solution of this problem (Ojala, 2015). As a critical step, CO₂ emissions should be decreased to mitigate climate change. Although energy efficiency has been increasing with the progression in technical devices, and the advancements in renewable energy have been improving, CO₂ emissions are still increasing. It shows that energy conservation still has an important role in order to help climate change mitigation (Johnson, 2016). In this sense,

young people in schools and teachers are accepted as vital actors, and variables affecting their energy conservation behaviors (ECB) are important. Preservice science teachers as the future teachers are also important actors in addressing ECB. Another important thing influencing ECB are psychological variables. According to self-determination theory (SDT) satisfaction of basic psychological needs (i.e., autonomy, competence, and relatedness) has a crucial role in ECB (Sweeney et al., 2014). The following section is devoted to explain the role of basic psychological needs in ECB and how it is measured.

Theoretical Background of Psychological Needs

Basic psychological needs are defined within the framework of self-determination theory (SDT). SDT, proposed by Deci and Ryan (1985), is a theory of human motivation that focuses on the process of internalizing goals and values (Deci & Ryan, 2000). SDT assumes that a person may engage in a particular environmentally conscious behavior for external reasons, e.g., to obtain monetary reimbursement, or for internal reasons, e.g., a sense of having protected the environment (Darner, 2014; Pelletier et al., 1998). Nearly all human behaviors, including pro-environmental behaviors, usually are not intrinsically motivated (Osbaldiston & Sheldon, 2003). When humans are socialized and engage in public norms, they discover how to perform behaviors through socialization. This kind of socialization occurs by using a process called internalization: Externally regulated behaviors are assimilated in the individual's cognitive design so that they are no longer understood as outside regulations but as originating from the individual's self (Deci & Ryan, 1990; Ryan & Deci, 2002). In this particular internalization process, satisfaction of basic psychological needs is an exclusive place in SDT considering that the degree of satisfaction of the needs influence the degree of internalization and how much internalized a behavior can determine the motivation type for the actions (Baxter & Pelletier, 2020; Deci et al., 1994; Osbaldiston & Sheldon, 2003).

Deci and Ryan (1985, 1990) address three psychological needs, which are vigorously promote self-determined motivation. These needs are namely, autonomy, competence and relatedness. Autonomy refers to feeling volitional about the behavior (Ryan & Deci, 2008). With respect to ECB, the term autonomy refers to acting for energy conservation willingly (Sweeney et al., 2014). Competence refers to feeling effective in performing the behavior (Ryan & Deci, 2008). People having competence also know where to find the required information and help. Along these lines, feeling of competence matches with perceived self-efficacy of Bandura, which focuses on the beliefs of a person about himself/herself

regarding to achieving certain things (Cooke, Fielding & Louis, 2016). It is important to note here that if competence is not associated with autonomy, intrinsic motivation is not raised (Ryan & Deci, 2000). People having competence with regard to energy conservation would feel that they are capable of conserving energy or that they know how to conserve energy and how to find information about it (Sweeney et al., 2014). The final basic psychological need is relatedness, which refers to feeling of being connected to a social environment or a community (Ryan & Deci, 2008). It is assumed that these three psychological needs are innate and are universal regardless of differences among cultures or gender (Vansteenkiste et al., 2020).

According to SDT, social environments are either facilitators or thwarts to satisfy basic psychological needs. In educational context, when basic psychological needs are satisfied in a context, students' motivation, vitality and their behavior are supported (Vansteenkiste et al., 2020). For instance, Darner (2012) designed a SDT based course to improve students' environmental motivation. In this educational context, the course fulfilled basic psychological needs of the participants. For example, to support their competence and autonomy need, students engaged in real life environmental problems and in these problems they had autonomy to decide how to solve the problem (Darner, 2012, 2014). The study of Darner (2012) showed that student's environmental motivation was increased when their basic psychological needs were fulfilled. In a similar vein, Karaarslan, Ertepinar and Sungur (2013) designed an environmental science course supporting basic psychological needs of PSTs to support their self-determined motivation, and they found that PSTs' self-determined motivation for environment and their pro-environmental behavior were improved throughout the course (Karaarslan et al., 2013).

There has been evidence that the relationship between basic psychological needs and pro- environmental behavior is significant. The study of Osbaldiston and Sheldon (2003) showed that to engage students in pro-environmental behavior, their need for autonomy should be supported. When this condition is provided, the students internalized the pro-environmental behavior and they develop self-determined motivation for these behaviors. All these results show that basic psychological needs have an important role in predicting pro-environmental behaviors. As a type of pro-environmental behavior, ECB can be predicted from basic psychological needs. There are researchers who claim that psychological needs are important since they have a critical role in motivation for displaying ECB (Sweeney et al., 2014; Webb et al., 2013). For instance, Sweeney et al. (2014) conducted an experimental study via internet with 696 householders in Australia. In that study word of mouth, which offers an online community to share experiences and provide support for the community, was used to satisfy basic psychological needs of participants. The study revealed that satisfaction of basic psychological needs helped participants internalize ECB and their ECB was enhanced.

In this era, climate change as one of the most serious problems is waiting for individual and collective solutions. Abovementioned studies showed that mitigating climate change has a psychological side, and basic psychological needs are critically important to enhance ECB which is a part of solution for mitigating climate change. For this purpose, in the first place it is necessary to determine people's energy conservation behavior while considering their basic psychological needs. As it was stated above determining preservice science teachers' ECB is critically important in order to have future citizens who have well developed ECB. The purpose of this study was to adapt the Basic Psychological Needs for Energy Conservation Scale developed by Sweeney, et al. (2014) into Turkish by ensuring its validity and reliability.

METHOD

Participants

Two different samples of preservice science teachers (PST) were used in the pilot and real study. Convenience sampling, which is also labelled as accidental or opportunity sampling, method was used to determine the participants for both study samples. In this sampling method, the researcher chooses participants, who are easily accessible (Cohen, Manion & Morrison, 2011). For pilot study 172 participants, who were third and fourth grade PSTs from two universities participated in the study. Among them, 130 (75.6%) were female and 42 (24.4%) were male. In addition, 78 PSTs (45.3%) were third graders and 93 (54.1%) were fourth graders, and one participant did not specify her/his class. The reason for having 3rd and 4th grade PSTs in the sample was that they had taken basic sciences and environmental education courses.

Junior and senior class pre-service science teachers from eleven universities in Central Anatolia region in Turkey was selected conveniently as the sample for the real study. The total number of universities in Central Anatolia region is eleven and all these eleven universities were reached for the purpose of this study. Of the 2200 PSTs enrolled at these universities, 1136 PSTs participated in this study. Thus, 52% of the target population constituted the sample of this study. Of the PSTs, 912 (80.3%) were female, 218 (19.2%) were male and 6 (0.5%) did not specify their gender- and 519 (45.7%) were in the third grade and 617 (54.3%) were in the fourth grade.

Ethical Statements

This study was completed in accordance with the Helsinki Declaration. In line with this, the study was permitted by Middle East Technical University, Applied Ethics Research Center (Date: 10/03/2014; Number: 286208161/124-222).

Basic Psychological Needs For Energy Conservation Scale and Its Adaptation Process

Basic psychological needs for energy conservation scale (BPNEC) was developed by Sweeney et al. (2014) based on self-determination theory. The instrument is in English and includes nine items on a seven-point Likert scale (1- strongly disagree, 7-strongly agree). It consists of two factors, which are autonomy/competence (six items; e.g., "I feel confident in my ability to save energy") and relatedness (seven items; e.g., "I feel that I have similar concerns with people who are saving energy") (Sweeney et al., 2014). Autonomy/competence refers to feeling volitional and effective in performing the behavior. People having autonomy/competence in energy conservation would feel that they are capable of conserving energy, they know how to conserve energy, and feel volitional control for this behavior (Sweeney et al., 2014).

BPNEC was translated to Turkish by both authors and two bilingual translators who are working as English instructors in academic writing center in a well-known English medium university. Through the adaptation process, a back-to-back translation was done and then, the back translation was also completed by another translator. Afterwards, interview with 15 PSTs were conducted to see whether items were easy to understand. During the interviews in order to determine their energy conservation behavior two open ended questions were asked: Which factors facilitate your energy conservation behaviors? What do you need to conserve energy? Interviews revealed that PSTs agreed that translated version of the items were easy to follow. But based on their answers for the questions the researchers

agreed to add new items to the BPNEC. Four new items were added (I am knowledgeable about energy conservation; I feel that I have similar concerns with people saving energy; I am not being restricted about what to do about energy conservation, I have a voice about what to do about energy conservation) to the Turkish version of the scale. Of these four items, one of them (I am knowledgeable about energy conservation) is competence need, one of them (I feel that I have similar concerns with people saving energy) is relatedness need, and the other two items (I am not being restricted about what to do about energy conservation, I have a voice about what to do about energy conservation) were autonomy needs. The original scale includes items for autonomy, competence and relatedness, and some items are similar with the items we added. However, these items emerged from the interviews. We thought that PSTs might expressed their feeling for their needs to conserve energy in this way and we added these items to see how they are working in the pilot study. Afterwards, all items were sent to an expert committee, which consists of three experts in motivation theories, environmental education and a psychological counseling and guidance. They reviewed the items and provided comments. All these comments were addressed by the researchers and final version of the scale was completed. As a final step, two PSTs reviewed the final version of the scale and provided their ideas regarding the format and the design of the scale as well as the clarity of the sentences. Based on their responses the scale was finalized, and a pilot study was conducted with 13 items. With the data obtained through pilot study, BPNEC was revised and real study was conducted with 1136 PSTs.

Data Analysis

To explore construct validity, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted. In instrument adaptation studies, running EFA as an initial step for construct validity is suggested to capture problems raised from the translation process (Orçan, 2018). Therefore, EFA was conducted in the pilot study. Then, CFA was conducted to a new sample to confirm the factorial structure which was explored in the pilot study (Orçan, 2018; Worthington & Whittaker, 2006). To explore the reliability of the scale Cronbach's alpha coefficient was conducted.

The factorial structure of Turkish BPNEC was examined in pilot study with EFA through principal axis factoring analysis with direct oblimin rotation (Field, 2013). In order to specify the factor structure, KMO measure of sampling adequacy and eigenvalues larger than one were used. EFA was performed with IBM SPSS 24 for Windows. Two basic issues were considered before conducting EFA. One of them was the sample size, and the other one was the strength of the relationship among items (Pallant, 2007). Sample size is suggested as 5:1 ratio that 5 participants for each items (Tabachnick & Fidell, 2013). This assumption was satisfied that BPNEC included 13 items in the pilot study and the sample size was 172. In addition to this, sample size assumption was tested with the Kaiser-Meyer-Olkin (KMO) measure. KMO index ranges from 0 to 1. The minimum value with .6 is suggested for KMO index (Tabachnick & Fidell, 2013). Additionally, Bartlett's test of sphericity provides evidence for the appropriateness of data for factor analysis. The test result should be significant ($p < .05$). EFA showed that KMO value was .89 and

Bartlett's test of sphericity was found to be significant ($p < .05$). The assumptions for EFA were satisfied. While deciding on the number factors, suggested Kaiser criteria (Kaiser, 1974) and scree plot criteria were considered (Pallant, 2007). Item analysis and reliability was performed with IBM SPSS 24 software.

CFA was conducted in the main study with Analysis of Moment Structures (AMOS) 21 (Arbuckle, 2011). Before running CFA the assumptions, namely sample size, normality and linearity, outliers, and absence

of multicollinearity and singularity were checked. Sample size is suggested as at least 200 (Kline, 2011). The sample size of main study was 1136, which was more than the reference point. Missing value for each item was between 0% and 3.5%. The missing value lower than 5% is not as a problematic issue that any method for missing data can be used (Tabachnick & Fidell, 2013). Missing values were replaced with mean in the main study. The outliers were examined with Mahalanobis Distance values by AMOS. The analysis revealed 34 cases as outlier. These cases were removed from the data and further analyses were conducted with 1102 cases. Normality assumption was checked with skewness and kurtosis values. Skewness and kurtosis values were within ± 1.5 acceptable range (Tabachnick & Fidell, 2013). Thus, the data showed a normal distribution (kurtosis -0.46; skewness = -0.18) (Tabachnick & Fidell, 2013). When the variables are highly correlated (above .90) multicollinearity and singularity problem arises. To check this assumption, bivariate correlations among the variables were investigated. It was found that the bivariate correlation between autonomy/competence and relatedness was 0.61 ($p < .05$). It means that multicollinearity and singularity assumption was satisfied. These results showed that all assumptions for CFA were satisfied.

In order to evaluate whether the hypothesized construct tested through CFA is valid or not, a variety of model fit indices were used. Among them, chi-square (χ^2), CFI, SRMR, RMSEA and 90% confidence interval for RMSEA were used as suggested by Kline (2011).

RESULTS

The construct validity of BPNEC instrument was explored through EFA and CFA. Two different samples were used for this purpose.

The Exploratory Factor Analysis (EFA)

EFA was conducted with 172 participants. The KMO value was 0.89. The Barlett Sphericity Test result was significant ($\chi^2=871.457$, $df=78$), which means that the data is suitable for factor analysis. Results produced by the Principal Axis Factoring technique showed that three items had communality values less than 0.40. Thus, these items were removed from the initial 13 items. These three items were autonomy needs. Two of them were the items we added to the scale (I am not being restricted about what to do about energy conservation, I have a voice about what to do about energy conservation) and the other was from the original scale (I'm free to choose what I do to save energy). With the remaining 10 items, two factorial structures, which explained 54% of the total variance were obtained and these two factor structures were similar with the original scale and also in parallel with the theoretical explanations. Table 1 shows the factor loadings of EFA. Factor one included the items 1, 2, 4, 6, 7, and 8. All of the six items were belong to PSTs' autonomy/competence needs. The item we added to competence need (I'm knowledgeable about energy conservation) was loaded in this factor, which is expected theoretically and all other items in this factor loaded similarly as in the original scale. Therefore, the first factor was named as autonomy/competence similar to the original scale factor solution. Factor two had the items 3, 5, 9, and 10. These 4 items were belonged to PSTs' sense of relatedness needs. The item we added to relatedness (I feel that I have similar concerns with people saving energy) was loaded in relatedness scale as we had thought, and all other items in this factor loaded similarly as in the original scale. The second factor was called as relatedness.

Table 1. Rotated Factor Matrix of Exploratory Factor Analysis

Item Number	Factor	
	1	2
B2	.831	
B7	.755	
B1	.693	
B6	.659	
B4	.599	
B8	.432	
B10		-.891
B9		-.829
B5		-.646
B3		-.477

Item Analysis and Reliability of the BPNEC

Item analysis was conducted to determine power of items for understanding the quality of the items. The item analysis showed that item-total correlation coefficients varying from .55 to .73. The minimum value for this index is expected to be 0.30 (Büyüköztürk, 2004; Kline, 2013). It can be concluded that items in BPNEC were within the acceptable limits. Findings revealed from item analysis are shown in Table 2.

Table 2. Item analysis of BPNEC

Item	Mean	Standard Deviation	Item Total Correlation
1. I have a say in choosing what I do to save energy.	5.16	1.268	.613
2. I am knowledgeable about energy conservation.	4.95	1.174	.614
3. I feel a sense of camaraderie with other people who are saving energy.	4.66	1.398	.568
4. I feel confident in my ability to save energy.	5.41	1.143	.702
5. I feel that I have similar concerns with people saving energy.	5.20	1.204	.576
6. I feel able to meet the challenge of reducing my energy use.	5.05	1.110	.691
7. I decide what I do to save energy	5.41	1.148	.599
8. I am capable of controlling the amount of energy I use	4.92	1.338	.601
9. I share a common bond with other people who are saving energy.	5.09	1.251	.732
10. I feel connected with other people who are saving energy.	4.80	1.327	.625

N=172

In order to report the reliability of the scale, Cronbach's alpha coefficient was examined for each dimension (see Table 3). Both dimensions' alpha values in the pilot and the real study were higher than 0.80, which indicated good internal consistency.

Table 3. Cronbach's Alphas Coefficients

	Factors	
	Autonomy/competence	Relatedness
Cronbach's Alpha	0.86 (pilot study) 0.86 (real study)	0.83 (pilot) 0.82 (real study)
Number of items	6	4

Confirmatory Factor Analysis

CFA was conducted to validate the two-factorial structure of BPNEC in the main data. AMOS 21 was used for this purpose. According to Sumer (2000), a model is accepted as a good fit if the $\chi^2 / df \leq 5$ point. CFA of our study showed that χ^2 / df value was 3.8 which indicates a good fit. RMSEA and SRMR values smaller than 0.05 means that the model is a good fit. If RMSEA value is smaller than 0.08, it indicates the model fits well with reasonable error (MacCallum, Browne, & Sagawara, 1996). CFI value with higher than 0.9 indicates evidence for a strong model (Finch, Immekus, & French, 2016). CFI value was found to be 0.98 in this study. Overall, the analysis provided evidence for reasonably good fit indices and the model fit the hypothesized factor structure ($\chi^2/df= 3.8$; CFI= .98; SRMR= .03; RMSEA= .05; 90% CI for RMSEA= .04-.06). Figure one below shows the standardized factor loadings of items for each factor. The factor loadings vary between 0.59 and 0.85.

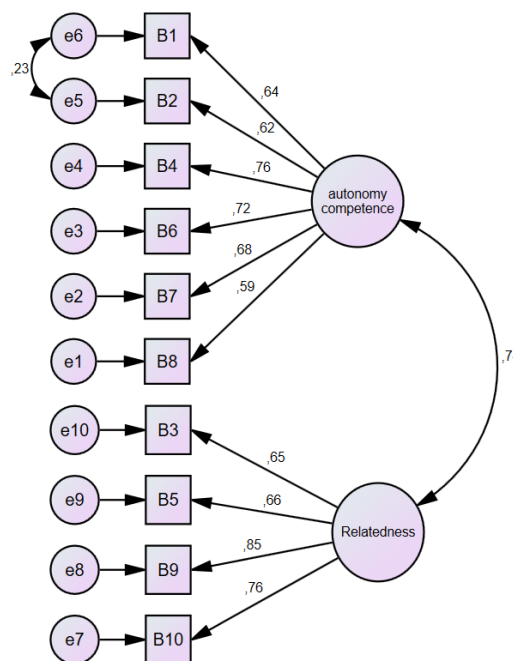


Figure 1. Confirmatory Factor Analysis with Standardized Results.

These findings show that the BPNEC adapted to Turkish can be used to measure PSTs' basic psychological needs for energy conservation context.

DISCUSSION

The aim of this study was to adapt the Basic Psychological Needs for Energy Conservation (BPNEC) instrument developed by Sweeney et al. (2014) into Turkish. The results of exploratory and confirmatory factor analysis conducted in the pilot and main study provided evidence for the construct validity of the Turkish version of the scale, which included 10 items and two dimensions. The dimensions were autonomy/competence and relatedness similar to the original scale. In addition, the reliability coefficients of these dimensions indicated the dimensions had good internal consistency.

According to EFA results, autonomy and competence factors were merged in our adapted scale. The original scale revealed the same result. This result does not contradict with SDT. Basic psychological needs consists of three factors, namely autonomy, competence and relatedness (Deci & Ryan, 2000;

Niemiec & Ryan, 2009; Ryan & Deci, 2000). According to SDT, intrinsic motivation for an activity is raised by satisfaction of autonomy and competence together. When competence is not associated with autonomy, intrinsic motivation is not raised (Ryan & Deci, 2000). It can be inferred that to raise intrinsic motivation for ECB, autonomy and competence needs should be satisfied together. Furthermore, item analysis was conducted for construct validity. Item analyses are used to figure out if the items of a scale result in generating meaningful data, both together and within sub dimensions of the scale (Tabachnick & Fidel, 2013). All evidence showed that the instrument is both valid and reliable.

As mentioned above, we added four items (I am knowledgeable about energy conservation, I feel that I have similar concerns with people saving energy, I am not being restricted about what to do about energy conservation, I have a voice about what to do about energy conservation) to the scale as a result of the interviews with PSTs. During the interviews all of participants talked about their knowledge about how to conserve energy. Even though they stated that they are knowledgeable about energy conservation they still need to learn specific energy conservation behaviors, which help them to consume less energy. For example, they need to know which home supplies consumed more energy. That is, they still needed to know which behaviors have more impacts to environment. During the courses they took at the universities, they had a little chance to talk and learn about energy conservation issues. Moreover, they mentioned that their courses also did not include real life issues for energy conservation. Rather than inquiring this issue by themselves, their want to learn necessary knowledge and gain experiences regarding energy conservation during the courses offered at the universities. The educational system in Turkey is mainly based on national examination and high levels of competition (Kingir, Tas, Gok & Sungur Vural, 2013). Since, the PSTs mostly used to learn knowledge through memorization and apply algorithms to given situations in these high-stake exam questions, they had difficulty in developing their research skills and epistemic beliefs at the universities. This might be one reasons for these PSTs to expect university instructors to provide necessary knowledge behavior relationships regarding energy conservation. This item worked properly, and analyses supported that having knowledge for energy conservation is a competence. This item was a unique contribution of this study to the literature.

Another item we added was “I feel that I have similar concerns with people saving energy” which belongs to relatedness factor. In interviews, many PSTs explained that they felt themselves as being connected to significant others in their life. For instance, one of the participants indicated that her roommate taught her that even leaving TV on standby caused energy consumption and increasing their carbon footprints. Then they decided not to leave TV on standby mode. She told that learning more about carbon footprint helped her to consider and perform more pro-environmental behaviors. Then she ended up feeling more connected to people who made an effort for energy conservation, and she thought that they both hold similar concerns. Since this daily life experiences are very similar among people, we decided to add an item to measure it under the relatedness dimension of the scale. The added item worked properly. This item was a unique contribution of this study to the literature. In a similar vein, two items were added to autonomy dimension which were “I am not being restricted about what to do about energy conservation, I have a voice about what to do about energy conservation.” However, these two items did not work well in the pilot study.

ECBs are critically important for climate change mitigation strategies (IPCC, 2014; Ojala, 2015). PSTs as future science teachers have critical role in shaping students’ energy conservation behaviors. SDT points out that satisfaction of basic psychological needs is very crucial for intrinsic motivation (Deci & Ryan,

2000). In the literature, there were studies exploring the role of self-determination theory in pro-environmental behavior within educational settings (e.g., Darner 2012, Karaarslan et al., 2013). However, studies are lacking to explore how PSTs' ECB are improved by satisfying their basic psychological needs for energy conservation. Therefore, this study revealed that the PSTs' basic psychological needs for energy conservation had several aspects and open to development during teacher education programs. The BPNEC can be used by university instructors to better address and develop PSTs energy conservation behaviors. We believe that this scale has higher potential to help researchers to further explore how to meet PSTs' basic psychological needs through qualitative and experimental studies.

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Author Contributions

This study was a part of BÇY's doctoral dissertation. Both authors worked on the adaptation of items. Data collection, data analysis and the reporting parts were carried out by BÇY under the supervision of ÖYT.

Conflict of Interest

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

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Ethical Statement

This study was completed in accordance with the Helsinki Declaration. In line with this, the study was permitted by Middle East Technical University, Applied Ethics Research Center.

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RESEARCH

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ARAŞTIRMA

Açık Erişim

The Study of Adaptation of the Positive and Negative Rumination Scale into Turkish*Olumlu ve Olumsuz Ruminasyon Ölçeği'ni Türkçeye Uyarlama Çalışması*Ayşe Demirci , Coşkun Arslan **Authors Information****Ayşe Demirci**

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ABSTRACT

The aim of this study was to examine Positive and Negative Rumination Scale (PNRS) developed by Yang et. al. (2018) to study on the adaptation into Turkish on a group of university students. As a result of the first order confirmatory factor analysis applied, it was concluded that the structure with five factors showed sufficient compatibility. In addition, in order to examine the factor structure of PNRS enjoy happiness (EH) and positive coping (PC) to be loaded into positive rumination (PR); suppress happiness (SH), negative attribution (NA), and self- deny (SD) to be loaded into negative rumination (NR) showed that the form was compatible with the factor structure of the Turkish form which was indicated for the 2- factor second order confirmatory factor which it is specified to, it was found that the second order structure with 2 factors gave sufficient fit and that the original factor structure was compatible with the factor structure of the Turkish form. The reliability analysis results of the scale have also given satisfactory results. Validity reliability analysis results for the scale show that the scale can be used as a valid and reliable measurement tool.

Article Information**Keywords**

Rumination
Positive Rumination
Negative Rumination
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Reliability

Anahtar Kelimeler

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ÖZET

Bu çalışmanın amacı, bir grup üniversite öğrencisi üzerinde, Yang, Wang, Song, Lu, Huang, Zou & Pan (2018) tarafından geliştirilen Olumlu ve Olumsuz Ruminasyon Ölçeği'nin (OORÖ) Türkçeye uyarlama çalışmasının yapılmasıdır. Uygulanan birinci düzey doğrulayıcı faktör analizi neticesinde beş faktörlü yapının yeterli uyumu gösterdiği sonucuna ulaşılmıştır. Ayrıca OORÖ'nin faktör yapısını incelemek amacıyla mutluluğun tadını çıkarma ve olumlu başa çıkmanın olumlu ruminasyona; mutluluğu bastırma, olumsuz yükleme ve kendini reddetmenin olumsuz ruminasyona yüklenecek şekilde belirtildiği 2 faktörlü ikinci düzey model için uygulanan ikinci düzey doğrulayıcı faktör analizi sonucunda 2 faktörlü ikinci düzey yapının yeterli uyumu verdiğini ve orijinal faktör yapısının Türkçe formun faktör yapısıyla uyduğuna göstermiştir. Ölçeğin güvenirlik analizi sonuçları da tatmin edici sonuçlar vermiştir. Ölçek için yapılan geçerlik güvenirlik analiz sonuçları, ölçeğin geçerli ve güvenilir bir ölçme aracı olarak kullanılabileceğini göstermektedir.

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INTRODUCTION

Although there is a strong literature supporting rumination which is an important concept in understanding the development of depressive mood and its continuity there is no unified definition or standard measurement of the rumination (Smith & Alloy, 2009). When the literature is examined, it is seen that rumination is defined by many researchers (Nolen-Hoeksema et al., 2008; Brinker et al., 2013; Cann et al., 2011; Feldman et al., 2008) and there are theories that deal with rumination from different perspectives (Martin & Tesser, 1996; Nolen-Hoeksema et al., 2008; Conway et al., 2000).

In addition, it is seen that many scales have been developed to measure rumination in the literature (Brinker & Dozois, 2009; Flett et al., 2020; Wade et al., 2008; Eisma et al., 2014; Rose, 2002) and to Turkish adapted (Karatepe, 2010; Kabadayi & Mercan, 2021; Oral & Arslan, 2017; Tekin & Kiroglu, 2019; Bugay & Erdur-Baker, 2015).

Meanwhile Nolen-Hoeksema (1991), explains rumination as repetitive thinking on individuals' depressive symptoms and reflection on possible causes and consequences of depressive symptoms, Conway et al. (2000) define rumination emphasizing individuals' current situation and repetitive thoughts about their sadness and the circumstances surrounding that sadness. Martin and Tesser (1996) mentions the beneficial side of rumination by developing goal progression theory which includes that individuals have a function in their progress towards the goal not a response to a mood state itself.

Where Feldman et al. (2008) have defined rumination as positive self-qualities, positive emotional experience, and positive life a tendency to respond to positive emotional states with repetitive thoughts about their circumstances. Thus, Feldman et al. (2008), drew attention to the responses given on positive affect. Yang et al. (2018), drawing attention that studies on rumination are either on negative affect (Nolen-Hoeksema, 1991) or positive emotional states (Feldman et al., 2008) they combined the positive and negative aspects of rumination by both positive and negative aspects of rumination, stating both positive and negative affect. They defined rumination as repeated thoughts on both positive and negative effects and stated that these thoughts were functioning positively or negatively in terms of psychological adjustment.

In the literature of our country, while there has been the separate scales that include response on positive emotional states and negative events, such as Ruminative Responses Scale has been adapted to Turkish by Neziroğlu (2010) which aims to measure rumination tendencies towards negative events; Response to Positive Emotions Scale adapted to Turkish by Yüksel (2014), rumination is into response to positive emotional states; there was no measurement tool found that measures rumination by combining both positive and negative affect on positive and negative affect.

Rumination like this the adaptation of the measurement tool that deals with a multidimensional structure of rumination like this is thought to provide the important contribution to the literature. Therefore, in this study, Positive and Negative Rumination Adaptation of the Turkish version of the scale (PNRS) to Turkish and conducting validity and reliability studies were intended.

METHOD

Research Group

The research group consists of a total of 308 volunteer university students, 245 of whom were female (79.5%) and 63 of whom (20.5%) were male studying at various universities in Türkiye organized through

"Google Forms". As the age of 11 of the participants participating in the study were 30 and above, they were not included in the study. The age of the participants of the research has ranged from 17 to 29.

Of the participants, 17 were at 1st Grade (5.5%), 88 were at 2nd Grade (28.6%), 76 were at 3rd grade (24.7%), 120 were at 4th grade (39%), 6 were at 5th grade (1.9%), 1 was at preparatory class (0.3%). In addition, for the language validity study, some data was collected from 44 volunteer English pre-service teachers educated in the 4th grade education in Necmettin Erbakan University Education Faculty English Language Teaching Program in the 2020-2021 academic year.

Ethical Statement

The research was reviewed by the Social and Human Sciences Research and Publication Ethics Committee Necmettin Erbakan University and was given permission (Date: 3.4.2020, Ref: 2020/22). In addition, the participants participated in the study on a voluntary basis.

Data Collection Tools

Life Orientation Test (LOT). The scale which was developed by Scheier and Carver (1987) and adapted into Turkish by Aydın and Tezer (1991) has been adapted to measure optimism. High scores taken from the scale point out that optimism is high. The internal consistency coefficient of the scale is .72, and the results of the test-retest reliability coefficient obtained from the application within four weeks intervals was found as .77.

Depression Anxiety Stress Scale (DASS). The Turkish adaptation of the developed scale by Lovibond and Lovibond (1995) was carried out by Akin and Çetin (2007). The Cronbach Alpha internal consistency coefficient of the scale was .89, item-total correlations were found between .51 and .75. The test-retest and two-half reliability scores of the scale were found .99 and .96.

Original Positive and Negative Rumination Scale

PNRS, developed by Yang et al. (2018), was developed to measure positive and negative rumination about positive and negative effects. First of all, an item pool (an open-ended questionnaire, brainstorming, by scanning the scales) was formed to measure positive and negative rumination about measuring positive and negative affect in order to form a multidimensional scale and at the last stage was reached the version was improved composed of 23 items and five factors; enjoy happiness (6 items), suppress happiness (5 items), negative attribution (5 items), positive coping (4 items), self-deny (3 items) was reached (Yang et al., 2018).

In addition, for the purpose of examining the factor structure of PNRS, a DFA was performed for a 2 factored second order model and the specified model of 2 order confirmatory model, enjoy happiness and positive coping loaded to positive rumination; suppress happiness, negative attribution and self-deny loaded to negative rumination and it is observed that the second 2-factor, and the specified model fits the data well (CFI=.98, NNFI=.94, RMSEA=.038 (0.31-.04), SRMR=.44). In addition, it is seen that the cronbach alpha coefficient calculated for scale varies between .71 and .85 in the enjoy happiness, suppress happiness, negative attribution, positive coping, self-deny, positive rumination, and in the dimension's negative rumination. On the other hand, while the test-retest results varied between .49 and .84 in the reliability study in the dimensions of enjoy happiness, suppress happiness, negative attribution, positive coping, self-deny, positive rumination, and in the dimensions negative rumination (Yang et al., 2018).

In the scale, the participants are asked to rate when they experience positive emotions such as happiness, excitement or enthusiasm for the first part of the scale how often they thought like in the items between 1 (never) and 4 (always). In the second part, the participants are asked to rate when experiencing negative emotions such as sadness, anger or embarrassment how often they thought like in the items between 1 (never) and 4 (always) (Yang et al., 2018).

Process

First of all permission was obtained via email from Hongfei Yang, the lead author of the group of researchers who developed the scale in order to adapt the scale into Turkish. In order to form the Turkish version, opinions of the experts from English Linguists, the experts in the area of Guidance and Psychological Counseling were consulted.

The resulting form was applied to 335 volunteer university students and as a result of the evaluation of the obtained data, the item-total correlation values of PNRS were determined to vary between 0,19 and 0, 62 and for the 5 sub-dimensions of the scale Cronbach Alpha values were determined between .53 and .75.

In general, the items with a total correlation of .30 and higher are known to differentiate individuals well (Büyüköztürk, 2016). As a result of the item analysis of the PNRS, the item whose total correlation value is below .30 finding 1 item (part 2, item 9) below 30 and determining the scale, in general, Cronbach Alpha reliability values in its sub-dimensions were not satisfactory due to the lack of availability, expert opinion was consulted again for all scale items. The scale was made more understandable through expert recommendations. After the corrections made by a Language Specialist and a Turkish Teacher, the scale of feedback was received regarding the intelligibility of the items, and the three university students in the age group where the reliability-validity study would be conducted, due to the lack of availability, opinion was taken again for all scale items. After the editing, the scale was rearranged and the language validity study was carried out. Then it was applied to a different research group for the second time. Within the scope of application, criterion-related validity studies were also carried out.

To examine the construct validity of the Positive and Negative Rumination Scale, confirmatory factor analysis Scale; reliability analyzes test-retest method, and Cronbach Alpha internal consistency coefficient methods has been used. Validity and reliability analysis were made by using IBM SPSS 26 and LISREL 8.80 package programs.

RESULTS

Findings Regarding Language Validity

Language validity study of PNRS, was carried out on the data obtained from 44 voluntary students studying in English Language Teaching programs. It was calculated by 17 days intervals to participants with the application of the Turkish form of the scale and then the application of the English form of the scale. According to the findings obtained from the group for language equivalence, a high level of positive correlation was found between the English version and the English form ($r = .82$ $p < .01$). With reference to this, the original form and the Turkish form of the scale, which is tried to be adapted, are linguistically equivalent and it can be said that the translated scale has linguistic validity.

Findings Regarding Construct Validity

In order to test the construct validity of the scale, the data obtained from 308 students Kaiser-Meyer-Olkin (KMO) coefficients and Bartlett Sphericity Test results were calculated. KMO sample fit coefficient was found .875, as a result of the analysis Bartlett Sphericity test was found significant ($\chi^2=2716,737, p=0.000$). Kaiser-Meyer- The Olkin (KMO) coefficient is expected to be higher than .60 for factorability. In addition, the Bartlett test analyzes whether there is a relationship between the variables based on partial correlations and if the calculated chi-square statistic is significant, it indicates that the data matrix is appropriate (Büyüköztürk, 2016).

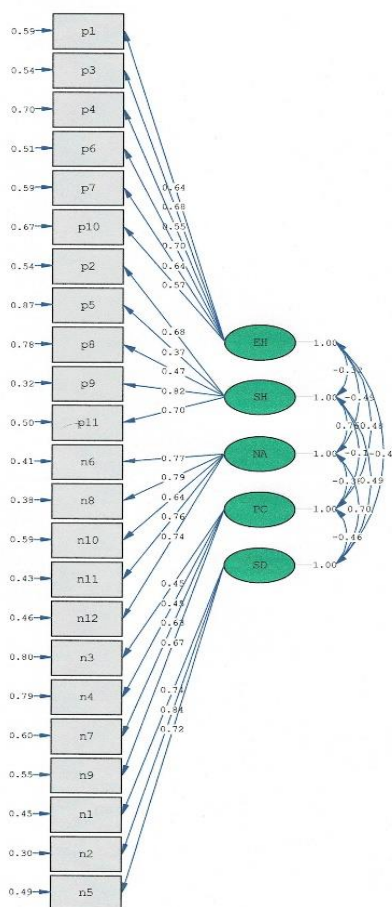


Figure 1. Path Diagram and Factor Loads of the First Order Confirmatory Factor Analysis Applied to the Positive and Negative Rumination Scale (PNRS)

Considering these results, it demonstrates that for factor analysis of the data, the sample size studied is sufficient and the data are suitable for factor analysis. In the items and sub-dimensions of this scale, it is seen that the highest skewness value is .97 and the lowest the value is -.96; the highest kurtosis value was 1.14 and the lowest -1.38. George and Mallery (2016) stated that ± 1 value for skewness and kurtosis values are excellent, whereas most values between ± 2 , depending on the application state that they are acceptable values.

Therefore, it was concluded that the data set did not have a skewed and flat distribution and showed a normal distribution. The five-factor structure of the Positive and Negative Rumination Scale determined in the original scale first order confirmatory factor analysis was performed to examine whether it is valid in Turkish culture. DFA was made using the LISREL 8.80 package program.

As a result of the DFA applied to the scale, the fit values were $\chi^2/df=2.313$, NFI=.92, NNFI=.95, IFI=.95, RFI=.91, CFI=.95, GFI=.87, RMR=.05, RMSEA=.07, SRMR=.07 Therefore, it can be said that the five-factor structure fits the sample data adequately (See Figure 1).

In addition, in order to examine the factor structure of PNRS, enjoy happiness and positive coping loaded to positive rumination, suppress happiness, self-deny and negative attribution is loaded to negative rumination and which was performed for the compliance as a result of DFA for a confirmatory model (2- factor second order model); it is observed that the second order with 2 factors and the fit values are $\chi^2/df=2,375$, NFI=.92, NNFI=.94, IFI=.95, RFI=.91, CFI=.95, GFI=.87, AGFI=.84, RMR=.06, RMSEA=.07, SRMR=.07 and a second order of 2 factor (2-factor second order model) indicated model to fit the data well (See Figure 2).

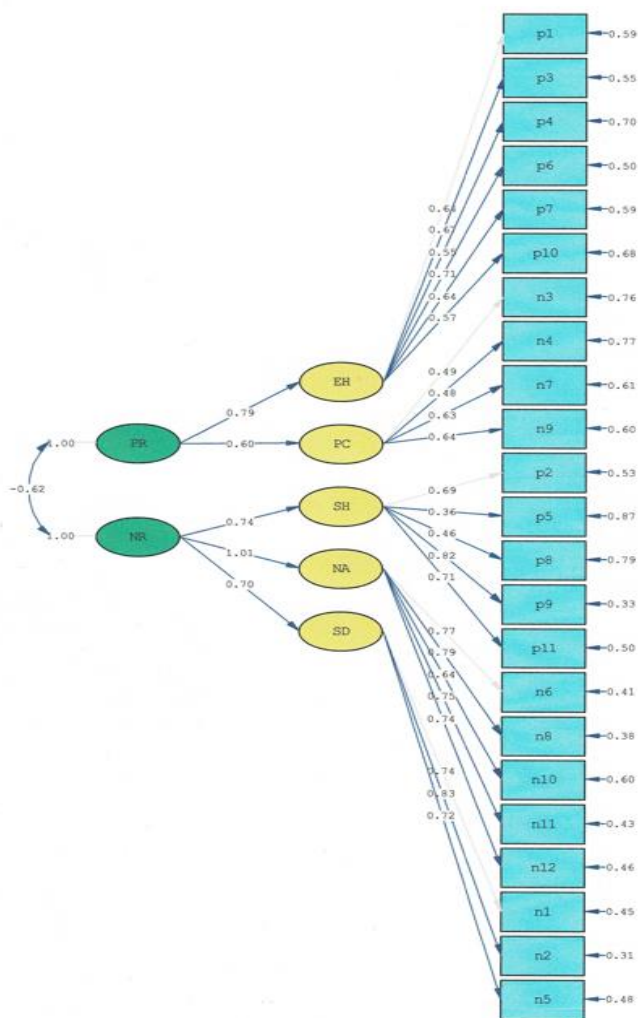


Figure 2. Path Diagram and Factor Loads of the Second Order Confirmatory Factor Analysis Applied to the Positive and Negative Rumination Scale (PNRS)

Findings Related to Criterion Validity Study

Criterion-related validity of the scale was made through the scores of 308 participants from the scales. Correlations between PNRS and The Life Orientation Test which was adapted into Turkish by Aydın and Tezer (1991) and Depression-Anxiety-Stress Scale which was adapted to Turkish by Akin and Çetin (2007) was examined using the depression subscale of the Depression-Anxiety-Stress Scale.

On the conclusion of the correlation analysis for criterion-related validity of PNRS; there was a significant and positive correlation between the scores they got from enjoy happiness ($r = .55, p < .01$) and positive coping ($r = .36, p < .01$), which are the sub-dimensions of students' PNRS and the scores they got from the Life Orientation Test (optimism). The sub-dimensions of PNRS were happiness suppression ($r = -.51, p < .01$), negative attribution ($r = -.67, p < .01$), self-deny ($r = -.51, p < .01$) with scores on Life Orientation Test (optimism), a negative significant correlation was observed between the scores they got from the scale (See Table1).

In addition, enjoy happiness ($r = -.51, p < .01$) and positive coping ($r = -.21, p < .01$) scores which are the subdimensions of PNRS and depression subscale, while a negative significant relationship was observed between the scores of PNRS, happiness suppression ($r = .44, p < .01$), negative attribution ($r = .59, p < .01$), self-deny ($r = .58, p < .01$) which are the subdimensions of PNRS where there was a positive significant relationship between their scores and between the scores they got from the depression subscale (See Table1).

In addition, significant correlations were observed between the scores obtained from the depression scale and the positive rumination subscale ($r = -.47, p < .01$) significant negative, with negative rumination subscale significant positive ($r = .64, p < .01$). Significant relationships were observed between the scores obtained from Life Orientation Test (optimism) and positive rumination subscale ($r = .58, p < .01$) with the scores obtained from the significant positive and negative rumination subscale significant positive. ($r = -.68, p < .01$) (See Table 1).

Table 1. Correlations among positive and negative rumination scale subscales, optimism, depression

	EH	SH	NA	PC	SD	PR	NR
1.Optimism(LOT)	.55**	-.51**	-.67**	.36**	-.51**	.58**	-.68**
2. Depression	-.51**	.44**	.59**	-.21**	.58**	-.47**	.64**

$p < .01$ **

Findings Related to Reliability Studies

Test-retest method and Cronbach Alpha internal coefficient of consistency methods were used to examine the reliability of PNRS. Test-retest reliability of PNRS was carried out on the data obtained from 90 university students (64 girls (71.1%), 26 boys (28.9%) volunteers). PNRS was applied to the university students twice with an interval of 15 days.

The reliability coefficients obtained from the scales with the test-retest method were .62 for the sub-dimension of enjoy happiness, .67 for the suppress happiness subscale .67 for the negative attribution subscale, .61 for the positive coping subscale, .61 for the self-deny sub-dimension, .65 for positive rumination, it was calculated as .74 for negative rumination (See Table 2).

Cronbach Alpha internal consistency coefficient methods have been used for examining the reliability of PNRS. Cronbach alpha internal consistency coefficient scores of PNRS, were made by the 308 participant's scores from the scales.

As a result of the analysis it was calculated as .79 for the enjoy happiness, .75 for the suppress happiness, .86 for the negative attribution, .65 for the positive coping, .80 for self-deny, .78 for positive rumination, .88 for negative rumination (See Table 2).

Table 2. Test-retest and cronbach alpha reliabilities for the positive and negative rumination scale subscales

	EH	SH	NA	PC	SD	PR	NR
1. Cronbach's α	.79	.75	.86	.65	.80	.78	.88
5. Test-Retest	.62**	.67**	.67**	.61**	.61**	.65**	.74**

p<.01**

DISCUSSION

In this study, it was aimed to examine the validity and reliability of the Turkish version of the Positive and Negative Rumination Scale. For language validity, in the analysis made with the data obtained from the 44 candidate volunteer English teachers, a high level of positive correlation was found between the Turkish form and the English form of the scale ($r = .82, p < .01$). Correlation coefficient being seen between 0.70-1.00 is a high level of relationship (Büyüköztürk, 2016). From this point of view, it can be said that the English form and the Turkish form of the adapted scale are equivalent in terms of language and the language validity of the translated scale is ensured.

First and second order confirmatory factor analysis were performed for the construct validity of the scale. In order for the model to be considered as being successfully fit with the , $\chi^2 / df \leq 3, 05 < RMSEA \leq .08, 05 < SRMR \leq .10, CFI \geq .95, NFI \geq .90$ (Schermelel-Engel et al., 2003); $NNFI \geq .90, CFI \geq .90$ (Sümer, 2000); $GFI \geq .85, IFI \geq .90, RFI \geq .90, RMR \leq .08$ (Marcholudis & Schumacher, 2007; cited in Seçer, 2015) the conditions of being As a result of First Order CFA applied to the scale, it was determined that the fit values were $\chi^2/df=2.313, NFI=.92, NNFI=.95, IFI=.95, RFI=.91, CFI=.95, GFI=.87, RMR=.05, RMSEA=.07, SRMR=.07$, therefore, it can be said it is seen that the five-factor structure fits the sample data adequately.

In addition, in order to examine the factor structure of PNRS, enjoy happiness and positive coping to is loaded to positive rumination; suppress happiness, negative attribution and in which self-deny is loaded to negative rumination 2- factor Second Order DFA for a second-order confirmatory model. As a result, the fit values were $\chi^2/df=2,375, NFI=.92, NNFI=.94, IFI=.95, RFI=.91, CFI=.95, GFI=.87, RMR=.06, RMSEA=.07, SRMR=.07$ second order (2-factor) with 2 factors indicated as it was observed that the model (second order model) fitted the data well.

The results of the first order confirmatory factor analysis applied, as in the original form, factored structure and fit sufficient of the five-factor structure, and that the Turkish form of the original factor structure proved to be consistent with its structure. In addition, as a result of the 2-factor second-order confirmatory factor analysis, in order to examine the factor structure of PNRS, enjoy happiness and positive coping loaded to positive rumination; suppress happiness in which negative attribution and self-deny are loaded to negative rumination the 2-factor order 2 structure and that showed that the original factor structure was compatible with the factor structure of the Turkish form In criterion-related validity studies, the scores obtained from the sub-dimensions of PNRS and the relationship between the scores obtained from the depression and optimism scale was examined. While a significant relationship was observed in the direction, a positive significant relationship was observed between the scores they received, enjoy happiness, positive coping, and positive rumination, which are the sub-dimensions of

PNRS of the students' scores and Life Orientation Test (optimism); with a negative significant relationship PNRS sub-dimensions happiness suppression, negative attribution, self-deny, and negative rumination between their scores and their scores on the Life Orientation Test (optimism). In addition, while a negative significant relationship was observed between scores, they received enjoy happiness, positive coping, and positive rumination, which are the sub-dimensions of PNRS of the students' scores and depression; with a positive significant relationship PNRS sub-dimensions happiness suppression, negative attribution, self-deny, and negative rumination between their scores and their scores on the depression. These results show that the results of the Turkish form, the scale is parallel to the results in the original (Yang et al., 2018) and criterion-related shows that its validity is at an acceptable level.

For the 5 sub-dimensions of the scale, the test-retest correlation performed at 15-day intervals varying between .61 and .67, and it is seen .65 for positive rumination in the second order 2-dimensional structure, .74 for negative rumination. In addition, it is seen that cronbach alpha values for the 5 sub-dimensions of the scale vary between .65 and .86 and for the positive rumination found in the second order 2 dimensional structures of the scale, .78 for positive rumination and .88 for negative rumination.

When we examine the evaluation criteria followed in the evaluation of Cronbach alpha coefficient, it can be said that the scale is quite reliable when the coefficients is $0.60 \leq \alpha < 0.80$, and it can be said that the scale is highly reliable when the coefficient is $0.80 \leq \alpha < 1.00$ (Özdamar, 2002) and based on that fact, the results are satisfactory. In general, the findings show that the Positive and Negative Rumination Scale is a valid and reliable measurement tool to evaluate its positive and negative sides of rumination.

It can be said that the scale, adapted to Turkish culture, is a valid and reliable measurement tool to evaluate the positive and negative aspects of rumination. It shows that it is a valid and reliable measurement tool to evaluate Providing a multi-dimensional evaluation of rumination, PNRS provides both positive affect and positive and negative response to negative affect as well as positive and negative. It fills an important gap in rumination measures by focusing on the response (Yang et al., 2018).

As a result, in the university student sample of the Positive and Negative Rumination Scale with the 5-factor first order structure and 2-factor second order model, it can be stated that the sample is suitable for Turkish culture, and it can be said that this scale to contribute on the researches which makes it possible to evaluate the multidimensionality of rumination.

This study has some limitations. Only university students participated in the research group. Therefore, in future studies, reliability and validity studies of the scale can be conducted for individuals in variety of age groups (adolescence, middle-age group, etc.). In addition, it can be tested whether this scale is a valid and reliable scale on individuals with psychological disorders. It can be used mental health experts working in psychological counseling and guidance units within the constitutions of universities for individuals who have rumination problems in both individuals and group sessions.

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Author Contributions

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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Ethical Statement

The research was reviewed by the Social and Human Sciences Research and Publication Ethics Committee Necmettin Erbakan University and was given permission (Date: 3.4.2020, Ref: 2020/22). In addition, the participants participated in the study on a voluntary basis.

Ethics Committee Name: Necmettin Erbakan University Institute of Social and Human Sciences Research and Publication Ethics Committee

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RESEARCH

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ARAŞTIRMA

Açık Erişim

Does Gender, Getting an Art Education, and Mental Health Explain The Appearance-Related Social Media Consciousness?

Cinsiyet, Sanat Eğitimi Alma ve Ruh Sağlığı Görünümü İlişkili Sosyal Medya Bilincini Açıklar Mı?

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ABSTRACT

This study aims to examine the appearance-related social media consciousness levels of university students in terms of gender, get art education, and psychological symptoms (depression, anxiety, stress) variables. This research was carried out with the correlational model, which is one of the quantitative research methods. The study group of the research consists of 295 university students, 229 female, and 66 male, studying at different higher education institutions in Turkey. The Appearance-Related Social Media Consciousness Scale, Depression Anxiety Stress Scale-21, and Personal Information Form were used in the research. Pearson Product-Moment Correlation Analysis and Hierarchical Regression Analysis methods were used in the analysis of the data. In the research, it was seen that gender (female), get art education (yes), and psychological symptoms (depression, anxiety, stress) had a significant explanatory value of 14.9% on the appearance-related social media consciousness. The findings obtained from the research were discussed within the framework of the literature and suggestions were made.

Article Information

Keywords

Appearance-Related Social Media Consciousness
Gender
Art Education
Mental Health

Anahtar Kelimeler

Görünümü İlişkili Sosyal Medya Bilinci
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ÖZET

Bu araştırmanın amacı, üniversite öğrencilerinin görünümü ilişkili sosyal medya bilinç düzeylerinin cinsiyet, sanat eğitimi alma ve psikolojik belirtiler (depresyon, kaygı, stres) değişkenleri açısından incelemektir. Bu araştırma, nicel araştırma yöntemlerinden biri olan ilişkisel model ile gerçekleştirilmiştir. Araştırmanın çalışma grubunu Türkiye'de farklı yükseköğretim kurumlarında öğrenim gören 229'u kadın, 66'sı erkek olmak üzere 295 üniversite öğrencisi oluşturmaktadır. Araştırmada, "Görünümü İlişkili Sosyal Medya Bilinç Ölçeği", "Depresyon, Anksiyete, Stres Ölçeği-21" ve "Kişisel Bilgi Formu" kullanılmıştır. Verilerin analizinde Pearson Moment Korelasyon Analizi ve Hiyerarşik Regresyon Analizi yöntemleri kullanılmıştır. Araştırmada cinsiyet (kadın), sanat eğitimi alma (evet) ve psikolojik belirtilerin (depresyon, kaygı, stres) görünümü ilişkili sosyal medya bilinç düzeylerindeki toplam puanın %14,9'unu anlamlı bir şekilde açıkladığı görülmüştür. Araştırmadan elde edilen bulgular alan yazın çerçevesinde tartışılmış ve çeşitli önerilerde bulunulmuştur.

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Ethical Statement: The ethics committee permissions for the research were obtained from the Social and Human Sciences Ethics Committee of Necmettin Erbakan University (Date: 13/05/2022; Number: 2022/205).

INTRODUCTION

Throughout history, the impulses people have been effective in shaping their lives and behaviors. The perception of taste, which is one of these impulses; is associated with looking beautiful, gaining admiration, and ensuring their continuity. Being popular today is equated with being liked more. Hart, Leary, and Rejeski (1989) state that physical appearance has been important in social life since the beginning of humanity. Therefore, individuals give importance to their external appearance in their social lives and evaluate their physical appearance as bad or good (Kaplan, 2022). This system of thought, which is formed by the influence of popular culture, can be felt in social media tools and every part of society today. This situation causes individuals to pay more attention to their perceptions of their appearance and evaluate their photos on social media in this way (Öngören, Durdu, Dongaz, Bayar, & Bayar, 2021). The focus of this research is the appearance-related social media consciousness, which is a concept that focuses on how individuals' photo sharing on social media is perceived by others.

In recent years, Instagram, Snapchat, etc. The use of photo-based social media tools such as. In the research of the digital platform conducted by We Are Social (2022), it was seen that the Instagram platform is a frequently used social media platform, especially among adolescents and young adults. The increasing use of photo-based social media tools such as Instagram can also shape the sharing of individuals on these platforms (Scott, Boyle, Czerniawska, & Courtney, 2018). This situation can affect individuals' concerns and thoughts about how they are perceived by others when sharing their photos on social media platforms (Boursier, Gioia, & Griffiths, 2020). Because today, individuals can make an effort to make a more effective impression on other people and to look attractive with their photo sharing on social media (Öngören et al., 2021). Individuals who think that their sharing will not make a good impression on other people may experience anxiety (Vander Dussen, 2021). This situation is defined as appearance-related social media consciousness (Choukas-Bradley, Nesi, Widman, & Galla, 2020). The characteristics of social media and the social importance given to physical appearance lead to social media consciousness associated with an appearance in an integrated manner. Appearance-related social media consciousness is defined as individuals' consciousness of how their socially constructed body images will be perceived by others (Choukas-Bradley et al., 2020; Öngören et al., 2021). This concept can be considered as one of the forms of social appearance anxiety in life transferred to the social media environment. It is thought that the social media consciousness levels of individuals related to appearance can be explained by different psychological and social structures. In this context, it is thought that the variables of gender, get art education, and psychological symptoms can explain social media consciousness related to appearance.

In the study, it is thought that the social media consciousness levels of university students related to appearance can be explained by the gender variable. Studies show that gender has an important predictive role in favor of women in shaping social appearance and body perception (Demarest & Allen, 2000; Levinson et al., 2013). In this respect, it can be said that the state of anxiety experienced as a result of having negative perceptions and thoughts about the body may differ according to gender (Feingold & Mazzella, 1998). With the spread of social media, the reflection of body perception on photos in social media through shared photos can lead to the transfer of this problem to the social media environment (Fardouly & Vartanian, 2016). Therefore, it is thought that women who have negative body perceptions and thoughts about their photos while sharing photos on their social media accounts may have a higher

risk of social media anxiety related to appearance. In this context, it is predicted that the gender variable can significantly predict social media consciousness related to appearance.

According to Kant, the reason why the judgment of taste is a general understanding of taste is that the enjoyment of the beautiful is a necessary pleasure or taste, and therefore it is a common pleasure in all people. The common aesthetic feeling is a mere ideal norm; a judgment of taste is given by following this ideal norm and this ideal rule. Every judgment made without relying on personal inclinations is made by this rule and based on it (Tunalı, 2011). In the traditional approach to aesthetic and usual perception, the distinction made between content and becoming separates the conceptual from the objective and thus distances the mind from the object. Of course, mental contents can have the status of scientific entities whose accuracy can be ascertained independently of their source, as well as made objects (Brown, 1999). The aesthetic experience that progresses as a result of interaction with the work of art is an effective process in understanding and analyzing the work of art. Aesthetic experience is the interaction of the organism with the environment (Määttänen, 2017). J. Dewey tends to include all thinking, understanding, cognition, and insight into the subject of experience, in short, the entire research process and the results that follow. Objects do not "enter" our consciousness all at once: they are hierarchized, categorized, and classified by questioning and thinking processes and acquire "meaning" only through the activity of thought (Johnson, 2000). The next learned or perceived things or situations are the results of previously experienced knowledge. For this reason, having a conscious aesthetic experience shows that the next experiences and tastes will turn into an aesthetic appreciation. Art education is of great importance in this sense. According to Efland (2004), apart from popular culture, people should learn visual arts through museums, galleries, libraries, and schools. By learning in this way, students will develop a conscious understanding of aesthetics. According to Wittgenstein, a person can experience emotions expressed with words such as "ah" and "wonderful" in the process of aesthetic judgment. But examining them psychologically does not mean examining them aesthetically. The accuracy and reality of aesthetic judgments can be determined. The meaning of the beautiful, pleasant expressions used here is the meaning of "correct". This requires a more scientific and rational situation (Tunalı, 2011). It is explained by this statement that there are teachable rules about art. Before evaluating an object, it is necessary to know the rules that will lead to an aesthetic judgment about it. Knowing the rules develops and changes judgment and taste. For this reason, it is expected that individuals who receive art education should have a conscious understanding of taste.

The psychological state of individuals can be effective in shaping the behaviors in their lives (Burger, 2019). It is supported by research that individuals who experience negative mental health symptoms such as depression, anxiety, and stress are more likely to face negative life experiences (Essex et al., 2006; Joshi & Sharma, 2020). In particular, it is known that the psychological state of the individual is effective in the formation of body perception and the formation of thoughts on this subject (Gillen & Markey, 2015). Therefore, this situation shows that individuals who are in a risky position in terms of mental health may have negative perceptions about photo sharing on social media. Because the mental state of the individual has an important place in the aesthetic evaluation of personal photos shared on photo-based social media tools. Different studies in the literature show that psychological symptoms (depression, anxiety, and stress) have a significant explanatory value in terms of social appearance anxiety, fear of negative evaluation, and anxiety in social media sharing (Çelik & Tolan, 2021; Levinson et al., 2013; Nonterah et al., 2015). Therefore, in this study, it is thought that the stress, anxiety, and depression levels of university students may be a significant explainer of social media consciousness levels related to appearance.

Cyberpsychology has become an important research area of psychology, with the internet and social media tools having an important position in the lives of individuals recently (Norman, 2017). It can be said that examining the causes and effects of individuals' behaviors in the internet environment can contribute to this field and contribute to the planning of prevention and treatment studies against possible risks. Therefore, in this study, it is thought that focusing on different predictors of social media consciousness (gender, getting an art education, and psychological symptoms) related to appearance, which is one of the subjects of cyberpsychology, may contribute to the literature and the field. In this context, the explanation of university students' social media consciousness levels related to an appearance by the variables of gender, getting an art education, and psychological symptoms were examined. In this context, the following hypotheses were tested within the scope of the research:

H₁: The social media consciousness levels of university students related to appearance show a significant difference according to the variables of gender and getting art education.

H₂: There is a positive and significant relationship between the stress, depression, and anxiety levels of university students and their social media consciousness levels related to appearance.

H₃: The social media consciousness levels of university students related to appearance are significantly predicted by the variables of gender (female), getting an art education (yes), and psychological symptoms.

METHOD

This research was carried out with the correlational model, which is one of the quantitative research methods. In this model, the relationships between two or more variables are discussed (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, & Demirel, 2018). This model was used in the study because the predictors of social media consciousness levels related to the appearance of university students were examined.

Study Group

The study group of the research consists of 295 university students, 229 female (77.6%) and 66 male (22.4%), studying at different higher education institutions in Turkey. In addition, 127 of the participants are studying in Fine Arts Education undergraduate programs, while 168 are studying in other undergraduate programs.

Ethical Statement

This study was completed by the Helsinki Declaration. In addition, the ethics committee permissions for the research were obtained from the Social and Human Sciences Ethics Committee of Necmettin Erbakan University (Date: 13/05/2022; Number: 2022/205).

Data Collection Tools

The Appearance-Related Social Media Consciousness Scale. To determine the social media consciousness levels of university students related to appearance, (Öngören et al., 2021), the measurement tool adapted to Turkish was used. The measurement tool consists of one dimension and 13 items. The measurement tool was prepared in a 7-point Likert type, and the increase in the score obtained from the scale shows that the individual has more negative evaluation perceptions and thoughts about photo sharing on social media. Measuring tool; It consists of items such as "When people take my picture, I think about how I will look if the pictures are shared on social media and", "I imagine what my body will

look like in a social media picture even when I am alone" and "I would feel bad if an unappealing photo of me was published on social media". In the exploratory factor analysis performed for the measurement tool, it was seen that the one-dimensional structure explained 68.13% of the total variance. In addition, in the concurrent scale validity analysis of the measurement tool, a moderately significant negative correlation was found with the level of body liking. In the reliability analysis of the measurement tool, Cronbach's alpha coefficient was found to be .93.

Depression Anxiety Stress Scale-21 (DASS-21). A measurement tool adapted to Turkish by Sariçam (2018) was used to determine the depression, anxiety, and stress levels of university students. The measurement tool consists of three sub-dimensions (depression, anxiety, stress) and 21 items. The measurement tool was prepared in a 4-point Likert type, and an increase in the score obtained from the sub-dimensions of the scale indicates that the levels of the individual in the relevant sub-dimensions increase. Measuring tool; It consists of items such as "I had difficulty unwinding", "I noticed that my mouth was dry" and "I realized that I could not experience any positive emotions". In the validity study of the measurement tool, it was observed that it had acceptable fit indices in the normal sample and excellent fit indices in the clinical sample. In the clinical sample, Cronbach's alpha internal consistency reliability coefficient was found as $\alpha=0.87$ for the depression subscale, $\alpha=0.85$ for the anxiety subscale, and $\alpha=0.81$ for the stress subscale. In the normal sample, the test-retest correlation coefficients were found to be $r=0.68$ for the depression subscale, $r=0.66$ for the anxiety subscale, and $r=0.61$ for the stress subscale.

Personal Information Form. In the research, information about gender and getting art education of university students was obtained with this form created by the researchers.

Data Collection

Before starting the data collection process, permission was obtained from the researchers who developed the measurement tools to be used in the research. Afterward, university students who accepted to participate in the research voluntarily were informed about the purpose of the research. Some of the data were collected through Google Forms, an online data collection tool, and some of them were collected through face-to-face interviews. In the study, the data were collected in a single session and it took about 10 minutes for a student to fill out the measurement tool. After the data were collected, people who wanted to learn the results of the scale they filled in were reminded that the results could be shared with them if they wanted. In this context, these people were contacted at the end of the research.

Data Analysis

Before starting the analysis of the data, the normality test of the scores obtained from the measurement tools was performed, and the kurtosis and skewness values were checked. The kurtosis and skewness values of all continuous variables in the study are between -1.96 and +1.96. The values of kurtosis and skewness of the variables between -1.96 and +1.96 indicate that the variables show a normal distribution (Can, 2019; Çokluk, Şekercioğlu, & Büyüköztürk, 2018). In the analysis of the data, Pearson Product-Moment Correlation Analysis was used to determine the relationships between the continuous variables of the research, and Hierarchical Regression Analysis was used to determine the predictive power of the independent variables to the dependent variable. Before the analysis, the normality of the variables was checked and outliers were examined. 3 observations with the Mahalanobis distance value were excluded from the analysis and as a result, 295 data were analyzed. In addition, multiple swelling, variance swelling

(VIF), and tolerance values between the variables were examined. The results showed that the values were at an appropriate level. When gender, one of the demographic variables, was included in the analysis, men were coded as 0 and women as 1, while individuals who were getting an art education were coded as 0, and individuals uneducated as 1.

RESULTS

Descriptive Statistics

Means and standard deviations, and correlations are shown in Table 1. Appearance-related social media consciousness was, as hypothesized, positive related to depression ($r = .268, p < .001$) and anxiety ($r = .295, p < .001$) and stress ($r = .332, p < .001$).

Table 1. Descriptive statistics and correlations for the study variables.

Variable	M	SD	1	2	3
1. Appearance-related social media consciousness	45.16	16.71	-	-	-
2. Depression	8.91	5.99	.268**	-	-
3. Anxiety	7.70	5.23	.295**	.704**	-
4. Stress	9.47	5.27	.332**	.764**	.775**

Note: * $p < .05$, ** $p < .01$

Regression Analysis

We next computed a multiple hierarchical regression analysis predicting appearance-related social media consciousness. The variables were entered into the model in four blocks: gender was entered first, followed by the state of getting an art education, depression, anxiety, and stress (see Table 2). Summary statistics for each variable in this equation are presented in Table 2. Gender, getting an art education, depression, anxiety, and stress accounted for 14.9 % of the variance in appearance-related social media consciousness, and the model was highly significant ($p < .001$). After the control variables, gender entered the equation first, accounting for 1.5 % of the variance in predicting appearance-related social media consciousness ($R^2 = 0.015, p=.039$). Then, get an art education entered on the second step accounting for an additional 2.7 % of the variance ($R^2 = 0.042, p=.002$). Finally, depression, anxiety, and stress variables were included in the model and contributed 10.7% to the model ($R^2 = 0.149, p=.000$).

Table 2. Results of hierarchical regression analyses predicting the level of appearance-related social media consciousness

Model 1	B	SH β	β	t	p	Partial	Part
Constant	41.42	2.04		20.253	.000		
Gender	4.82	2.32	.121	2.078	.039	.121	.121
	R=.121	R ² =.015		F ₍₁₋₂₉₃₎ =4.319		p=.039	
Model 2	B	SH β	β	t	p	Partial	Part
Constant	43.37	2.13		20.363			
Gender	5.41	2.30	.135	2.353	.019	.136	.135
Getting Art Education	-5.59	1.93	-.166	-2.889	.004	-.167	-.165
	R=.205	R ² =.042		F ₍₂₋₂₉₂₎ =6.387		p=.002	
Model 3	B	SH β	β	t	p	Partial	Part
Constant	33.82	2.56		13.197	.000		
Gender	4.89	2.20	.122	2.217	.027	.129	.120
Getting Art Education	-5.362	1.86	-.159	-2.869	.004	-.166	-.156
Depression	.216	.25	.077	.865	.388	.051	.047
Anxiety	.215	.28	.067	.751	.453	.044	.041
Stress	.656	.31	.207	2.088	.038	.122	.113
	R=.386	R ² =.149		F ₍₅₋₂₈₉₎ =10.096		p=.000	

Note: * $p < .05$, ** $p < .01$

DISCUSSION

Today, social media tools affect the lives and behaviors of individuals in a significant way. Research on social media behaviors of individuals has contributed to the formation of the field of cyberpsychology and this research will contribute to preventive and interventional services. In this study, the possible predictors of social media awareness about appearance, which is one of the original and new concepts of cyberpsychology, were examined.

In the study, gender, the first variable included in the model, significantly explained the social media awareness related to appearance in favor of women at a rate of 1.5%. This finding from the study is consistent with Choukas-Bradley et al. (2020), adolescents' social media awareness related to appearance is consistent with the results of the study. In the related study, the social media awareness levels of female adolescents' appearance were found to be significantly higher than male adolescents. In addition to this research, it is known that there are significant results in favor of women in different studies examining the relationship between the body image of individuals and gender in the literature (Fox & Vendemia, 2016; McLean, Paxton, Wertheim, & Masters, 2015). It is known that women can think more about their body perceptions, their photos on social media, and their appearance compared to men (Fox & Vendemia, 2016). In a study, it was seen that this difference has a biological basis and that women are more successful than men in perceiving and thinking about the state of beauty compared to men (Cazzato, Mele, & Urgesi, 2014). Therefore, it can be said that social media awareness related to appearance is predictive in favor of women and is compatible with the literature.

Secondly, the variable of getting an art education was included in the model. As a result, the variable of getting an art education made a significant contribution of 2.7% in explaining social media awareness related to appearance. Individuals' getting an art education can differentiate their perspectives on situations with art and aesthetic value. Particularly, getting an education related to the art may affect the artistic tastes and perceptions of the individual. In the research, it was seen that being getting an art education negatively affected social media anxiety related to appearance. Therefore, it has been seen that being interested in art does not have any worrying thoughts about sharing photos on social media, and even interacting with art has a protective role in this regard. It can be said that the research has a unique role in terms of its results in terms of dealing with the anxiety about photo sharing on social media in terms of the art variable. Because there is not enough research on variables be interested in the art such as painting, playing instruments, making sculpture, and theater. In a study that dealt with body image in terms of the variable of getting an art education, it was observed that the students who received art education had a significantly healthier thought about body image than other students (İmamoğlu & Demirtaş, 2017).

Finally, depression, anxiety, and stress variables were included in the model and the explanatory status of psychological variables on social media awareness related to appearance was examined. As a result, psychological variables made a significant contribution of 10.7% to the model. The psychological state of the individual can affect body perception. Individuals in the risk group in terms of various psychological symptoms such as depression, anxiety, and stress may have more negative perceptions and thoughts related to their bodies (Wang, Ren, & Zhou, 2020). This situation can lead to social appearance anxiety (Hart et al., 2008). Therefore, it can be said that individuals in the psychologically risky group may have more negative thoughts and perceptions when sharing photos on social media, and as a result, they may experience social media anxiety related to appearance (Choukas-Bradley et al., 2020). Different

studies in the literature support this finding (Nonterah et al., 2015). Choukas-Bradley et al. (2019), it was found that individuals with a high level of social media awareness related to appearance had higher levels of body dissatisfaction and depressive symptoms.

Conclusion

In this study, the appearance-related social media consciousness levels of university students were examined in terms of gender, getting art education, and psychological symptoms. In the research, it was seen that gender (female), getting art education (yes), and psychological symptoms (depression, anxiety, stress) had a significant explanatory value of 14.9% on the appearance-related social media consciousness. It is thought that the results obtained from the research can contribute to the field of cyberpsychology. It is known that the rate of young people using photo-based social media tools has become widespread in recent years. This situation has increased the importance of research on the social media behaviors of young people. Therefore, studies to be carried out in this field will contribute to mental health professionals and the literature. In addition, it can be considered an important finding in the research in terms of having a protective role in terms of social media anxiety related to appearance. It can be said that in the prevention-based studies to be carried out in this context, it can be said that the studies aimed at gaining artistic skills can be emphasized. In addition, it can be said that preventive mental health-based studies have an important role in terms of social media anxiety related to appearance, along with many psycho-social problems, in terms of the fact that psychological symptoms have an important explanatory rate in explaining the appearance-related social media consciousness.

Limitations and Recommendations

The research is limited in that it is carried out with 295 students studying at different universities in Turkey and that the measurement tools used within the scope of the research are evaluated within the framework of the qualifications. In addition, analyzes were carried out using only quantitative data in the research, and this revealed limited findings in terms of explaining students' social media awareness related to appearance. Therefore, incorporating mixed-method models and qualitative data into the process in different studies to be conducted will enable richer findings. In addition, in this study, gender, getting art education, and psychological symptoms variables were discussed as predictors of the appearance-related social media consciousness. Studies that focus on different explanatory factors of the appearance-related social media consciousness in different studies to be conducted will contribute to the literature on the subject.

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Author Contributions

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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Ethical Statement

This study was completed by the Helsinki Declaration. In addition, the ethics committee permissions for the research were obtained from the Social and Human Sciences Ethics Committee of Necmettin Erbakan University (Date: 13/05/2022; Number: 2022/205).

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RESEARCH

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ARAŞTIRMA

Açık Erişim

The Relationships Between the Leadership Tendencies, Job Satisfaction and Burnout of Guidance and Research Centre Managers

Rehberlik ve Araştırma Merkezi Yöneticilerinin Liderlik Eğilimleri, İş Doyumları ve Tükenmişlikleri Arasındaki İlişkilerin İncelenmesi

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ABSTRACT

Leadership styles, job satisfaction and professional burnout adopted by individuals in managerial positions in an organization appear as important concepts. In this context, the concepts of leadership styles, job satisfaction and professional burnout constitute the main variables of this study. The aim of the research is to examine the relationship between the leadership styles, job satisfaction and professional burnout adopted by the managers working in the Guidance and Research Centres within the scope of the specified variables. In line with the stated purpose, 138 managers working in the Guidance and Research Centre constitute the sample of the study. As a result of the analyses, It has been found that there is a significant relationship between the leadership styles of the managers in the Guidance and Research Centres and job burnout and job satisfaction and various sub-dimensions of the variables.

Article Information

Keywords

Guidance and Research Centre
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ÖZET

Bir örgütte yöneticilik pozisyonunda çalışan bireylerin benimsediği liderlik eğilimleri, iş doyumunu ve mesleki tükenmişlikleri önemli kavramlar olarak karşımıza çıkmaktadır. Bu bağlamda araştırmanın amacı, Rehberlik ve Araştırma Merkezlerinde görev yapan yöneticilerin benimsedikleri liderlik eğilimleri, iş doyumları ve mesleki tükenmişlik düzeyleri arasındaki ilişkiyi incelemektir. Belirtilen amaç doğrultusunda Rehberlik ve Araştırma Merkezinde görev yapan 138 yönetici araştırmanın örneklemini oluşturmaktadır. Analizler sonucunda Rehberlik ve Araştırma Merkezlerinde görev yapan yöneticilerin liderlik eğilimleri ile iş tükenmişliği ve iş doyumunu değişkenlerinin çeşitli alt boyutları arasında anlamlı bir ilişki olduğu tespit edilmiştir.

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INTRODUCTION

Guidance & Research Centres (GRCs) are governmental institutions that provide services free of charge pertaining to private education, guidance, counselling and psychological counselling (Karaköse & Bozgeyikli, 2012). The aim of these institutions is to enable people to become responsible, self-aware beings who are able to benefit from the educational and professional opportunities presented to them. The centres also assist individuals by supporting their social, emotional, academic and professional development so that they may lead a healthy life (The Ministry of National Education Regulation on Guidance and Psychological Counselling Services, 2020). Each GRC has a manager who is generally responsible for coordination, organisation and the supervision of numerous matters. The number of managers may vary according to certain factors, and as such so will their responsibilities. When schools do not provide psychological counselling they will provide consulting services. For special education institutes they will appoint a psychological counsellor to determine individuals' levels of performance and provide appropriate guidance. The planning and realisation of in-service training, courses, conferences and workshops for the career development of their peers, in addition to ensuring the health and safety of those who work at the centres are among the other responsibilities within the remit of managers (Ministry of National Education's Regulation on Guidance and Psychological Counselling Services, 2020).

By legal definition, counselling and research centres employ more than one specialist. The managers of these centres are required to be of influence on employees and ensure that the work carried out is in line with the centre's aims. Managers' responsibilities also entail consistent communication with the individuals to whom they provide services which includes to; the managers of peer schools, psychological counsellors, private education institutions and educators, non-governmental organisations, and public institutions. The success of managers in so many areas is not only attributable to their technical and specialist knowledge, but their actual management skills. Alongside this skill and specialist knowledge, they are expected not only to have effective communication and management skills but also to also be "leaders". Leadership is referred as the aim of bringing to life the objectives of an organisation, meeting the determined needs of individuals, the organisation of individual-group-community relations, and being responsible for interaction and communication between individuals belonging to the organisation (Simon & Thompson, 1991).

Leaders who are required to manage and organise so many relations must be able to think more broadly, and from different perspectives (Bolman & Deal, 2015). Bolman & Deal (1991) put forward four frames with respect to different types of leadership. They essentially approached the concept of leadership from the perspectives of; structural leadership, human resources leadership, political leadership and symbolic leadership and their associated tendencies. Structural leaders clearly determine the aims of the organisation, the roles of each individual, the rules of the group and the direction to be taken therein. They believe that employees are responsible for the results of the structured process. When problems may arise these leaders create new rules, make revisions and restructure accordingly. Human resources leaders on the other hand use network psychology as their support mechanism, and meeting the needs of the individual are kept at the forefront. Leaders with these tendencies are people who empower workers who give importance to the feelings of others; their primary aim being to create a harmonious organisation. Leaders with political tendencies however, are realistic and pragmatic. For them, competition and conflict are at the forefront of organisations and as such, they focus on the interests of

their group. They put their efforts into steering the organisation forward by fostering relations that will give them support and power. Last but not least, leaders with symbolic tendencies use their charisma to develop a culture, and without even being aware of it group members contribute to the development of a mutual vision. By placing importance on cultural events such as celebrations and ceremonies, they ensure that love, excitement, loyalty and respect are the driving forces in the organisation.

Numerous studies have been carried out on the leadership tendencies of institution managers, their leadership styles, job satisfaction of staff and burnout levels (Alanoğlu, 2019; Aydemir&Aydemir, 2014; Çulha, 2017; Erdal & Turan, 2017). However, none have been carried out on the individual leadership tendencies of managers and their levels of job satisfaction and burnout. This study is therefore of importance as it is the first study to examine the tendencies of the leaders of guidance and research centres in Turkey, and their job satisfaction and burnout levels.

Job Satisfaction and Burnout

Job satisfaction is defined as the level of satisfaction people have with respect to their work. It goes beyond daily duties incorporating satisfaction with group members/management, organisational policies and the effect of work on one's personal life. Job satisfaction is crucial to an organisation, as a satisfied worker will be determined to work to the best of their abilities. Every worker desires progress in their career, alongside a steady balance between their work and personal life. If a worker is happy with the organisation they work for and the job that they do, then they will desire to give something back to that organisation (Dawis, 2004). Increasing the level of job satisfaction of GRC workers facilitates the organisation in reaching its goals, ensures that clients receive proper service and that healthy relationships among workers are developed. It has been noted though, that low levels of job satisfaction and high levels of burnout have a significant connection (Filiz, 2014; Çetinkanat, 2002; Öztürk & Deniz, 2008). Burnout is the result of extreme, long-term stress causing mental and physical exhaustion (Maslach & Leiter, 2006). The individual is depressed, depleted mentally and this state of being begins to reveal itself when the individual feels unable to meet demands, and with the continuance of this stress the individual begins to lose their motivation and eventually experience burnout (Maslach & Leiter, 2016). There are studies that have found that a positive leadership style decreases burnout syndrome in workers and increases their level of job satisfaction (Zopiatis & Constanti, 2010; Ghorbanian, Bahadori & Nejati 2012; Lok & Crawford, 2004). Therefore, the concepts of leadership styles, job satisfaction and burnout are considered important variables for the managers of an institution that provides psychological counselling and guidance to students.

METHOD

Participant and Procedure

The participants of this study all worked at the Counselling and Research Centre. From a total of 138 participants, 109 (79.1%) were male and 29 (20.9%) were female. Their ages ranged between 28-65, whilst the average age was 39.78, with the standard deviation at 7.45. Of the participants, 92 were undergraduates, and 46 had undergone postgraduate studies. The years of management taken into account for the study were; 76 (54.7%) between 1-5 years, 41 (29.5%) between 6-10 years, and 22 above 11 years.

Ethical Statement

This study was approved by the Artvin Coruh University's Scientific Research and Publication Ethics Board on July 1, 2022. Consent of volunteering were requested from the participants for the applied scales.

Measures

Multi-dimensional Leadership Orientations Scale (MLOS). The MLOS was developed by Bolman and Deal (1991), and the scale has been adapted to Turkish by Dereli (2003). The scale, which has a total of 32 items, is scored on a 5-point scale. The MLOS has four sub-dimension: political leadership, human resources leadership, symbolic leadership, and structural leadership. The Cronbach's alpha internal consistency coefficient of the scale was reported as 0,87, 0,87, 0,84, and 0,88, respectively (Dereli 2003).

Maslach Burnout Scale (MBS). The MBS was developed by Maslach and Jackson (1981), and the scale was adapted to Turkish by Ergin (1996). The scale, which has 22 items, is scored on a 5-point scale. The MBS has three sub-dimension: emotional burnout, depersonalisation, and personal accomplishment. The Cronbach's alpha internal consistency coefficient of the scale was reported as 0,83, 0,65, and 0,72, respectively.

Minnesota Job Satisfaction Scale (MJSS). The MJSS was developed by Weiss, Dawis, England, and Lofquist (1967), and the scale was adapted to Turkish by Baycan (1985). The scale, which has a total of 20 items, is scored on a 5-point scale. The MJSS has a uni-dimensional structure.

Data Analysis

A correlation analysis was undertaken so as to examine the relationships between the leadership styles of those who worked at the CRC, their job satisfaction and burnout. Following this, a multiple regression analysis was carried out to determine whether leadership styles predicted burnout and job satisfaction. The analyses were performed using SPSS 22.

RESULTS

The relationships between the variables may be found within this section under the heading of initial analyses. This is followed by the findings of the multiple regression analysis.

To examine the relationships between the leadership styles of those who manage the Counselling and Research Centre, their job satisfaction and occupational burnout, the first step was to consider the correlation coefficients between the variables. The total scores of the four dimensions of leadership style (political, human resources, symbolic and structural leadership), together with the dimensions of burnout (emotional burnout, depersonalisation and personal accomplishment) and job satisfaction were all included in the correlation analysis. The results are presented in Table 1.

As can be seen in Table 1; job satisfaction and emotional burnout have a significantly negative relationship. Job satisfaction on the other hand, has significantly positive relations with personal accomplishment, political leadership, human resources leadership, symbolic leadership and structural leadership. However, a relationship of significance was unable to be determined between that of job satisfaction and depersonalisation. Whilst occupational burnout's relationship with leadership, in general, is one of insignificance, the sub-dimension of personal accomplishment was found to have significant positive relationships with political and symbolic leadership.

Table 1. Correlations among the variables

Variable	1	2	3	4	5	6	7
1. Job satisfaction	-						
2. Emotional burnout	-.34**	-					
3. Depersonalisation	-.14	.62**	-				
4. Personal accomplishment	.42**	-.03	-.18*	-			
5. Political leadership	.33**	-.05	.04	.18*	-		
6. Human resources leadership	.26**	-.05	-.02	.13	.74**	-	
7. Symbolic leadership	.32**	-.04	.05	.21**	.83**	.74**	-
8. Structural leadership	.22**	-.11	.01	.04	.76**	.79**	.77**

Note: * $p < .05$, ** $p < .01$

Regression Analysis

Findings from the regression analysis are presented in Table 2.

Table 2. Multiple regression results

Dependent	Predictor	B	SE _B	β	T	R ²	F
Emotional burnout	Political leadership	.014	.535	.004	.025	.02	.56
	Human resources leadership	.157	.481	.050	.327		
	Symbolic leadership	.293	.551	.091	.532		
	Structural leadership	-.873	.652	-.21	-1.33		
Depersonalisation	Political leadership	.061	.293	.035	.209	.01	.298
	Human resources leadership	-.227	.263	-.13	-.862		
	Symbolic leadership	.190	.302	.108	.630		
	Structural leadership	.018	.357	.008	.052		
Personal accomplishment	Political leadership	.297	.361	.132	.822	.09	3.46**
	Human resources leadership	.255	.325	.114	.785		
	Symbolic leadership	.765	.373	.337	2.05*		
	Structural leadership	1.165	.441	.41	2.64**		
Job satisfaction	Political leadership	.739	.426	.273	1.73	.12	4.82**
	Human resources leadership	.231	.384	.086	.601		
	Symbolic leadership	.467	.440	.171	1.06		
	Structural leadership	-.647	.520	-.19	-1.24		

Note: * $p < .05$, ** $p < .01$

According to the findings in Table 2, the regression models set up to predict emotional burnout ($F_{4,134} = .02, p > .05$) and depersonalisation ($F_{4,134} = .01, p > .05$) derived from leadership style's dimension occupational burnout, were insignificant. Furthermore, these two subdimensions revealed that they were not significant predictors of any subdimension of leadership styles. In contrast though, the model constructed for predicting personal accomplishment as derived from leadership styles, was found to be of significance, ($F_{4,134} = .09, p < .01$). Thus, it is possible to suggest that this dimension positively predicts personal accomplishment with significance where symbolic and structural leadership styles are concerned, but does not predict the other leadership styles with any significance.

On a final note, the regression models constructed to determine the prediction of job satisfaction due to leadership styles were found to be of significance ($F_{4,134} = .12, p < .01$). None of the leadership styles, however, were found to predict job satisfaction with any significance.

DISCUSSION

Upon examining studies in scientific literature, it is evident that there is a relationship between certain leadership styles, the job satisfaction of workers and their burnout levels (Filiz, 2014; Çetinkanat, 2002; Öztürk & Deniz, 2008). Despite there being many studies on the effect of the perceived style of leadership of organisation leaders, job satisfaction and burnout levels of their staff, there are no apparent studies on the effect of leadership styles on the actual leaders themselves. This study looks at the effect of the leadership styles of the managers of Counselling and Research Centres, their job satisfaction and burnout levels in light of relevant literature.

According to the first finding of this study, although a significant relationship between all leadership tendencies and job satisfaction was determined, job satisfaction was not a significant predictor of leadership tendencies. As per Herzberg's (1959) two-factored theory, institutional policies and relations established with superiors and management are considered hygiene components and as factors that decrease job satisfaction. Increased levels of hygiene factors do not necessarily increase job satisfaction; nevertheless, when they decrease below the level of acceptance then dissatisfaction with one's job surfaces. Hence when a manager is able to lead well, it is possible for staff to reach the optimal level of job satisfaction (Herzberg, 1996). The positive relationship between a manager's leadership tendencies and their level of job satisfaction can be considered in a similar light. In such situations, it could pave the way for managers to go beyond the act of just simply managing; whereby they become leaders dedicating more of themselves to their work, in turn ensuring job satisfaction. When examined from an alternate perspective, being able to lead means being able to solve any problem that may arise (Bolman & Deal, 2015). A particular study determined that school managers highly capable of solving problems had a higher level of job satisfaction (Koçak & Eves, 2010). Caution should be taken when determining the cause-effect relation between the variables statistically, due to the fact that a significant relation was determined correlationally but one of insignificance as a result of regression.

Secondly, a relationship of significant negativity was found between job satisfaction and emotional burnout, a sub-dimension of burnout. Similar results were determined in a study carried out with psychological counsellors and school guidance counsellors (Umay, 2015). Other studies that have centred on these two variables also support the finding of a negative and significant relationship between them (Akçamete, Kaner & Sucuoğlu, 1998; Karadağ, 2013; Berber, 2011). Studies carried out abroad with school guidance counsellors also correlate with the findings of this study (Mullen, Backer, Chae & Li, 2020; Mullen, et. al., 2018). Based on these findings, it is possible to submit that the higher the level of satisfaction people have with their work, the less likely they are to suffer burnout, or in other words those who do not suffer from burnout are likely to be more satisfied with their work. There is a negative but insignificant relationship between job satisfaction and depersonalisation, a sub-dimension of burnout. Depersonalisation arises either from indifference, detachment and loss of interest in work or the belief that it is meaningless (Walburg, 2014). The results of the samplings of this study indicate that there is no correlation between job satisfaction and whether there is an interest in work or not. In their study, Lee & Ashforth (1996) stated that with the developmental burnout model, the feeling of inadequacy develops independently of depersonalisation (Kim & Seoumun, 2013). More research is required on the relationship between this particular dimension and job satisfaction.

When evaluating the third finding, a positive significant relationship between personal accomplishment a sub-dimension of burnout, and political and symbolic leadership was determined. Personal

accomplishment indicates the direction in which burnout increases in. Whether it be within the organisation or whether it be within the context of personal evaluation, individuals have a negative perspective towards themselves (Maslach, Schaufeli, & Leiter, 2001). When an individual has negative thoughts about their peers, then sooner or later they will begin to think negatively about themselves too. They think that nothing will become of their work, that it has no purpose, and that the time they put into it is unnecessary and a waste. As a consequence of such beliefs they develop low self-esteem and guilt (Strelan, 2007), start questioning their personal qualities and become less productive (Cordes, Dougherty, & Blum, 1997). It may be purported that political leaders who see the work place as ultimately the home of conflict and competition, work for their own interests in their pursuit of power. As such, this could spur conflict within the organisation and cause the leader to eventually experience burnout. Alternately, leaders who cause burnout may have adopted a leadership style where they actually feed off of conflict. With structural leadership, the tendency to plan and structure everything may lead to perfectionism and result in the leader becoming even more burnout. The regression results point out that personal accomplishment is a positive predictor of symbolic and structural leadership. Moreover, as sub-dimensions of burnout, emotional burnout and depersonalisation were found to have relations of significance with leadership styles. For the purpose of further clarification and detail more studies need to be carried out.

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Author Contributions

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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Ethical Statement

The study was approved by the Artvin Coruh University Sciences Research and Publication Ethics Committee on July 1, 2022 (No: E-18457941-050.99-54379 / 2022-07-04). In addition, consent forms were obtained from all participants included in the study.

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RESEARCH

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ARAŞTIRMA

Açık Erişim

The Association Between Sports Character and Mental Well-Being

Sportif Karakter ve Mental İyi Hali Arasındaki İlişki

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ABSTRACT

This research was executed in order to reveal the relationship between the sportive character and mental well-being of students studying in sports sciences. The research was developed in compliance with the correlation survey and causal comparative models. The obtained data were reached by convenience sampling method. Participants consist of 299 athlete students (n = 100 female; n = 199 male), studying at Artvin Çoruh University, Erzincan Binali Yıldırım University, and Kütahya Dumlupınar University. The "Sports Character Scale", which was adapted into Turkish, and the "Warwick-Edinburgh Mental Well-Being Scale", which was developed to evaluate the well-being of athletes, were used to gather data in the study. In the analysis of the data, first and foremost, the link between the character of the athlete and mental well-being was examined by network analysis. In addition, multiple regression analyses were conducted to ascertain the predictive role of sports character on mental well-being. At the conclusion of the analysis of the data, integrity and sportspersonship significantly predicted mental well-being positively and antisocial attitude negatively. These variables explain approximately 24% of the total variance of mental well-being. On the other hand, compassion and fairness included in the regression were not predicted significantly. In general terms, it can be stated that sports character is an important component of mental well-being. In future research, the explanation of the irrelevant results in the link between sports character and mental well-being should be examined thoroughly.

Article Information

Keywords

Antisocial Attitude
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ÖZET

Bu araştırma spor bilimlerinde okuyan öğrencilerin sportif karakteri ile mental iyilik hali arasındaki ilişkiyi ortaya koymak amacıyla yapılmıştır. Araştırma ilişkisel tarama ve nedensel karşılaştırma modeline göre desenlenmiştir. Elde edilen verilere uygun örnekleme yöntemiyle ulaşılmıştır. Katılımcılar Artvin Çoruh Üniversitesi, Erzincan Binali Yıldırım Üniversitesi ve Kütahya Dumlupınar Üniversitesi'nde öğrenim gören 299 sporcu (n=100 kadın; n=199 erkek) öğrenciden oluşmaktadır. Araştırmada veri toplamak için Türkçe'ye uyarlaması yapılan "Sports Character Scale" ile sporcuların iyi oluş düzeylerini ölçmek amacıyla geliştirilen "Warwick-Edinburgh Mental İyi Oluş Ölçeği" kullanılmıştır. Verilerin analizinde öncelikle Sporcu karakteri ile mental iyi oluş arasındaki ilişki network analizi ile incelenmiştir. Ayrıca sporcu karakterinin mental iyi oluş üzerindeki yordayıcı rolünü belirlemek için çoklu regresyon analizi yapılmıştır. Verilerin analizi sonunda Mental wellbeing'i; integrity ve sportspersonship pozitif yönde ve antisocial attitude ise negatif yönde anlamlı yordamaktadır. Bu değişkenler mental wellbeing toplam varyansının yaklaşık %24'ünü açıklamaktadır. Diğer taraftan, regresyona dâhil edilen compassion ve fairness ise anlamlı yordamamaktadır. Genel itibarı ile sportif karakterin mental iyi oluş için önemli bir faktör olduğu belirtilebilir. Sonraki araştırmalarda sports character ve mental wellbeing arasındaki ilişkide anlamsız çıkan sonuçların nedenleri detaylı bir şekilde incelenmelidir.

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INTRODUCTION

Well-being is one of the basic concepts in the positive psychology approach that focuses on the positive aspects of human nature. Researchers who adopt the positive psychology approach consider well-being from different perspectives. One of these perspectives is the concept of subjective well-being, which considers well-being as a combination of the overall satisfaction of individuals with life, as well as the fact that the positive emotions experienced by the individual are more than negative ones (Diener, 2000). On the other hand, psychological well-being, which approaches well-being from a different perspective, addresses well-being in terms of individuals living a functional life beyond just being satisfied with their feelings, thoughts, and behaviors (Ryff, 1995). As a matter of fact, researchers criticized the concept of subjective well-being as being pleasure-oriented and proposed the concept of psychological well-being and stated that psychological well-being is a level of well-being beyond happiness (Ryff & Singer, 2008). Therefore, it has been observed that both well-being concepts are incomplete at some point. From this point of view, the concept of mental well-being has emerged to eliminate deficiencies.

Mental well-being has a structure that combines subjective and psychological well-being (Keyes, 2002). Therefore, mental well-being emphasizes the importance of having functional lives that individuals can enjoy on the road to happiness. In this context, mental well-being represents the positive perception of individuals regarding themselves, developing safe and warm relationships with others, being satisfied with themselves even if they are aware of their own limitations, acting autonomously and independently, shaping the environment to provide their needs and wishes, having a purpose and meaning in life, being aware of their capacity, and striving to develop this capacity (Keyes et al., 2002). Furthermore, the World Health Organization (2004) defines mental well-being as the ability of individuals to be productive and useful in business life, to be aware of their own skills, to overcome the stressful situations they face by making the right decisions, and to contribute society by fulfilling their social duties. As it can be understood from the definition, it is important for individuals to build up their strengths as well as cope with stressful situations in life. In this direction, individuals with high mental well-being levels strive to develop their own capacities, lead a purposeful and meaningful life, perceive themselves positively, have safe and close interpersonal relationships, and adapt to the environment to provide their own needs (Keldal, 2015). For these reasons, it is pointed out that mental well-being is more than the absence of symptoms and disorders of mental illness (Cates et al., 2015). Moreover, mental well-being appears to be associated with many psychologically positive traits such as empathy (Shanafelt et al., 2005), optimism (Conversano et al., 2010), and self-esteem (Makikangas & Kinnunen, 2003). In line with this information, it can be said that athletes with high mental well-being have many psychologically compatible features and effective stress coping skills both in their inner world and in their relationships with their teammates, coaches, competitors, and social environment.

The beneficial role of physical exercise has been confirmed by the results of various research studies. It is also inevitable that sport has a positive impact on mental well-being. It is acknowledged that sport has a preventive effect on physical and psychological problems and strengthens health and mental well-being (Cramer et al., 1991; Lubans et al., 2016; Szabo, 2003). On the other hand, being able to perform high performances in sports usually requires more training and if these structures are weak, particularly in young athletes, it can lead to poor academic performance, insufficient sleep, social isolation, more stress, increased anxiety, reduced time spent with family, and multiple stress factors that can increase the risk of burnout (Brenner et al., 2019) and as a result, mental well-being may be adversely affected.

At the present time, it is also acknowledged that character is a sophisticated and versatile concept. In fact, this concept is sometimes even used synonymously with the word personality (Shields & Bredemeier, 1995). According to Jakubowski (2013), character means "carving, processing", which takes its basic meaning from the Greek basis word "charassein", and is expressed as truth, unconditional acceptance. According to the Turkish Language Association (2022), character is defined as the unique structure of an individual, the main symptom that distinguishes them from others, and the superior main feature, self-structure that determines the behavior patterns. According to Stolls and Keller (2000), character is the behavioral form of concepts such as demonstrating the right behavior and humanity in relation to our virtues.

A number of studies in sports have conceptualized character from a moral perspective. For example, Arnold (1999) stated that moral character includes a life in harmony with virtues such as justice, honesty and compassion. Shields and Bredemeier (1995) defined character in sports as having personal virtues such as fairness, compassion, integrity, and sportspersonship. In addition, the excessive desire or ambition to win, which is created or exists for various reasons in the personality of the athlete, not only causes the athlete to move away from sports morality (Türksoy-Işım et al., 2019) but also has an important effect on the character, which is defined as the attitudes and behaviors that people develop in order to hold on to life, and as the qualities that make an individual different from the other (Cevizci, 2003).

Sports or physical activity is an area that constantly emphasizes its favorable effects on societies and character. The idea that competitive sports improve character in a positive way has been going on since Ancient Greece (Bredemeier & Shields, 2006). In modern history, the idea that sport builds character comes from 19th century England. In 19th century England, playgrounds were believed to be the training ground for the discipline essential to produce leaders in adulthood, and that physical activity was a crucial social experience influencing behavior and values. The fundamental virtue that the British endeavored to instill in young people through sports was the sense of integrity and justice. It was thought that following the rules, respecting the opponent, not cheating, and learning how to be a good winner and loser could help with good character development (Robbins, 1996; aktaran İmamli & Ünver, 2018). However, when it comes to the individual decision-making process is, a number of moral deficiencies and negative situations related to the character are also observed in this area. Some studies claim that the changes that sport creates in character are positive, while others argue that these effects may be adverse (Josephine Institute Center for Sports Ethics [JICSE], 2006). For instance, it brings about anti-social behaviours such as match-fixing, racism, illegal substance abuse, etc., and moral problems arise when the motivation to win is involved (Jang, 2013). In addition, according to Kleiber and Roberts (1981), sport is accepted as a medium for learning values such as sportspersonship, cooperation with negotiation and resolving moral conflicts, teammates, teamwork, fairness, team loyalty, submission r, and esponsibility for the greater good (Jang, 2013). In addition, British Doctor Michael Turner points out that 75% of the athletes in the 1996 Atlanta Olympics consumed doping (Tarakçioğlu & Doğan, 2013). Ekici (2013) remarks to the significance of the situation with the events that took place in different dates and countries in his study on the problem of match-fixing, which is one of the issues that arise in sports fields and that includes people from almost all walks of life and that leads to the occurrence of large illegal lobbying. It has been observed that sports can have many positive and negative effects on character structure. However, the circumstances in which the individual experiences whether the sport will have a positive or negative effect on the character are shaped in the shadow of individual factors. Nevertheless, the

popular view is that sports build or support character (Kavussanu & Roberts, 2001; Sage & Kavussanu, 2007).

The sports character consists of a series of distinguishable components. It is probably impossible to have a complete list of these components, as each psychological quality, capacity, or process can influence moral responsibilities and behavior of a player. However, it is relatively easy to identify a number of apparent and significant components of character from a sporting point of view. It is aimed to draw the attention of trainers, families and athletes by examining the researches made for planning or revisions on the participation of the youth in sports with the trainer and parent training programs under five subdimensions such as fairness, anti-social attitude, sportspersonship, justice, and integrity (Jang, 2013). Among these subtopics, fairness is the attitude that the athletes should behave equally according to the rules of the game and adhere to these rules (Shields & Bredemeier, 1995). Secondly, antisocial attitude is defined as “behavior intended to harm or disadvantage another individual” (Kavussanu, 2006). Thirdly, sportspersonship is one of the character traits and consists of knowing the rules and standards of behavior in sport (Shields & Bredemeier, 1995), it is about choosing the moral attitudes when competing. Sportsmanship includes etiquette such as winning with courtesy, losing with dignity, and being polite to opponents and referees (Shields & Bredemeier, 1995). Fourthly, justice involves empathizing or feeling towards others and is explained by adhering to the rules of the game and the spirit of the rules while competing (Hoffman, 2000; Shields & Bredemeier, 1995). Finally, integrity is synonymous with behaviorally satisfying ethical intentions. An attitude of integrity, or the act of implementation, is a quality of character that is clearly related to sports and such actions are characterized by individuals who behave according to their own beliefs, even if they are considered negatively by coaches, teammates, or fans (Shields & Bredemeier, 1995).

Therefore, the character of the athlete is also shaped by values such as being fair, honest, social, and compassionate due to the large audience they are in contact with, and while the high level of these values will help to fight the problems that may arise in the sports fields, the beginning of the professionalization process or the long sports life to progress regularly and efficiently, it also strengthens the assumption that it can also affect well-being positively, otherwise, it will cause negative results.

In sports life, it is substantial for the development and performance of athletes to clarify the interaction between the character structure of the athletes and their mental well-being. When the literature is examined, there is not any scientific research has been found that directly reveals the relationship between athlete character and mental well-being. In conclusion, this study aims to examine the relationships between athlete character and mental well-being in university students.

METHOD

Participants

Two hundred and ninety-nine university students ($n = 100$ female, 33.4%; $n = 199$ male, 66.6%) studying in the sports science departments of three public universities (Artvin Çoruh University, Erzincan Binali Yıldırım University, and Kütahya Dumlupınar University) in the 2020-2021 academic year participated in the research. The ages of participants varied from 18 to 32 with a mean age of 21.72 years ($sd=2.02$). 57 (19.1%) of the participants were in the first year, 66 (22.1%) were in the second year, 97 (32.4%) were in the third year, and 79 (26.4%) were senior students.

Ethical Statements

Prior to the start of the study, permission to conduct research was obtained from Artvin Coruh University Scientific Research and Publication Ethics Committee (Date: 26.08.2020, number: E.8669).

Data Collection Tools

Warwick-Edinburgh Mental Well-Being Scale. Developed by Tennant et al. (2007) to measure the mental well-being of individuals in England, the scale, which adapted into Turkish by Keldal (2015), consists of 14 items and has a 5-point Likert-type answer key. The total internal consistency coefficient of the one-dimensional scale is ,89 of the Turkish version. The minimum score can be obtained from the scale is 14, while the maximum is 70. The scale is scored as 1=strongly disagree, 2=disagree, 3=somewhat agree, 4=agree, 5=totally agree. All items of the scale are positive. High scores on the scale indicate high mental (psychological) well-being. The internal consistency reliability of the scale was calculated from the data obtained from 348 people and the Cronbach Alpha coefficient of the scale was found to be .89. The test reliability of the scale was conducted on 124 participants and the correlation coefficient was found to be .83.

Sports Character Scale. The personal information form developed by Jang (2013), adapted into Turkish by Görgüt and Tuncel (2017), and prepared by the researchers was used as a data collection tool in the study. Consisting of 27 items, the Sports Character Scale includes five sub-dimensions: integrity, anti-social, compassion, sportspersonship, and justice. A five-point Likert-type rating was used in the scale, which was classified as “Totally Agree” (5), “Agree” (4), “Partly Agree” (3), “Disagree” (2), “Strongly Disagree” (1). The total item correlation values of the scale vary between .33 and .67. It was determined that Cronbach's alpha internal consistency coefficients of the sub-dimensions were 0.81 for integrity, 0.78 for anti-social, 0.76 for compassion, 0.78 for sportspersonship, and 0.84 for the justice.

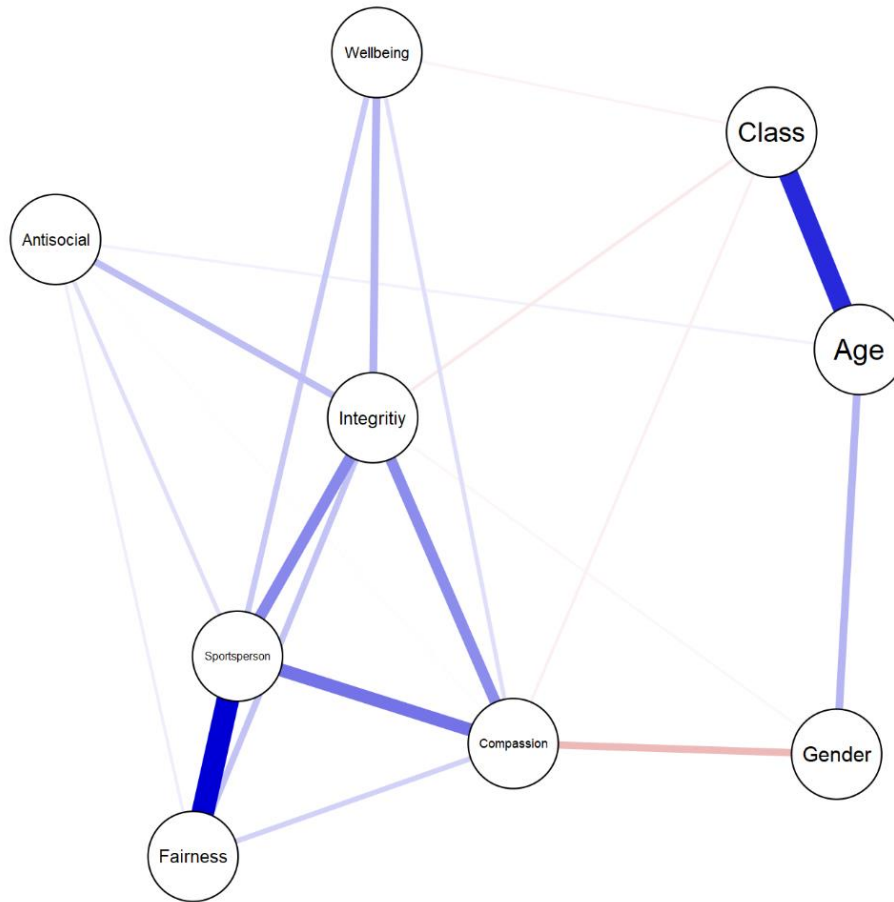
Procedure

The sampling was done according to the convenience sampling approach. No incentives were given and voluntary participation was emphasized. Data were collected online and only volunteers were asked to participate. Informed consent was obtained from the participants. The relationship between sportive character and mental well-being was analyzed by network analysis. In addition, multiple regression analysis was performed to determine the predictive role of sports character on mental well-being.

RESULTS

First and foremost, network analysis was executed in the study to illustrate the link between variables. The findings are presented in Figure 1.

As it can be seen in Figure 1, mental well-being has the strongest relationship with integrity. It is also understood that it has relations with sportspersonship and compassion. It can be stated that their relations with other dimensions are weak.



Regression Analyses

First of all, the assumptions of multiple regression analyzes were examined. The normal distribution of the variables was checked with skewness and kurtosis values. The skewness values range from -.88 to .04 and the kurtosis values range from -1.28 to .40. According to these values, the data can be considered as normally distributed. Multiple regression analyzes were performed with mental well-being as the dependent variable and sports character dimensions as the independent variable (Table 1).

Tablo 1. Summary of multiple regression analysis for variable predicting mental wellbeing

Variable	<i>B</i>	<i>SE_B</i>	β	<i>t</i>	<i>R</i> ²	<i>F</i> ₍₅₋₂₉₈₎
Integrity	.330	.095	.265	3.488**		
Antisocial	-.205	.081	-.139	-2.544*		
Compassion	.172	.136	.095	1.268	.239	18.45**
Sportspersonship	.645	.280	.234	2.303*		
Fairness	-.072	.428	-.015	-.168		

Not: * *p* < .05; ** *p* < .01, dependent variable = mental wellbeing

When Table 1 is examined, it is observed that the multiple regression model established for the prediction of mental well-being of sportive character is significant, [*F* (5,298) = 18.45, *p* < .01]. Integrity (β = .265, *p* < .01) and sportspersonship (β = .234, *p* < .05) predicted mental well-being positively and antisocial

attitude ($\beta = -.139, p < .05$) predicted negatively. These variables explain approximately 24% of the total variance of mental well-being. Compassion and fairness included in the regression were not predicted significantly.

DISCUSSION

This study aims to clarify the relationship between sportive character and mental well-being. It is discussed in line with the results presented below. In the study, the link between the sportive characters and mental well-being of university students studying in sports sciences was examined. According to the findings, it was unearthed that the model established for the prediction of mental well-being of sportive character is significant. Integrity and sportspersonship predicted mental well-being positively and antisocial attitude predicted negatively. These variables explain approximately 24% of the total variance of mental well-being. Compassion and fairness included in the regression were not predicted significantly. This significant relationship between sports character and athlete mental well-being was also supported by the results obtained in different studies.

The idea that sport creates character can be considered as true in some respects; however, which side the direction of character will be is indefinite (İmamlı & Ünver, 2018). Argument of Peterson and Seligman (2004) that integrity is a character strength and virtue that contributes to mental health, psychological well-being and interpersonal effectiveness supports the current research. In this context, integrity can be associated with personality and attitudinal qualities that imply better mental health, psychological well-being, stress protection and effective social functioning. On the other hand, winning and losing in sports contribute to character development in two different ways (Martens, 1982). On the one hand, the emphasis on winning forces some athletes to cheat by breaking the rules and to behave in ways they consider inappropriate off the court. On the other hand, when a player resists the temptation to cheat or engage in other immoral behavior despite the high value placed on winning, integrity improves and moral lessons become more valuable. Along with this, it can be said that exhibiting the right behavior contributes positively to well-being.

It is also stated that sport is a very powerful social experience and will have positive effects on character development under the right conditions (Bredemeier ve Shields, 2006). According to the current research data, it is demonstrated that there is a significant negative relationship between mental well-being and antisocial attitude. Antisocial behaviors are actions intended to harm or disadvantage another individual (Kavussanu & Boardley 2009; Tazegül, 2014). In their research, it was determined that sports training influenced the personalities of the students, there was a decrease in the scores of the neurotic personality dimension, and an increase in the scores of the extraversion, agreeableness, and responsibility dimensions. On the other hand, although the idea that sport builds character is an embraced idea in the world of sport, there is also evidence that competitive sports have negative effects on character development. It is emphasized that competition can create moral problems, reduce prosocial behavior and increase antisocial behavior (Lemyre et al., 2002; Kavussanu et al., 2006). Considering that sport does not automatically produce a moral character, it has great significance to prevent pro-social and antisocial behaviors, especially in young athletes, in terms of proper character development and positive impact on mental well-being.

According to Abad (2010), one of the main features of sportsmanship is fair play. Martens (2013) suggests that many athletes who score high on sensation-seeking measures may be predisposed to engage in risky and unsportspersonlike behaviors. Stress and sportspersonship parameters have been the subject of

research using different samples and variables since it is known that the stress situation, that negatively affects well-being can be reduced to the desired level and sportspersonship behaviors can be improved through physical activities and exercises. The same studies confirm the current research data and show that sports have a positive effect on the sportspersonship parameter (Mendez et al., 2015; Mathner et al., 2010; Yalız-Solmaz & Bayrak, 2006). For instance, not shaking hands after the match, criticizing the sport, being a bad winner or loser, and not giving a hundred and ten percent during the match are examples of behaviors that can be considered unsportspersonlike (Abad 2010). In line with the negative examples given, well-being cannot be expected to be positive.

In conclusion, there are few studies in the literature on the relationship between the concepts of character and mental well-being of the athlete. As a result of the increase in negative psychological factors and thus the deterioration of mental well-being in parallel with the ever-growing global and commercial sports environment, it is important to examine the character of the athlete and the factors affecting the character development. It is considered that planning the athlete development process as a long-term education and training program and increasing the awareness of the trained manpower in the field of sports psychology and in the current research will contribute positively to the process.

Limitations

While the results of the current study contribute to the understanding of the relationship between the sportive character of the athletes and their mental well-being, they also have some limitations. First of all, the findings obtained within the scope of the research were collected with self-report measurement tools. Secondly, the research was carried out only with the participation of university students studying sports sciences. In this respect, the research findings only give information about university students.

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Author Contribution

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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RESEARCH

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ARAŞTIRMA

Açık Erişim

Predicting Trait Anxiety and Depression Symptomatology in Young Adults: The Role of Positive Early Childhood Memories

Genç Yetişkinlerde Sürekli Kaygı ve Depresif Belirtileri Yordama: Olumlu Erken Çocukluk Anılarının Rolü

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ABSTRACT

The role of negative early memories has been shown to be linked with various adult psychopathologies. Some however claim positive early memories to be a better predictor of psychopathology. The aim of this study was to test this assumption for trait anxiety and depressive symptoms in a Turkish sample. First, the Early Memories of Warmth and Safeness Scale-EMWSS was adapted into Turkish using a sample of 200 high-school and 213 university students. Findings from Exploratory and Confirmatory Factor Analyses confirmed the original single-factor structure, while tests of reliability revealed excellent results. Secondly, EMWSS-Turkish Version (EMWSS-T), Trait Anxiety Scale (TAS) and Beck Depression Inventory (BDI) were administered to an independent sample of 121 university students to test the predictive power of EMWSS-T on trait anxiety and depressive symptoms. Results showed that EMWSS-T significantly explained 20% and 11% of the variance in TAS and BDI, respectively and discriminated normal and above-normal BDI scorers. In conclusion, the study was able to confirm the role of positive early memories in trait anxiety and depressive symptomatology. In addition, a new supplementary measure for detecting psychopathological symptoms were introduced to clinical and post-secondary educational settings.

Article Information

Keywords

The Early Memories of Warmth and Safeness Scale
Positive Early Childhood Memories
Young Adult
Depressive Symptoms
Trait Anxiety Symptoms

Anahtar Kelimeler

Şefkat ve Güvene Dayalı Erken Anılar Ölçeği
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ÖZET

Olumsuz erken anıların yetişkinlikte pek çok psikopatoloji ile bağlantılı olduğu belirlenmiştir. Bazı araştırmacılar ise olumlu erken anıların psikopatolojiyi daha etkili yordadığı savunmaktadır. Bu araştırmanın amacı, bu varsayımın bir Türk örneklemini üzerinde sürekli kaygı ve depresif belirtiler bağlamında sınanmasını içermektedir. İlk aşamada, 200 lise, 213 üniversite öğrencisi üzerinde Şefkat ve Güvene Dayalı Erken Anılar Ölçeği'nin Türkçeye uyarlanması çalışması gerçekleştirilmiştir. Açımlayıcı ve doğrulayıcı faktör analizi bulguları original ölçeğin tek faktörlü yapısını doğrulamış, güvenilirlik çalışmaları ise mükemmel sonuçlar ortaya koymuştur. İkinci aşamada, ölçeğin sürekli kaygı ve depresyon belirtilerini yordayıcılığını sınamak amacıyla 121 üniversite öğrencisinden oluşan bir örnekleme ölçekle birlikte Sürekli Kaygı Ölçeği ve Beck Depresyon Envanteri uygulanmıştır. Bulgulara göre Şefkat ve Güvene Dayalı Erken Anılar Ölçeği – Türkçe Versiyonu Sürekli Kaygı Ölçeği ve Beck Depresyon Ölçeği puanlarındaki varyansın sırasıyla %20 ve %11'ini açıklamış, ayrıca Beck Depresyon Envanteri'nde normal ve normal-üstü puan alan iki grubu anlamlı düzeyde ayırt etmiştir. Sonuç olarak bulgular, olumlu erken anıların, sürekli kaygı ve depresyon belirtilerinde yordayıcı bir değişken olduğunu doğrulamıştır. Ayrıca, klinik ve yükseköğretim ortamlarında psikopatolojik belirtileri belirlemeyi destekleyebilecek bir ölçme aracı da alana diğer bir katkı olarak sunulmuştur.

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INTRODUCTION

Early life experiences can have permanent effects on one's psycho-social development and maturation while these effects may be positive and/or negative depending on the perceived quality of those experiences (Cassidy, 2008; Gilbert et al., 2003; Richter et al., 2009; Porcerelli et al., 2016). According to Porcerelli and colleagues (2016), whether early memories are recalled or not, psychoanalytic and cognitive-behavioural theories lead us to believe that early memories seem to reveal important aspects of our personality. This supposition is perhaps best supported by the works of Bowlby. Bowlby's theory of attachment provides a framework for understanding the link between the quality of one's early relationships with primary caregiver(s) and psycho-social development/mental health in the short and long run. Through these early social experiences, the child begins to form internal working models (mental representations of the self, the world and the others) which guide her in relating to self and others (Cassidy, 2008; Silva et al., 2019). Positive relationships involving responsive, warm and accepting caregiver attitudes and behaviours yield positive inner working models that foster positive social and psychological outcomes later in life, whereas the opposite has been shown to result in adolescent or adult psychopathology (Allen, 2008; Clulow, 2007; Silva et al., 2019).

With the beginning of Bowlby's statement that attachment is a "from the cradle to the grave" thing for the humankind, empirical evidence concerning the long term effects of attachment styles on adolescent and adult well-being began to pile up substantially. These studies have yielded empirical evidence as well as clinical-based arguments for the link between child attachment style and psychological well-being/psychopathology in adolescence and adulthood. This line of research was able to show the predictive value of attachment styles on many psychopathological conditions including alexithymia (Barbosa et al., 2011), eating disorders (Tasca et al., 2013), psychotic conditions (Huguelet et al., 2015), self-injurious behaviour (Kharsati & Bhola, 2016), depression, obsessive-compulsive disorder and panic disorder (Sümer et al., 2009). One may even come across neurophysiological findings claiming that parent-infant relationships and substance abuse in adolescence and adulthood have the same neurological pathways, placing the assumption of substance abuse being a substitute for secure attachment into the picture (cited by Clulow, 2007).

The specific events in one's early years may (mostly) not be recalled by the individual. However, in light of the studies mentioned above, the feelings induced by these experiences seem to give important clues regarding the individual's early social experiences. Thus, parallel with attachment research, others sought to investigate the personal judgements and perceptions regarding early childhood experiences. These studies have expanded our knowledge on the critical role of early memories on future psychological well-being and have perhaps indirectly proved the role of attachment in human social and psychological well-being throughout the life span. This actually led many to consider early memories as a potential human factor to be used in various fields including psychotherapy (Nilsson et al., 2019).

A study with women on early memories and social safeness showed that early memories had indirect associations with sense of social safeness through external shame, i.e. negative memories involving feelings of inferiority and inadequacy led women to develop fears of receiving compassion from others which led to perceiving the world as a threatening arena (Silva et al., 2019). Another study on the predictors of paranoid ideation in adolescence revealed early shame experiences to be one of the significant predictors of this psychological condition (Baretto-Carvalho et al., 2019). Gilbert and colleagues (2003) have studied the recall of early experiences involving threat and submissiveness and its

relations with depression and shame in adulthood. Based on their findings, the authors concluded that submissive behaviour to avoid getting hurt by parents during childhood carried a risk for adult depression and/or external shame.

The studies described above made use of negative early memories in explaining certain psychopathological conditions. Richter and colleagues (2009) on the other hand, argue that although negative early memories are proved to be in the picture, the possible effects of positive memories on psychiatric conditions have not been clearly understood. Wolf and Zimprich (2016) strengthen this ideation with the claim that positive memories booster one's ability to solve future problems as well as develop and maintain healthy social relationships and vice versa. Proof for this thinking may be viewed in a few studies, to date. For instance, Marta-Simoes and colleagues (2018) found that early positive memories with adults and peers were associated with higher scores on self-compassion and perceived quality of life in women. Based on these findings, the authors concluded that memories of being cared for, loved and protected during early childhood lead to perceiving oneself as capable of promoting others' positive attention, thus resulting in considering oneself as worthy of compassion.

An earlier study by Richter and colleagues (2009) (also leading the way to our study), with 180 university students revealed that the positive emotions elicited by early experiences were stronger predictors of self-criticism, self-reassurance and psychopathology compared to the recall of parental behaviours (i.e. the actual events) during the participants' childhood years. The positive early memories in this study were measured with the Early Memories of Warmth and Safeness Scale developed within their study. EMWSS has also been adapted for Portuguese adolescents (Cunha et al., 2014) and a few years later again in a Portuguese sample of adolescents from diverse populations (Vagos et al., 2017). The latter study showed that the brief version of the EMWSS comprised of nine items may be a better measure of adolescent perceptions of their early memories for linking positive early memories and psychopathology. In addition, Cunha and colleagues (2017) adapted the Peer version of EMWSS on a Portuguese sample and their results confirmed a 12-item scale with a good model fit. The original as well as the adapted forms rested on the idea that the recall of the personal feelings rather than the actual events formed the critical link between early memories and psychological health in adulthood.

This small but important body of research seem to imply at least two important issues, which gave us the motivation to conduct this study. First, positive, rather than negative memories may be exerting a buffering effect on psychological health in adulthood, which we consider should be studied on Turkish samples. Secondly, a brief literature review on studies conducted with Turkish samples revealed no measurement tools for assessing positive early childhood memories. With these two implications in mind, the major purpose of this study was to test the predictive power of positive early memories on trait anxiety and depressive symptomatology in a sample of Turkish young adults. However, prior to answering these two questions, a sound instrument was needed. Therefore, as a first step, the psychometric properties of the Early Memories of Warmth and Safeness Scale (EMWSS) developed by Richter and colleagues (2009) was adapted to Turkish. Taken together, in addition to exploring the association between trait anxiety/depressive symptomatology and positive early memories, a new measurement tool to be introduced in clinical and psychoeducational practice was believed to be an important academic and practical contribution for the Turkish literature.

METHOD

Sampling

Two samples, one for the adaptation of EMWSS and one for testing the research questions were used. The scale adaptation was conducted with a convenience sample of 208 high school students from one high school in Izmir, Turkey and 213 undergraduate students from one Faculty of Education in an Izmir university. Data derived from 200 high school and 213 college students were found eligible for statistical analyses (N=413). The sample consisted of 156 (37.8%) male and 257 (62.2%) female students with a mean age of 19.56 (sd=2.929, range=16-44). The crosstab for gender by school revealed that 25.7% of the sample (n=106) was high school girls, 36.6% (n=151) was college girls, 15% (n=62) were high school boys and 22.8% (n=94) were college boys. The higher percentage of females in the sample was thought to be the result of the general tendency of females to choose faculties of education for college education.

The second sample formed via snowball sampling, consisted of 121 university students. 113 of these (93.4%) were undergraduate students studying in one of the three Turkish universities located in two metropolitans (two in Izmir and one in Antalya), whereas seven (5.8%) were non-students and one participant had a missing entry. The sample consisted of 68 (56.2%) male and 53 (43.8%) female students with a mean age of 22.74 (sd=3.911, range=17-37). A significant number of participants came from middle income families (n=76, 62.8%) and nearly half (n=55, 45.5%) had three or more siblings.

Instrumentation

Student Demographics Form. A 5-item Student Demographics Form was administered to both samples. An extra question on school status was added to the form in the adaptation study in order to discriminate high school and university students.

Early Memories of Warmth and Safeness Scale – Turkish Version (EMWSS-T). Data on early memories were gathered via EMWSS-T in both samples. The original EMWSS aims to measure the inner positive feelings regarding one's early childhood experiences. It contains 21 positively worded items representing the recall of feeling warm, safe and accepted as a child, rated on a 5-point Likert type scale ranging from 0 to 4 (0=No, never, 1=Yes, but rarely, 2=Yes, sometimes, 3=Yes, often, 4=Yes, most of the time). Some exemplary items from the scale are "I had a sense of belonging", "I knew I could rely on people close to me to console me when I was upset" and "I felt peaceful and calm" (Richter et al., 2009).

The original study by Richter and colleagues (2009) was conducted with 180 undergraduate students of Psychology between ages 18-49. The results of exploratory factor analysis revealed a single factor structure with factor loadings ranging from 0.64 to 0.85. The Cronbach's Alpha coefficient of the scale was reported as 0.97 (Richter et al., 2009).

Beck Depression Inventory (BDI). Adapted to Turkish by Hisli (1989), BDI aims to objectively quantify the depressive symptoms present in Turkish university students. It is comprised of 21 items rated on a 4-point Likert type scale with 0 implying minimum and 3 implying maximum degree of symptom for each item (maximum score=63). A principal components analysis using varimax rotation revealed a 4-factor solution (hopelessness, negative thoughts about self, physical concerns, self-blame). The Pearson correlation coefficient was 0.50 between BDI and MMPI-D, yielding a satisfactory result for criterion-related validity. As for reliability, the Cronbach's Alpha and split-half reliabilities were 0.80 and 0.74, respectively. The cut-off point for above-normal depressive symptomatology was determined

as 17. The BDI was administered only to the second sample and the total BDI score was used in the analyses.

Trait Anxiety Scale (TAS). Originally developed by Spielberg and colleagues (1966, cited by Öner & LeCompte, 1983), TAS was adapted to the Turkish population by Öner and LeCompte (1983). TAS consists of 20 items which aim to measure how an individual feels in general. Seven items are reversely scored and all items are scored on a 4-point Likert type scale (1=almost never, 4=almost always, maximum score=80). The Cronbach's Alpha coefficients and the test-retest reliability coefficients were found between 0.83-0.87 and 0.71-0.86, respectively. Good criterion validity was also reported by the authors (Öner & LeCompte, 1983). TAS was administered only to the second sample of this study.

Procedures

The adaptation of the EMWSS began with the authors' contact with the corresponding author of the original study via e-mail for permission to adapt the scale. Following the author's permission, the study was approved by the Ethics Committee of the Institute of Educational Sciences of the university where the second author works (File: 19/9-178, July 05, 2019). These were followed by the Turkish translation of the scale by the second author, who is a native English and Turkish speaker. The reverse translation of the scale was conducted by another academic proficient in Turkish and English. The reverse translation was then sent to the corresponding author of the original study for a final check. Next, the first author contacted a public high school and administered the instruments to the students in their classrooms. To collect information from the university students, a Google Forms was developed. The first author attended the classes while the students completed the instruments via their mobile phones and sent the forms to the researcher through a WhatsApp Application. All participants gave informed consent prior to data collection and no personal information was requested in order to protect privacy.

Following the scale's adaptation, data on EMWSS-T and trait anxiety and depressive symptoms were collected through Google Forms using WhatsApp Groups. The Google Form prepared by the first author was sent by the second and latter author to one of their undergraduate students and these students were asked to share the Google Form on their WhatsApp groups. A total of 54 responses were received. The authors then contacted two colleagues from two different universities and were asked to repeat the procedure, resulting in the collection of data from 121 participants. Again, all participants gave informed consent prior to data collection and no personal information was requested to protect privacy.

Data Analysis

Exploratory (EFA, using Principal Components Analysis) and confirmatory factor analyses (CFA, using maximum likelihood parameter estimation) were conducted to test the single factor structure of EMWSS-T. Cronbach's Alpha coefficients and item-total correlations were examined for internal consistency and the Pearson correlation coefficient was calculated for test-retest reliability.

Two simple linear regressions were run to test the predictive power of EMWSS-T on TAS and BDI. An independent samples t-test was also conducted to investigate whether EMWSS-T scores differed between normal and above-normal BDI scorers.

All data were checked for preliminary underlying assumptions prior to all analyses. CFA was conducted using LISREL 8.8, while descriptives, EFA, reliability analyses and group comparisons were analysed using SPSS version 22 for Windows.

RESULTS

The Validity and Reliability of EMWSS-T

Construct Validity of EMWSS-T. The CFA used in testing the one-dimensional structure of EMWSS-T initially revealed measurement errors between items 9-11, 15-21 and 17-20 so these pair items were correlated to improve model fit. A brief look at these specific items showed that the item content was similar; however, the inter-item correlations were below 0.90 (Şimşek, 2007; Yaşlıoğlu, 2017) (0.68, 0.68 and 0.71 for the item pairs, respectively), showing that the items measured different things. These modifications led to a one-factor model revealing good indices of model fit ($\chi^2=555.85$, $df=186$, $p<0.001$, $\chi^2/df=2.99$, $RMSEA=0.069$, $SRMR=0.041$, $NNFI=0.98$, $CFI=0.98$), with the exception of GFI (0.89) that showed a marginal fit. The factor loadings, R2 and the t-values for each item are displayed in Table 1.

Table 1. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) Results for EMWSS-T

Item	Factor Loading	Communalities	R ²	t value
Item 1 EFA	0.58	0.33		
Item 1 CFA	0.56		0.32	12.02
Item 2 EFA	0.66	0.44		
Item 2 CFA	0.64		0.41	14.35
Item 3 EFA	0.75	0.56		
Item 3 CFA	0.73		0.51	16.98
Item 4 EFA	0.38	0.14		
Item 4 CFA	0.36		0.49	7.29
Item 5 EFA	0.67	0.45		
Item 5 CFA	0.65		0.42	14.50
Item 6 EFA	0.72	0.52		
Item 6 CFA	0.71		0.50	16.27
Item 7 EFA	0.70	0.49		
Item 7 CFA	0.68		0.46	15.44
Item 8 EFA	0.72	0.52		
Item 8 CFA	0.70		0.49	16.04
Item 9 EFA	0.72	0.51		
Item 9 CFA	0.68		0.47	15.54
Item 10 EFA	0.63	0.39		
Item 10 CFA	0.60		0.36	13.10
Item 11 EFA	0.79	0.62		
Item 11 CFA	0.77		0.60	18.44
Item 12 EFA	0.76	0.58		
Item 12 CFA	0.75		0.57	17.80
Item 13 EFA	0.78	0.61		
Item 13 CFA	0.78		0.60	18.51
Item 14 EFA	0.45	0.20		
Item 14 CFA	0.43		0.57	8.94
Item 15 EFA	0.78	0.60		
Item 15 CFA	0.75		0.56	17.81
Item 16 EFA	0.56	0.31		
Item 16 CFA	0.53		0.29	11.28
Item 17 EFA	0.79	0.62		
Item 17 CFA	0.76		0.58	18.13
Item 18 EFA	0.85	0.73		

Item 18 CFA	0.86		0.73	21.53
Item 19 EFA	0.71	0.50		
Item 19 CFA	0.69		0.47	15.70
Item 20 EFA	0.80	0.65		
Item 20 CFA	0.78		0.61	18.74
Item 21 EFA	0.75	0.56		
Item 21 CFA	0.72		0.52	16.66

According to Table 1, the factor loadings of all items were above 0.30 (Çokluk et al., 2018), ranging between 0.36 and 0.86. The variance explained by each item (R²) ranged between 0.13 and 0.73 and all t-values were above 1.96 (7.29-21.53, $p < .05$). Taken together, these three parameters and the fit indices confirmed the single-factor solution for EMWSS-T.

Reliability of EMWSS-T. The Cronbach's-Alpha coefficient for EMWSS-T was 0.93, presenting excellent internal consistency. The means, standard deviations and the item-total correlations for EMWSS-T are depicted in Table 2.

Item	<i>M</i>	<i>SD</i>	Corrected item-total correlation	α if item deleted
1. I felt secure and safe.	3.14	1.12	0.53	0.93
2. I felt appreciated the way I was.	2.67	1.19	0.61	0.93
3. I felt understood.	2.44	1.21	0.71	0.93
4. I felt a sense of warmth with those around me.	3.29	2.25	0.35	0.94
5. I felt comfortable sharing my feelings and thoughts with those around me.	2.51	1.30	0.62	0.93
6. I felt people enjoyed my company.	2.71	1.23	0.67	0.93
7. I knew that I could count on empathy and understanding from people close to me when I was unhappy.	2.63	1.24	0.66	0.93
8. I felt peaceful and calm.	2.64	1.19	0.67	0.93
9. I felt that I was a cherished member of my family.	3.23	1.10	0.67	0.93
10. I could easily be soothed by people close to me when I was unhappy.	2.63	1.23	0.58	0.93
11. I felt loved.	3.09	1.10	0.75	0.93
12. I felt comfortable turning to people important to me for help and advice.	2.81	1.20	0.72	0.93
13. I felt part of those around me.	2.87	1.15	0.74	0.93
14. I felt loved even when people were upset about something I had done.	2.71	2.40	0.40	0.94
15. I felt happy.	2.89	1.12	0.74	0.93
16. I felt feelings of connectedness.	2.98	1.21	0.52	0.93
17. I knew I could rely on people close to me to console me when I was upset.	2.78	1.16	0.75	0.93

18. I felt cared about.	2.91	1.15	0.83	0.93
19. I had a sense of belonging.	2.93	1.30	0.66	0.93
20. I knew that I could count on help from people close to me when I was unhappy.	2.90	1.21	0.76	0.93
21. I felt at ease.	2.88	1.18	0.71	0.93

According to Table 2, the item-total correlations ranged between 0.35 and 0.83 and all items positively contributed to the internal consistency of the scale. With the exception of a change of 0.01 with the deletion of items 4 and 14, none of the item deletions resulted in changes in the Cronbach's Alpha coefficient.

The test-retest reliability was also assessed by re-administering EMWSS-T to 54 participants within a three-week interval. The calculated Pearson-r value was 0.93, revealing good stability over time.

The Predictive Power of EMWSS-T on TAS and BDI Scores

As expected, EMWSS-T displayed negative significant correlations with BDI ($r = -.333, p = .000$) and TAS ($r = -.447, p = .000$), while Q-Q scatter plots revealed EMWSS-T scores displaying negative linear relationships with BDI and TAS scores. With the remaining assumptions having met for linear regression, two separate simple linear regressions were conducted for EMWSS-T as the independent and BDI and TAS as the dependent variables. The descriptive statistics for the three measures are depicted in Table 3.

Table 3. Descriptives for EMWSS-T, BDI and TAS (n=121)

	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	Range
EMWSS-T	57.83	19.81	-.941	.400	0-84
BDI	14.46	8.64	.449	-.215	0-39
TAS	57.31	14.21	-.194	-.483	25-86

The model summary for the predictive power of EMWSS-T on BDI revealed R and R² values of 0.33 and 0.11, respectively. The results of one-way ANOVA yielded that the regression model fitted the data well [$F(1, 119) = 14.816, p = .000$]. The β coefficient for the constant and EMWSS-T score were 22.86 ($t = 9.917, p = .000$) and -0.145 ($t = -3.849, p = .000$), respectively. In sum, EMWSS-T was a significant predictor of depressive symptoms, explaining 11% of the variance. Similar findings emerged for EMWSS-T as a predictor of TAS, with R and R² values of 0.45 and 0.20, respectively, with a significant F value for model fit for the data [$F(1, 119) = 29.735, p = .000$]. The β coefficient for the constant and EMWSS-T score were 75.87 ($t = 21.104, p = .000$) and -.321 ($t = -5.453, p = .000$), respectively. Thus, EMWSS-T was found to be a significant predictor of trait anxiety symptoms, explaining 20% of the variance. The Cronbach's Alpha values for BDI and TAS were 0.86 and 0.90, respectively. The results for the linear regressions are depicted in Tables 4 and 5.

Table 4. Results of the Regression Analysis for BDI

	B	Std. Error	β	T	p	Partial Correlation
Constant	68,85	.333		20,654	.000	
BDI	-.762	.198	-.333	-3,849	.000	-.333

Table 5. Results of the Regression Analysis for TAS

	B	Std. Error	β	T	p	Partial Correlation
Constant	93,538	6,746		13,866	.000	
TAS	-.623	.1114	-.447	-5,453	.000	-.447

Following regressions, EMWSS-T scores were compared using an independent samples t-test [F(119)=.101, p=.751, Levene’s Test for Equality of Variances] across the two groups formed using the cut-off point for BDI (i.e. 17). Results revealed that EMWSS-T scores differed significantly between normal and above-normal scorers, with above-normal scorers scoring significantly lower compared to normal scorers (Table 6).

Table 6. Results of the Independent Samples T-Test for EMWSS-T across BDI

BDI score	n	M	SD	df	t	p
Normal	75	61.56	19.38			
Above-normal	46	51.74	19.16	119	2.717	.008

DISCUSSION

This study aimed to link positive early childhood memories with trait anxiety and depressive symptomatology in young adulthood. To reach these goals, the authors first adapted EMWSS to Turkish in order to measure the positive early memories of the participants. EMWSS was chosen based on its focus on measuring feelings of early positive experiences, rather than the actual experience and negative feelings associated with those experiences (Richter et al., 2009). Its practicality in administration, scoring and interpretation was also considered as additional advantages.

The findings revealed proof for the construct validity of EMWSS-T, such that the single dimensional solution found in the original (Richter et al., 2009) as well as the Portuguese versions (Cunha et al., 2014; Vagos et al., 2017) was confirmed in our Turkish sample. Although the GFI suggested a marginal fit (0.89), all other indices were at very good levels, showing the scale’s strength for measuring the early memories of warmth and safeness of Turkish adolescents and young adults. Tests of reliability also revealed strong proof for EMWSS-T with values very close to Cunha and colleagues’ (2014), Richter and colleagues’ (2009) and Vagos and colleagues’ (2017) studies (Alpha values between 0.95-0.97, test-retest Pearson r values between 0.91-0.92).

One important aspect of EMWSS-T is worth mentioning. EMWSS was originally developed for adults whereas the Portuguese full and brief versions were tested on adolescents. Our study, in a way, combined these two groups, including adolescents over age 15 and young adults and was able to offer an assessment tool that could be used in a wider age range. Thus, taken together, the results of validity and reliability studies revealed EMWSS-T to be a valid and reliable measure in late adolescence and young adulthood.

The results of simple linear regressions run to answer the main questions provided evidence for one’s early positive social memories to be a significant indicator of trait anxiety and depressive symptoms. These findings overlap with the dynamics of Western cultures including England, Portugal and Spain for both adolescence and young adulthood (Cunha et al., 2014; Cunha et al., 2017; Richter et al., 2009; Vagos et al., 2017), implying the effects of early social relationships on adult psychological well-being to be culture-free. The variance explained by EMWSS-T for depression and trait anxiety symptomatology were 11% and 20%, respectively. At first glance, although significant, these values may seem small. However, by taking into account the various factors including attachment style and perceived social support (for

example, Doğan, 2008; Marta-Simoes et al., 2018; Sümer et al., 2009; Wilson et al., 2020) that may be explaining the remaining variance in both conditions, positive early memories may be considered an important factor of its own in clinical and psychoeducational practice.

We also took advantage of the cut-off point for BDI and were able to show that EMWSS-T could significantly discriminate individuals with normal and above-normal depressive symptoms. However, some caution should be taken in interpreting the results in clinical settings. TAS and BDI are self-report measures and thus can only point to symptomatology rather than to an actual diagnosis. Thus, for the present, we recommend EMWSS-T to be used as a supplementary measure in diagnostic assessments or as a measure that may be considered helpful in identifying young adults at risk for trait anxiety and/or depression in clinical and educational settings. This may especially be useful for the Disability Services of universities in identifying and supporting students in academic and non-academic domains during their college years as well as their transition to work life.

One limitation in this study involved the samples used. The participants were chosen from among a student population in both the scale adaptation and the main study. High school students may not be considered problematic in that in Turkey, K-12 education is an obligation by law (Ministry of National Education, 2012). However, a significant proportion of Turkish youth do not transition to tertiary education. Therefore, future research should also focus on using non-student populations. Secondly, the convenience sampling procedure may be considered a limitation of its own, due to its non-probability nature where the authors choose the sample based solely on convenience. Thirdly, EMWSS-T and its predictive power on clinical symptomatology was tested on a community sample and demands studies using clinical samples. A second limitation may be the lack of measurement invariance for EMWSS-T. However, this action was not considered a necessity due to previous studies' showing the original single-factor model to work for both adolescent and young adult populations (Cunha et al., 2014; Cunha et al., 2017; Richter et al., 2009; Vagos et al., 2017).

Studies have reported that early memories are closely linked with psychopathology and that these memories usually result in internal working models that yield secure/insecure adult attachment styles (Allen, 2008; Barbosa et al., 2011; Clulow, 2007; Silva et al., 2019). Therefore, the next step should be to compare the positive early memories of samples derived from the community and clinical settings in order to determine the possible outcomes in the Turkish population, using measures for positive early memories together with adult attachment styles. Thus, future studies investigating such a model are advised and if this be verified, it will be possible to use early memories of warmth and safeness measures such as EMWSS-T to determine adolescents and young adults who may be carrying attachment problems.

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Author Contributions

This study was conducted by all the authors working together and cooperatively. All authors substantially contributed to this work in each step of the study.

Conflict of Interest

The authors would like to report no conflict of interest with any parties.

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Ethical Statement

The study was approved by Dokuz Eylül University, the Ethics Committee of the Institute of Educational Sciences on July 05, 2019. Consent was obtained via Google Forms from all participants.

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RESEARCH



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ARAŞTIRMA

Açık Erişim

Examination of the Relationship Between Fears of Compassion and Anxiety in Adults

Yetişkinlerde Şefkat Korkusu ile Kaygı Arasındaki İlişkinin İncelenmesi

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ABSTRACT

The main purpose of this research is to examine whether adults' trait anxiety, state anxiety, and gender together predict the fears of compassion (fear of compassion for others, fear of compassion from others, and fear of self-compassion). Besides, in this study, it was aimed to examine whether fears of compassion differ significantly according to trait anxiety levels (low, medium and high). The study group consisted of 437 (241 female and 196 male) adults. Data were collected using the State-Trait Anxiety Scale, the Fears of Compassion Scale, and the Personal Information Form. Data were analyzed using Multiple Linear Regression Analysis and One-way analysis of variance (ANOVA). Research findings of this study shows that adults' trait anxiety, state anxiety, and gender together predicts the 18% of the total variance in fear of compassion to others, 15% of total variance in fear of compassion from others, and 16% of total variance in fear of self-compassion. In addition, this study shows that while adults' anxiety levels (high, medium, and low) decrease, their fears of compassion decreases. The findings are discussed based on the relevant literature. The limitations of the research and suggestions for future theoretical and practical research are presented.

Article Information

Keywords

Fears of Compassion
State Anxiety
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ÖZET

Bu araştırmanın temel amacı, yetişkinlerin sürekli kaygı, durumluk kaygı ve cinsiyetlerinin birlikte şefkat korku türlerini (başkalarına şefkat gösterme korkusu, başkalarından şefkat görme korkusu ve kendine şefkat gösterme korkusu) yordayıp yordamadıklarını incelemektir. Ayrıca, bu çalışmada, şefkat korkusu türlerinin (başkalarına şefkat gösterme korkusu, başkalarından şefkat görme korkusu ve kendine şefkat gösterme korkusu) sürekli kaygı düzeylerine (düşük, orta ve yüksek) göre anlamlı olarak fark gösterip göstermediğinin incelenmesi amaçlanmıştır. Çalışma grubu 437 (241 kadın ve 196 erkek) yetişkinden oluşmaktadır. Veriler Durumluluk-Sürekli Kaygı Ölçeği, Merhamet Korkusu Ölçeği ve Kişisel Bilgi Formu kullanılarak toplanmıştır. Veriler Çoklu Doğrusal Regresyon Analizi ve Tek yönlü varyans analizi (ANOVA) kullanılarak analiz edilmiştir. Araştırma bulguları, yetişkinlerin sürekli kaygıları, durumluk kaygıları ve cinsiyetlerinin birlikte başkalarına şefkat gösterme korkusu puanlarına ilişkin toplam varyansın %18'ini, başkalarından şefkat görme korkusu puanlarına ilişkin toplam varyansın %15'ini ve kendine şefkat gösterme korkusu puanlarına ilişkin toplam varyansın %16'sını yordadıklarını göstermektedir. Ayrıca bu çalışmada, yetişkinlerin kaygı düzeyleri (yüksek, orta ve düşük) düştükçe başkalarına şefkat gösterme korkusu, başkalarından şefkat görme korkusu ve kendine şefkat gösterme korkusu puanlarının da düştüğünü göstermektedir. Bulgular, ilgili literatüre dayanılarak tartışılmıştır. Araştırmanın sınırlılıkları, gelecekteki teorik ve pratik araştırmalar için önerileri sunulmuştur.

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INTRODUCTION

At the beginning of the twenty-first century, a different approach was developed to understand and explain human behavior. This approach, which continues to affect many fields including educational sciences, especially psychology and psychological counseling and guidance, is Positive Psychology. Seligman and Csikszentmihalyi (2020), two of the representatives of positive psychology, defended the view that "the pathology-oriented philosophy of psychology of currently known traditional psychology approaches limits and narrows psychology". The traditional psychology handles the problematic behaviors of the person in terms of psychopathology. Therefore, while approaches of traditional psychotherapy aim to reduce pathology, positive psychology focuses on strengthening the positive and strong aspects of the individual. The basic concepts of Positive Psychology are well-being, subjective well-being, psychological well-being, optimism, hope, resilience, forgiveness, gratitude, compassion and others.

The first study on compassion, one of the concepts named above, was conducted by Neff (2003). Neff (2003) defined the concept of compassion as "the individual's being open to his own pain and being emotionally affected by it, not avoiding it and not disconnecting it, the willingness to soothe one's own pain and to heal oneself with compassion." Later studies brought new explanations to the concept of compassion. It has been emphasized that compassion is an emotional state. Compassion has been described as a response to pain, including empathy, sympathy, and pity. In addition, compassion has been defined as a prosocial mood that motivates self-help and soothing behaviors (Stellar & Keltner, 2014; Gustin, 2017; Stellar et al., 2017). Kirby et al. (2019) argued that compassion was not a static emotion and manifested itself in an interpersonal context. Emphasizing that the concept was in mutual interaction, Kirby et al. (2019) stated "compassion is not a static emotion; on the contrary, it manifests itself in an interpersonal context; that is, there is a flow from oneself to another, from another to oneself and from oneself to oneself (self-compassion)." They added that compassion was a feeling that spread like a wave, and that the compassion shown by someone could cause other people to show compassion to others.

On the other hand, Gilbert et al. (2014) described compassion as a complex situation. The individual may focus on showing compassion to others and self, but may also experience a totally opposite situation. There can be many reasons that prevent individuals from showing compassion to other people. Gilbert and Procter (2006) state that when under stress and distress, an individual's desire to be compassionate and their attitude to show compassion may vary from individual to individual. For, according to researchers, developing a sense of compassion to oneself and others depends on the empathic and visualization capacity of the individual under stress. For example; for a stressed individual who has difficulty envisioning a situation in his or her mind, it will be very difficult to show compassion.

Gilbert and Procter (2006) and Joeng & Turner (2015) state that people may be afraid to show compassion, because, according to these researchers, showing compassion means making one more sensitive to pain. Therefore, researchers consider receiving and showing individual compassion as a kind of weakness. Stellar and Keltner (2014) have expressed an opinion against the view of the aforementioned researchers. According to Stellar and Keltner (2014), the feeling of compassion can lead to bonding with ourselves and others. When others are in pain and need help the most, it can connect the individual or person to those who need help.

According to Moses (2002), Germer (2009) and Jazaieri et al. (2013), many people in the world are of the opinion that showing compassion to and receiving compassion from others is easier and more enjoyable than showing compassion to self. However, they also state that compassion towards others may not be expressed or may be suppressed. Jazaieri et al. (2013) discussed the situations that could prevent, suppress, and make it difficult to express compassion, and stated that some people may fail to show compassion, while others may experience the fear of compassion while at the same time experiencing compassion. When the relevant literature is examined, it is observed that very different views have been expressed on showing compassion, fear of showing compassion, and fear of receiving compassion.

Singer and Klimecki (2014) state that the possibility of harming the interests of the person or the group to which one is affiliated may prevent the individual from showing compassion to others or frighten him or her. A study by Neff and Pommier (2013) reports that the higher level of self-compassion an individual has, the higher this individual will empathize with others and be willing to help another person in case of need. It is stated that individuals with self-compassion are able to forgive their own mistakes and manage to live in some way or other. It is also stated that individuals with self-compassion do not hesitate to show compassion to other people as they see it as a natural consequence of being human, they understand their predicaments and are inclined to help them (Welp & Brown, 2014). Welp and Brown (2014) state that whether an individual shows self-compassion or not is affected by interpersonal relationships. People who consider their own mistakes as “a consequence of being human” are both forgiving and compassionate towards themselves, and also consider other people's mistakes as a human condition and help them. People with low self-compassion levels do not consider other people's mistakes as normal. These characteristics negatively affect their behavior of helping other people. Fear of showing compassion to others may stem from confusing compassion with obedience. For example, being kind and forgiving can be regarded as being weak and submissive (Gilbert et al., 2011).

Receiving compassion from others can be seen as an extension of the capacity of self-compassion. It has been reported that secure and compassionate people have subjective well-being both in childhood and adulthood (Gill, 2015). Fear of receiving compassion from others (for example, feeling that one does not deserve or should not respond to care and favor from others) has been associated with conditions such as self-criticism, insecure attachment, depression, anxiety, and stress (Gilbert et al., 2011). For some, being the object or recipient of compassion can produce reactions of fear, avoidance, or negative emotions such as grief or loneliness. Increasing this aspect of compassion may help individuals become more comfortable being the target of another person's attention, as well as help improve relationships and social connectedness (Gilbert et al., 2011; Jazaieri et al., 2013).

According to the results of a meta-analytical study by Kirby et al. (2019), it has been determined that individuals with fears of compassion are vulnerable to many health problems. The study of Basran et al. (2019), on the other hand, shows that fears of compassion is related to the prosocial and antisocial behavior dimensions. Dias, et al. (2020) investigated the effect of fears of compassion on body image and irregular eating. Research findings showed that there were significant relationships between fears of compassion, being ashamed of one's body and irregular eating behaviors. The findings of a study conducted by Zhang et al. (2021) with secondary school students on fears of compassion, difficulties in emotion regulation and emotional eating indicate that eating disorders and difficulties in emotion regulation are related to fears of compassion.

When the studies conducted on fears of compassion in Türkiye are examined, it is seen that Necef and Deniz (2018) adapted the Fears of Compassion Scale into Turkish. Meriç (2020) investigated whether fears of compassion, self-compassion and psychological resilience of the parents of children attending preschool differ according to gender, age, education level, socioeconomic level, and whether they worked or not. It was observed that of the sub-dimensions of fears of compassion, showing compassion and kindness to others and showing compassion and kindness to self did not differ significantly according to level of education, but the mean scores of the parents with secondary education level concerning responding to compassion from others were significantly higher than the mean scores of the other parents. It was determined that of the sub-dimensions of fears of compassion, responding to compassion from others and showing kindness and compassion to self did not differ significantly according to socioeconomic level, but the mean scores of the parents with a medium socioeconomic level in regard to showing compassion to others were found to be significantly higher than the mean scores of the other parents. It was determined that the self-compassion mean scores of the parents aged between 31 and 40 were significantly higher than the mean scores of the parents aged between 21 and 30. It was also determined that self-compassion mean scores of the parents differed significantly depending on whether they worked or not, and that the self-compassion mean scores of the working parents were significantly higher than the mean scores of the non-working parents. In addition, it was found that the fears of compassion levels of the parents had a statistically negative and significant correlation with the levels of self-compassion. It was determined that the resilience levels of the parents had a statistically negative and significant correlation with the levels of responding to compassion from others and showing compassion and kindness to self, which are the sub-dimensions of fears of compassion, but they did not have a statistically significant correlation with the levels of showing compassion to others.

Bakalım and Karahan (2022), on the other hand, examined whether the psychological flexibility sub-dimensions of adult individuals were significant predictors of the sub-dimensions of fears of compassion. In addition, the researchers examined whether the fears of compassion scores differed significantly according to gender and relationship status. The findings of the study indicated that psychological flexibility was a significant predictor of fears of compassion. The findings revealed that men's fears of compassion was higher than women's, and that the fear of responding to compassion from others was significantly higher in married individuals than in single individuals.

When the results of these studies conducted both in Türkiye and abroad on fears of compassion are evaluated in general, it is observed that fear of compassion from others, fear of compassion for others, and fear of self-compassion are affected by many variables. As Gilbert (2011) argues, a person's tendency to make excessive self-criticism, insecure attachment status, depression, anxiety and methods of coping with stress may affect that person's fear of showing compassion and fear of receiving compassion. For example, showing compassion or receiving compassion may cause anxiety in insecurely attached individuals because they will avoid close relationships with other people. In fact, they may not be able to show their compassion due to high anxiety or may avoid receiving compassion from other people. Likewise, regarding topics such as depression and stress, a person may fail to receive compassion because the intervening variable underlying the problem may be anxiety.

In conclusion, high anxiety is thought to play an important role in all types of fears of compassion. However, it is believed that people's attitudes and their cognitive constructs related to phenomena may vary in childhood and especially in adolescence, but these attitudes may crystallize (crystallization of

attitudes) beginning with adulthood, so the concerns about and fears towards other people may be more stagnant in adulthood. In this context, the present study considers understanding the relationship between state anxiety and trait anxiety and fears of compassion to be important. It is also noteworthy that studies investigating adults' fears of compassion in Türkiye are so few that they can be counted. Therefore, the aim of this study is to examine whether adults' trait anxiety and state anxiety levels predict types of fears of compassion (fear of compassion for others, fear of compassion from others, and fear of self-compassion). In addition, the present study also aimed to examine whether the types of fears of compassion differed significantly by gender.

METHOD

Research Model

This study was conducted using the relational survey design, which is one of the general survey models. At this study the relationship between fears of compassion and anxiety in adults is investigated.

Study Group

The study group consisted of 439 (243 women and 196 men) adults. 305 participants are married, 101 participants are single and 34 of them were divorced. 276 participants have undergraduate students, 59 participants have master degree. The rest of the participants are graduated from high school. The ages of participants ranged 25 to 66 years.

Ethical Statement

The study was carried out within the framework of the Helsinki Declaration and all participants whose informed consents were obtained took part in this study as volunteers. The ethical approval was given by Usak University Ethical Committee.

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Data Collection Tools

Fears of Compassion Scale. The Fears of Compassion Scale was developed by Gilbert et al. (2011). It was adapted into Turkish university students by Necef and Deniz (2018). The scale, graded according to a five-point likert type, consists of 35 items. The Fears of Compassion Scale consists of three sub-dimensions: “expressing compassion for others”, “responding to the expression of compassion from others” and “expressing kindness and compassion towards yourself”. High scores indicate high fear of compassion for the relevant sub-dimension. In the adaptation study of the scale, it is found that the total score of the Cronbach Alpha internal consistency coefficient was .92 for the total score; the sub-dimension of showing compassion to others is .83; the sub-dimension of responding to compassion from others is .83; the sub-dimension of showing self-compassion and understanding is .93. The item analysis showed that the corrected item-test correlations of the scale were between .35 and .80. In this study, the total score of the Cronbach Alpha internal consistency coefficient of the scale was .95; the fear of compassion for others is .87; the fear of compassion from others sub-dimension is .88; the fear of self-compassion sub-dimension is .95.

The State Anxiety and Trait Anxiety Scale. The State-Trait Anxiety Inventory (STAI) developed by Spielberger et al. (1970) was adapted into Turkish and standardized by Öner and Le Compte (1983). Both scales consist of 20 items each. Responses to the items range from 1 to 4. The total score obtained from each scale varies between 20 and 80. A high score indicates a high level of anxiety (Ceviz et al., & Tektaş, 2021). The scores obtained from the scale are theoretically between 20-80. The average score level determined in the applications is between 36-41 is changing. The Reliability coefficients determined for the Trait Anxiety Inventory range from .86 to .92 in the English form, and between .83-.87 in Turkey. Item correlations .34-.72 varies between .71 and .86 (Öner, 1983, pp. 15-16).

Personal Information Form. The personal information form was developed by the researcher to investigate the participants age, gender, education level, marital status.

Data Collection Process

The data collection set consisting of the State-Trait Anxiety Inventory (STAI), the Fears of Compassion Scale, and the Personal Information Form was applied to adults by using google form. Data were applied to adults who volunteered to participate in the study and collected by the researchers.

Data Analysis

First, the skewness and kurtosis values of each variable were determined to test the assumption of normality of the distribution of the collected data. Then, the linearity assumption was tested by determining the correlation coefficients between variables using the Pearson Correlation Analysis technique and One way ANOVA. Based on the results of these analyses, Multiple Linear Regression Analysis was applied to the data. Analysis was performed with SPSS 22.0 package program.

RESULTS

Preliminary Analysis

Before starting the analysis, the data were evaluated in terms of normality, extreme values and missing data. There are no missing data as data were collected online from 439 (243 female and 196 male) adult participants. It is seen that the skewness and kurtosis values of the variables of the study are in the range of ± 1.5 (Table 1). Outliers were checked with the Mahalanobis distance test. Since the data of two participants were outliers, they were excluded from the data set. Finally, the analyzes were carried out on the data of 437 participants. The descriptive statistics of the variables of this study and the correlation coefficients between the variables are presented in Table 1.

Table 1. Descriptive statistics and relations between variables

Variables	1	2	3	4	5	Mean	Sd	α
1. Fear of compassion for others	-					16.92	7.24	.87
2. Fear of compassion from others	.62*	-				18.24	8.88	.85
3. Fear of self-compassion	.44*	.69*	-			17.60	13.08	.93
4. State anxiety	.28*	.19*	.25*	-		40.91	11.35	.94

5. Trait anxiety	.37*	.30*	.30*	.71*	-	43.87	9.10	.89
6. Gender ^a	.13*	.18*	.20*	-.07	-.15*			
Skewness	-.08	.42	.63	.30	.25			
Kurtosis	-.36	.25	-.26	-.36	-.14			

Note. N = 437; *p < .01;
 a1=female; 2=men

As seen in Table 1, state anxiety showed positive correlations with fear of compassion for others (r = .28), fear of compassion from others (r = .19), and fear of self-compassion (r = .25). Trait anxiety has a positive and significant relationship with fear of compassion for others (r = .37), fear of compassion from others (r = .30), and fear of self-compassion (r = .30). Cronbach Alpha internal consistency coefficients for all variables of the study were found to be high.

The main purpose of this research is to examine whether adults' trait anxiety, state anxiety, and gender together predict fears of compassion (fear of compassion for others, fear of compassion from others, and fear of self-compassion). Therefore, in accordance with the purpose of this study, the results of multiple regression analysis applied to the data are presented below, respectively.

Findings on whether adults' trait anxiety, state anxiety, and gender together predict fear of compassion for others

The findings regarding whether adults' trait anxiety, state anxiety, and gender together predict fear of compassion for others are presented in Table 2.

Table 2. Multiple linear regression analysis findings regarding the prediction of fear of compassion for others

	Fear of compassion for others				
	B	Standard Error	β	t	p
Constant	-1.429	1.939		-.737	.462
Trait Anxiety	.318	.050	.400	6.335	.000
State Anxiety	.006	.040	.009	.140	.889
Gender ^a	2.871	.642	.197	4.474	.000

Note. N = 437; R=.424; R² =.180; F=31,606; p<.001
 a1=femal, 2 = Men

As seen in Table 2, state and trait anxiety variables and gender were used as predictors of fear of compassion for others. Trait anxiety and gender regressed significantly predicted fear of compassion for others (R²=.180; F=31,606; p<.001). This finding shows that trait anxiety and gender together explain 18% of the total variance in fear of compassion for others. Among the independent variables, trait anxiety (β = .400) is the strongest predictor of fear of compassion for others. This is followed by gender (in favor of women) (β = .197). The power of state anxiety (β = .040) to predict fear of compassion for others was not significant (p > .05).

Findings on whether adults' trait anxiety, state anxiety, and gender together predict fear of compassion from others

The findings regarding whether adults' trait anxiety, state anxiety, and gender together predict fear of compassion from others are presented in Table 3.

Table 3. Multiple linear regression analysis findings regarding the prediction of fear of compassion from others

	Fear of compassion from others				
	B	Standart Error	β	t	p
Constant	-2.283	2.423		-.942	.346
Trait Anxiety	.378	.063	.387	6.017	.000
State Anxiety	-.052	.050	-.067	-1.047	.296
Gender ^a	4.208	.802	.236	5.247	.000

Note. R=.384; R2=.147; F=24,959; p<.001

a1=Female 2=Male

As seen in Table 3, state and trait anxiety variables and gender were used as predictors of fear of compassion from others. Regression trait anxiety and gender significantly predicted fear of compassion from others (R=.384; R2=.147; F=24,959; p<.001). This finding shows that trait anxiety and gender together explain 14.7% of the total variance in fear of compassion from others. Among the independent variables, trait anxiety ($\beta = .387$) is the strongest predictor of fear of compassion from others. This is followed by gender (in favor of women) ($\beta = .236$). The power of state anxiety ($\beta = -.067$) to predict fear of compassion from others was not significant ($p > .05$).

Findings on whether adults' trait anxiety, state anxiety, and gender together predict fear of self-compassion

The findings regarding whether adults' trait anxiety, state anxiety, and gender together predict fear of self-compassion are presented in Table 4.

Table 4. Multiple linear regression analysis findings regarding the prediction of fear of self-compassion

	Fear of self-compassion				
	B	Standart Error	β	t	p
Constant	-13.776	3.545		-3.886	.000
Trait Anxiety	.432	.092	.301	4.707	.000
State Anxiety	.070	.073	.060	.953	.341

Gender ^a	6.606	1.173	.251	5.630	.000
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Note. R=.398; R2 =.158; F=27,143; p<.001
 a1=Female 2= Male

As seen in Table 4, state and trait anxiety variables and gender were used as predictors of fear of self-compassion. Regression trait anxiety and gender significantly predicted fear of self-compassion (R=.398; R2 =.158; F=27,143; p<.001). This finding shows that trait anxiety and gender together explain 15.8% of the total variance in fear of self-compassion. Among the independent variables, trait anxiety ($\beta = .301$) is the strongest predictor of fear of self-compassion. This is followed by gender (in favor of women) ($\beta = .251$). The predictive power of state anxiety ($\beta = .060$) for fear of self-compassion

In addition, in this study, it was aimed to examine whether fears of compassion (fear of compassion for others, fear of compassion from others and fear of self-compassion) differ significantly according to trait anxiety (low, medium and high) levels.

Table 5 presents the ANOVA and Tukey analysis findings applied to the data to determine whether the fears of compassion (fear of compassion for others, fear of compassion from others, and fear of self-compassion) differ significantly according to trait anxiety (low, medium and high) levels.

Table 5. ANOVA and Tukey test results regarding the examination of the fears of compassion according to low, medium and high trait anxiety levels

	Group	N	Mean	SD	F	p	Significant Difference
Fear of compassion for others	1. Low	137	39.93	8.75	24.094	.000	1<2
	2. Medium	165	44.49	8.78			1<3
	3. High	135	47.12	8.39			2<3
Fear of compassion from others	1. Low	140	40.58	9.14	15.096	.000	1<2
	2. Medium	155	44.84	8.84			1<3
	3. High	142	46.07	8.47			
Fear of self-compassion	1. Low	167	40.87	8.98	20.967	.000	1<2
	2. Medium	141	44.15	8.06			1<3
	3. High	129	47.47	9.04			2<3

As seen in Table 5, individuals with low trait anxiety scores have lower fear of compassion for others than individuals with medium and high anxiety levels. Individuals with moderate trait anxiety scores have lower fear of compassion for others than individuals with high anxiety levels.

Again, as seen in Table 5, individuals with low trait anxiety scores have lower fear of compassion from others than individuals with medium and high anxiety levels. In addition, individuals with low trait anxiety scores have lower fear of self-compassion scores than individuals with medium and high anxiety levels.

DISCUSSION

In this study, it was aimed to examine whether the trait anxiety, state anxiety, and gender together predicted fears of compassion (fear of compassion for others, fear of compassion from others, and fear of self-compassion). Research findings showed that adults' trait anxiety, state anxiety, and gender together predicted 18% of the total variance in fear of compassion for others. Although this percentage of explanation are low, the significance level of $p < .001$ is still important. Among the predictors variables, trait anxiety is the strongest predictor of fear of compassion for others. This finding, that anxiety, which is one of the basic structures of personality, is directly related to anxiety in basic emotions, supports the theoretical views on these concepts (Krohne & Hindel, 1988). This finding also supports previous research findings (Gilbert et al., 2011; Gilbert et al., 2014; Gilbert & Procter, 2006) showing that fears of compassion is associated with trait anxiety. Research findings showed that adults' trait anxiety, state anxiety, and gender together predicted 15 % of total variance in fear of showing compassion from others, and 16 % of total variance in fear of showing self-compassion. Although these percentages of explanation are low, but the significance level of $p < .001$ is still important. Among the predictors variables, trait anxiety is the strongest predictor both fear of compassion for others, and fear of self-compassion. These findings indicate that anxiety, which is one of the basic structures of personality, is directly related to anxiety in basic emotions, supports the theoretical views on these concepts (Krohne & Hindel, 1988). When which of the trait and state anxiety scores explains the fears of compassion effectively is considered, it is seen that trait anxiety has an important role in explaining the fears of compassion. On the other hand, it is observed that state anxiety does not contribute to the explanation of the fears of compassion. State anxiety is a state of anxiety that arises against a certain situation in daily life, but according to a well-known general knowledge, those with high trait anxiety also have high state anxiety. Evidence for the effect of trait anxiety on fears of compassion can generally be obtained from the literature on Attachment Theory. For example, Miculincer et al. (2005) stated that anxiously attached individuals may be overly concerned with being compassionate and helpful in order to be loved, so while they may be attached submissively, avoidant individuals are disturbed by distressing emotions and stay away from others who are in distress. As Miculincer et al. (2005) emphasized, secure attachment increases the capacity to engage in empathy, caring and compassionate behavior towards others. Securely attached individuals are more sensitive to their own and others' emotional states and needs.

Among the predictors variables, gender (in favor of women) is the important predictor of fear of compassion for others, and fear of self-compassion, but the power of state anxiety to predict fear of compassion for others, and fear of self-compassion were not significant. This finding, that anxiety, which is one of the basic structures of personality, is directly related to anxiety in basic emotions, supports the theoretical views on these concepts (Krohne & Hindel, 1988). This finding also supports previous research findings (Gilbert et al., 2011; Gilbert et al., 2014; Gilbert & Procter, 2006) showing that fears of compassion is associated with trait anxiety. Among the predictors variables, gender (in favor of women) is the important predictor of fear of compassion for others, but the power of state anxiety to predict fear of compassion for others was not significant. Based on this finding, it can be said that trait anxiety and gender play a role on fears of compassion. In this context, it is seen that the role played by personality

trait anxiety and gender should be taken into account. In addition, this study showed that as adults' trait anxiety levels (high, medium, and low) decreased, their fear of compassion for others, fear of compassion from others, and fear of self-compassion decreased.

The findings of this research also indicated that individuals with low trait anxiety scores have lower fear of compassion for others than individuals with medium and high anxiety levels. Individuals with moderate trait anxiety scores have lower fear of compassion for others than individuals with high anxiety levels. This finding shows that as the level of trait anxiety decreases, the fear of compassion for others decreases.

Individuals with low trait anxiety scores have lower fear of compassion from others than individuals with medium and high anxiety levels. According to this finding, it can be said that as the level of anxiety decreases, the fear of compassion from others decreases, but there is no significant difference between the fear of compassion from others of those with medium and high levels of anxiety.

Individuals with low trait anxiety scores have lower fear of self-compassion than individuals with medium and high anxiety levels. Individuals with moderate trait anxiety scores have lower fear of self-compassion scores than individuals with high anxiety levels. This finding shows that as the level of trait anxiety decreases, the level of fear of self-compassion decreases. On the one hand, this finding of this research supports the theoretical views. In conclusion, this research shows that anxiety is very closely related to fears of compassion. As a personality trait, the high level of trait anxiety increases the fears of compassion. Therefore, the relationships between the fears of compassion and the individual's attachment characteristics, early childhood experiences and cognitive structures can be investigated.

Limitations, Implications for Future Theoretical and Applied Research

This research has some limitations. First, the participants of this research are adults willing to participate in the study. In future studies, it is recommended to use methods such as cluster and proportional sampling in sample design. In future research, it is recommended to study with adults in different cities and with different sample groups. Secondly, in this study, correlations between various variables (anxiety, gender, fears of compassion) examined. However, in future research, it is recommended to test the relationship between anxiety and fear with a structural equation model.

Despite its limitations, this research primarily provides theoretical contributions to the literature on fears of compassion types (fear of compassion for others, fear of compassion from others, and fear of self-compassion). In addition, this research offers some implications for fears of compassion practices, along with theoretical and applied research in the future. The results of this research have contributed to the theoretical views in the relevant literature, as stated while discussing the findings above

The results of this research also offer implications for current psychological counseling and guidance practices. Especially, trait anxiety and gender play a role in fears of compassion (fear of compassion for others, fear of compassion from others, and fear of self-compassion) of adults. The results of this research can be used in psychological counseling and guidance services to be offered to adults when coping with fears of compassion.

In conclusion, this research shows that anxiety is very closely related to fears of compassion. As a personality trait, the high level of trait anxiety increases the fears of compassion. Therefore, the

relationships between the fears of compassion and the individual's attachment characteristics, early childhood experiences and cognitive structures can be investigated.

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Author Contributions

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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Ethical Statement

The study was carried out within the framework of the Helsinki Declaration and all participants whose informed consents were obtained took part in this study as volunteers. The ethical approval was given by Usak University Ethical Committee.

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RESEARCH

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ARAŞTIRMA

Açık Erişim

The Mediating Role of Emotion Regulation on the Effect of Parental Pressure for Greater Academic Performance on Gaming Addiction

Ebeveyn Akademik Başarı Baskısının Oyun Bağımlılığı Üzerinde Etkisinde Duygu Düzenlemenin Aracı Rolü

Dilara Kaymakçı , Halil Ekşi , Kamile Gamze Yaman 

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ABSTRACT

Today, the use of technology and the interest in technology-based games are very important for school-age children. This study seeks to use a Structural Equation Model (SEM) to examine the mediating role of difficulties in emotion regulation in the relationship between parental pressure for greater academic performance and gaming addiction in high school students. Additionally, this study endeavors to investigate gaming addiction, difficulties in regulating emotions, and parental pressure for greater academic performance through diverse variables. Using multistage cluster sampling to select participants from the universe, the study sample consists of 627 high school students aged 14-17 studying in various districts within the province of İstanbul, Turkey. The data for this study were collected using the Personal Information Form, the Gaming Addiction Scale for Adolescents, the Difficulties in Emotion Regulation Scale, and the Parental Pressure and Support for Greater Academic Performance Scale. An Independent Samples t-Test, an ANOVA, Pearson's Product-Moment Correlation, and a Path Analysis were used to analyze the study's data. After analysis of the SEM constructed for this study, we found that parental pressure for greater academic performance had a very high, direct effect on gaming addiction, that this effect decreased after including difficulties in emotion regulation as a mediating variable, and that parental pressure for greater academic performance had a low, indirect effect on gaming addiction through difficulties in emotion regulation. The results of the SEM analyses show that the fit indices of the model in question were within acceptable limits and that the model accounted for 21% of the total variance of gaming addiction.

Article Information

Keywords

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ÖZET

Günümüzde teknoloji kullanımı ve teknoloji temelli oyunlara yönelik ilgi okul çağı çocukları için oldukça önem arz etmektedir. Bu çalışmanın amacı lise öğrencilerinin ebeveynlerinin çocuklarına yönelik akademik başarı baskısının oyun bağımlılığı üzerindeki etkisinde duygu düzenleme güçlüğü'nün aracı rolünü Yapısal Eşitlik Modeli çerçevesinde incelemek ve oyun bağımlılığın, duygu düzenleme güçlüğü'nün, ebeveyn akademik başarı baskısının çeşitli değişkenlerle ilişkisini araştırmaktır. Araştırmanın örneklemini, İstanbul ilinde öğrenim gören lise öğrencilerini kapsamına alan araştırma evreninden çok aşamalı küme örnekleme yöntemi ile seçilen 14-17 yaş arası 627 öğrenci oluşturmaktadır. Araştırma verileri; Kişisel Bilgi Formu, Ergenler İçin Oyun Bağımlılığı Ölçeği, Duygu Düzenleme Güçlüğü Ölçeği ve Ebeveyn Akademik Başarı Baskısı ve Desteği Ölçeği ile toplanmıştır. Araştırmanın amaçları doğrultusunda yapılan veri analizlerinde Bağımsız Gruplar t-Testi, ANOVA (Tek Yönlü Varyans Analizi), Pearson Momentler Çarpımı Korelasyonu ve Yol Analizi kullanılmıştır. Çalışmanın amacı uyarınca kurulan Yapısal Eşitlik Modeli'ne göre ebeveyn akademik başarı baskısının oyun bağımlılığına doğrudan etkisinin oldukça yüksek olduğu, duygu düzenleme güçlüğü'nün aracı değişken olarak modele dâhil edilmesiyle ebeveyn akademik başarı baskısının oyun bağımlılığı üzerindeki etkisinin azaldığı, ebeveyn akademik başarı baskısının duygu düzenleme güçlüğü üzerinden oyun bağımlılığına dolaylı etkisinin düşük düzeyli olarak gerçekleştiği görülmektedir. YEM analizi sonuçları bakımından, test edilen modelin uyum indekslerinin kabul edilebilir düzeyde olduğu bulgulanmıştır. Kurulan model üzerinden oyun bağımlılığı değişkeninin toplam varyansının %21'lik bir kısmının açıklandığı görülmüştür.

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INTRODUCTION

Since the dawn of mankind, games have shown themselves to be a continuing need. In a period where technology continues to occupy an increasingly larger space in our lives, digital games have begun to increase in prevalence. Despite there being a wide diversity of digital games appealing to individuals of every age, most of such games are consumed by younger individuals and whereas the age of one's first experience with digital games continues to witness a decrease, the amount of time spent playing them has increased over time (Kim, Kim, Lee, Hong, Cho, Fava, Mischoulon, Heo, & Jeon, 2017; Prot, Anderson, Gentile, Brown, & Swing, 2014). Sağlam and Topsümer (2019) cite the primary reason for playing games as having grown up in gaming culture, followed by curiosity, relaxation, satisfaction, social relationships, and trust. Having great importance for individuals' development, games have increasingly come to be perceived as objects of fear on which restrictions should be placed. As times continue to change, games have migrated from the streets onto the computers, telephones, and tablets residing in our very homes, causing them to have completely changed forms while still being an agent of social-emotional development.

Gaming Addiction

In the related literature review, gaming addiction is characterized as an impulse control disorder with symptoms like impaired control over how long one plays, continuing to play despite adverse consequences, and feeling psychological deprivation when unable to play (Yalçın-Irmak & Erdoğan, 2016). Considered a form of technology addiction, gaming addiction is defined as the uncontrolled and compulsive playing of video games and is also regarded as a subcategory of internet addiction (Gökçearslan & Durakoğlu, 2014). Although gaming addiction is not an officially designated form of addiction in the DSM (APA, 2013), internet gaming disorder is included as a condition requiring further study and is defined as continuous and repeated involvement in video games for which there are several criteria: preoccupation with gaming even while during life activities, the need to spend more time gaming, unsuccessful attempts to control one's gaming habits, losing interest in previous hobbies, increased gaming despite having knowledge of psychological problems, deceiving others about the amount of time spent playing games, negative emotions, and jeopardizing educational or career opportunities because of gaming. Using substance use disorders and addiction disorders that trigger the reward system in the brain as a reference, gaming disorder can be considered a type of addiction in the same way that gambling disorder, itself diagnosed as a non-substance use disorder in DSM-5, is addressed. ICD-11 criteria also recognize gaming addiction as an online gaming disorder, describing it as causing one to lose control of his/her gaming habits, prioritize games and gaming over life activities, and neglect other social areas (ICD-11, 2018). Griffiths and Davies (2005), in discussing the existence of gaming addiction, emphasize six criteria that reveal instances of gaming addiction, namely, mood modification, salience, withdrawal symptoms, tolerance, conflict, and loss of control, and relapse.

Examining the relationship between psychological needs and gaming addiction in adolescents, Dursun and Eraslan-Çapan (2018) state that adolescents who are unable to build relationships with others seek to fulfill their needs of socialization and entertainment on virtual environments and that the need for autonomy predicts gaming addiction. Studies investigating the impact of gaming addiction on emotion regulation indicate that individuals addicts to gaming have a lower ability to regulate their emotions, have a propensity to depression, avoid negative feelings, and tend to engage in behaviors that entail addiction, like emotional adjustment and reorganization (Elmas, Cesur, & Oral, 2017; Evren, Evren, Dalbudak,

Topçu, Kutlu, & Elhai, 2019; Ilgaz, 2014; Kim et al., 2017; Şendurur & Şendurur, 2018; Taş & Güneş, 2018; Taylor, Bagby, & Parker, 1997; Tice, Bratslavsky, & Baumeister, 2010; Ulum, 2016). It is believed that the pressure for greater academic performance that adolescents' family members place on them hampers them from meeting their needs for autonomy and entertainment, which may lead to addiction. Just as loneliness is both the cause and effect of gaming addiction for adolescents, adolescents are observed to play games to regulate their feelings of loneliness (Şahin, Keskin & Yurdagül, 2019).

There are currently several studies demonstrating that the online games played by adolescents adversely affect their development and that creating a new identity for oneself in virtual environments leads to a variety of behavioral problems, aggressive behaviors, and tendencies toward violence (Anderson & Carnagey, 2005; Emre, 2020; Kaya, Bedir, & Kaval, 2019; Sallayıcı & Yöndem, 2020; Sarıkaya & Ilgaz Büyükbaykal, 2019; Yıldırım & Taştan, 2020). Joung (1999) states that addictions emerging while trying to cope with difficult situations entail significantly more negative consequences on constructive behaviors.

It would be inaccurate to claim that computer games only beget negative effects. Sepetçi (2017) states that games provide a venue for social interaction in which intellectual skills are developed. Kum (2020) holds that the interfaces of games increase students' creativity. That being said, here, it is important that the length and content of games be age-appropriate.

While investigating gamers' motivations for playing games, Yee (2006) finds that they are drawn to games for three reasons, namely, achievement, social, and immersion. Within the category of achievement, gamers seek rivalries with other players, to obtain a position of status, and to gain and exert power within the game. Here, adolescent gamers believe that they will be able to display the very power, achievement, and status that they were unable to obtain in real life despite parental pressure to do so and that they will be able to regulate these negative emotions through games.

Difficulties in Emotion Regulation

Emotion regulation is defined as a person's awareness of and ability to manage his/her emotions (Koole, 2010; Pepping, Davis, & O'Donovan, 2013). During adolescence, individuals find themselves in situations where they are required to use a variety of methods to cope with different emotions (Duy & Yıldız, 2014). Coping with anxiety and difficult situations is instrumental in one's ability to regulate his/her emotions (Jazaieri, Urry, & Grossve, 2013). The specifics of this developmental period sometimes cause adolescents to experience difficulties expressing and managing their emotions. Whereas studies indicate that the inability to control one's impulses serves to increase problematic gaming behaviors (Irmak, 2014), others have found that functional emotion regulation (a sub-dimension of emotion regulation) decreases as digital gaming addiction increases (Barut, 2019).

Parental Pressure for Greater Academic Performance

Parents play an important supportive role to adolescents as they set out on discovering the social world in which they live (Santrock, 2011; Yıldırım & Kaya, 2009). Indeed, parental support has been found to be essential to students' increased academic performance (Kapıkıran & Özgüngör, 2009). When families exert pressure on their children for greater academic performance, they do not function as the social support mechanism that families normally would. Previous studies have found that perceived social support decreases as digital gaming addiction increases (Barut, 2019), and the lack of family support has been connected to increased gaming addiction in adolescents (Pawlowska, Potembska, & Szmanska,

2018; Şahin, Keskin, & Yurdagül, 2019). In addition, family support holds an integral place in potential programs seeking to treat gaming addiction (Woog, 2016).

Various studies have found that family support is effective in preventing and reducing addiction and that although parents, as a support system, have a positive impact on their children's academic lives, they can sometimes exert pressure on their children. This study, therefore, examines the academic pressure that parents exert on their children and its relation to gaming addiction. Kapıkıran (2016) defines parental pressure for greater academic performance as coercion by parents against their children because they expect a greater academic performance from their children. The large majority of families do set restrictions on their children's playing computer games (Irmak, 2014). The pressure and restrictions placed on children by their families often entail excessive studying, holding unrealistic expectations with regard to performance and grades, making comparisons with their peers, and exhibiting a condescending attitude toward their peers which can lead to test anxiety and difficulties regulating their emotions (Kapıkıran, 2019).

METHOD

Research Model

This study employs a correlational survey model to investigate the mediating role of difficulties in emotion regulation in the relationship between parental pressure for greater academic performance and gaming addiction. Correlational survey models are helpful in identifying whether two or more variables influence each other and, if they do, what changes they produce and at what strength (Creswell, 2017).

SEM was employed to reveal the relationship between mediator, dependent, and independent variables and the model that they created. Structural Equation Modeling is a multivariate statistical technique that uses latent variables to analyze unobservable constructs. In other words, it is a comprehensive statistical approach that allows hypotheses about latent and unobserved variables to be tested (Jöreskog & Sörbom, 1993; Hoyle, 1995; Akt., Çokluk, Şekercioğlu, & Büyüköztürk, 2012).

Study Group

The research universe consisted of a total of 580.546 students actively enrolled in officially recognized secondary education institutions within the greater province of Istanbul during the spring semester of the 2019-2020 academic year. The research sample, however, was composed of 627 students aged between 14 and 17 ($\bar{X}=14.37, SS=1.07$) selected from the universe through multistage cluster sampling. Using stratified sampling, specific districts of Istanbul were first selected for inclusion in the research sample and then random cluster sampling was used to determine in which secondary education institutions the study would take place. We used data from the study entitled "Quality of Life in Istanbul" (Şeker, 2011) for stratified sampling. Using education indicators as a point of reference in his study, Şeker identified the education indices of districts. First, the districts throughout greater Istanbul were divided into three strata (i.e., high, moderate, low) based on the education indicators in question, after which one district per stratum was selected using random sampling. Kadıköy (high), Kartal (moderate), and Sultanbeyli (low) where the three districts selected for this study. Then, after the schools of each school type (i.e., Imam Khatib high schools, vocational high schools, Anatolian high schools) were grouped into their own cluster, 15 secondary education institutions were selected for inclusion in the study using random sampling and data were collected for 9th, 10th, 11th, and 12th grade students. A total of 311,

108, and 208 students enrolled in Anatolian, Imam Khatib, and vocational high schools, respectively, were reached.

While determining sample size, the margin of error was calculated as $n=360$ with $\pm 5\%$ at a confidence interval of 95% for a heterogeneous universe (Gürbüz & Şahin, 2015). Of the individuals composing the sample group, 277 (44.2%) were females and 350 (55.8%) were males; 169 (27%) were 9th graders, 177 (28.2%) were 10th graders, 160 (25.5%) were 11th graders, and 121 (19.3%) were 12th graders. Of the students, 217 (34.6%) were enrolled in schools located in the district of Kadıköy, 244 (38.9%) in schools located in Kartal, and 166 (26.5%) in schools located in Sultanbeyli. Broken down by school type, 311 (49.6%) students were enrolled in Anatolian high schools, 108 (17.2%) in Imam Khatib high schools, and 208 (33.1%) in vocational high schools. A total of 423 students (67.5%) stated that they played online video games; of these, 281 students (44.8%) admitted to playing for one hour or less, 196 students (31.3%) between one and three hours, 43 students (6.9%) between three and six hours, and 18 students (2.9%) six hours or more.

Ethical Statements

Data in the research were obtained from paper-pencil forms by the student volunteers in class environments. It was emphasized that data would only be collected from student volunteers, and participants provided informed consent on the scale sets. The study was approved by authors' university Scientific Research and Ethical Review Board (2000/58654).

Data Collection Instruments

The Personal Information Form was used to collect information on students and their families, which included socio-demographic characteristics, social network use, information pertaining to online gaming, and how they perceived their parents' attitudes toward gaming. The Gaming Addiction Scale for Adolescents (Ilgaz, 2015) was used to determine the high school students' gaming addiction levels. The Difficulties in Emotion Regulation Scale (Yiğit & Güzey, 2017) was used to determine difficulties in emotion regulation. The Parental Pressure and Support for Greater Academic Performance Scale (Kapıkıran, 2016) were used to ascertain how much pressure students' parents placed on them for greater academic performance.

Personal Information Form. This form was prepared by the researchers to identify high school students' demographic characteristics, including gender, school type, and the district in which their school was located.

Gaming Addition Scale for Adolescents. We used this scale, developed by Ilgaz (2015), to determine high school students' gaming addiction levels. Composed of twenty-one 5-point Likert-type items (i.e., very frequently, frequently, sometimes, rarely, never) and 7 factors (i.e., salience, tolerance, mood modification, withdrawal, relapse, conflict, problems), this scale had an internal consistency coefficient (Cronbach's α) value of 0.92, indicating that it was highly reliable. Broken down by sub-dimension, Cronbach's α values were found to be 0.93 for relapse, 0.89 for tolerance, 0.88 for problems, 0.84 for conflict, 0.83 for salience, 0.77 for withdrawal, and 0.65 for mood modification. The highest and lowest scores able to be earned from this scale were 21 and 105, respectively, and cut off value was determined for diagnostic purposes. A high score indicates a high propensity to gaming addiction.

Difficulties in Emotion Regulation Scale [Turkish Version] (DERS-19T). This scale was adapted by Yiğit and Güzey (2017) to determine high school students' difficulties in regulating their emotions and consists of sixteen 5-type Likert items (i.e., almost never [0-10%], sometimes [11-35%], about half the time [36-65%], most of the time [66-90%], almost always [91-100%]). Composed of five subscales (i.e., clarity, goals, impulse, strategies, non-acceptance). Whereas Cronbach's α coefficient for the entire scale was 0.92, indicating high reliability, it was 0.84 for clarity, 0.84 for goals, 0.87 for impulse, 0.87 for strategies, and 0.78 for non-acceptance. The lowest and highest scores able to be earned from this scale were 16 and 105, respectively, and no cut-off value was set. A high score indicates that the individual has difficulty regulating emotions.

Parental Pressure and Support for Greater Academic Performance. This 5-point Likert-type scale was developed by Kapıkıran (2016) to evaluate the pressure for greater academic performance that high school students' parents place on them. The exploratory factor analysis (EFA) conducted to determine the scale's construct validity revealed it to be composed of a single factor that accounts for 60% percent of the variance. The factor loadings items of the scale ranged between 0.50 and 0.75. The confirmatory factor analysis (CFA) for the scale revealed the following values: RMSEA .070, SRMR, .070, and CFI .92. The 10-item scale was composed of two subscales (i.e., parental pressure for greater academic performance, parental support for greater academic performance), each consisting of five items. Whereas Cronbach's α coefficient for the entire scale was 0.82, it was calculated as 0.84 for parental pressure for greater academic performance and 0.71 for parental support for greater academic performance. The lowest and highest scores able to be earned from the parental pressure for greater academic performance subscale were 10 and 50, respectively, with a high score indicating that students perceived to be pressured by their parents to perform better academically.

Data Analysis

The data obtained from the scales were analyzed with SPSS 21 and Mplus 6.12. Also SPSS 21 was used to perform analyses on variables' descriptive statistics, an Independent Groups t-Test, a one-way ANOVA, and Pearson's Product-Moment Correlation whereas Mplus6.12 was used to test the SEM constructed for this study. Before performing the path analysis, the assumptions required by multivariate statistics were examined. These the the evaluation of missing values, extreme values, sample size, normality, linearity, multicollinearity and singularity (Tabachnick & Fidell, 2015). In this context, missing values were observed in the scales of 113 participants. Then, in order to evaluate whether these missing data are random, the data set with missing values and the data set without missing values were compared with the Independent groups t-test according to the scale scores. As a result of the evaluation, it was seen that removing the missing data did not change the score distribution, and accordingly, these data were removed. Then, it was determined that the values (Z scores) of the variables in the data set were in the range of +3 and -3; therefore, extreme values were not found (Johnson & Wichern, 2007). In this study, the Mahalanobis critical value was calculated as 22.45 (Tabachnick & Fidell, 2015). The sample size (n=360) in this study is consistent with the suggestions that a larger than 300 people would yield good results for path analysis under structural equation modeling (SEM) (Byrne, 2010). Care was taken to ensure that the skewness and kurtosis values were within the tolerance level (range 1.96 and -1.96) expressed by Tabachnick and Fidell (2015). In addition, multivariate linearity was checked by examining the scatter diagrams and p-plot plots between the variables, and it was accepted that the data provided multivariate normality.

RESULTS

This section presents information and results on the statistical analyses of the data obtained during this study.

Table 1. Results of the independent t-test conducted to determine whether scores on the gaming addiction, ders-19t, and parental pressure for greater academic performance scales differed by gender

Score	Group	N	\bar{x}	ss	Sh \bar{x}	t_{test}		
						t	Sd	P
Gaming Addiction	Male	350	50.7	14.881	0.795	-8.004	625	0.000
	Female	277	40.94	15.527	0.933			
Difficulties in Emotion Regulation	Male	350	36.33	13.04	0.697	5.489	625	0.000
	Female	277	42.3	14.103	0.847			
Parental Pressure for Greater Academic Performance	Male	350	24.72	9.919	0.53	-3.397	625	0.000
	Female	277	21.52	10.002	0.601			

As seen in Table 1, the results of the independent t-test conducted to determine whether students' scores differed by gender revealed that the arithmetic means of gaming addiction ($t=-8.004$; $p<.01$), of parental pressure for greater academic performance ($t=-3.397$; $p<.01$), and of difficulties in emotion regulation ($t=5.489$; $p<.01$) differed significantly by gender. Whereas the difference between the first two variables (i.e., gaming addiction, parental pressure for greater academic performance) favored males, that of the third variable (i.e., difficulties in emotion regulation) favored females.

Whereas female students were found to experience relatively more difficulties regulating emotions than male students, male students were found to have relatively higher gaming addiction levels and to be subject to more pressure for greater academic performance by their parents than female students.

(AHS – Anatolian High Schools, IKHS – Imam Khatib High Schools, VHS – Vocational High Schools)

As presented in Table 2 above, we conducted a one-way ANOVA to determine whether the scores on the Gaming Addiction, DERS-19T, and Parental Pressure for Greater Academic Performance scales differed by school type and the well-being index of the district in which the school was located. The results show there to be a meaningful difference between the arithmetic means of gaming addiction ($F=1.349$; $P<.05$), difficulties in emotion regulation ($F=2.113$; $P<.05$), and parental pressure for greater academic performance ($F=2.377$; $P<.05$) based on the education indices of the districts in which schools were located. We also found there to be a statistically meaningful difference between the arithmetic means of gaming addiction ($F=2.530$; $P<.05$), difficulty in emotion regulation ($F=7.998$; $P<.05$), and parental pressure for greater academic performance ($F=6.250$; $P<.05$) by school type. Following the ANOVA, we conducted complementary post-hoc analyses and a Scheffe test to identify from which groups these meaningful differences stemmed and found there to be a meaningful difference between gaming addiction averages by school type. We also found a meaningful difference to exist between the scores earned on the DERS-19T by students in Anatolian high schools and vocational high schools (in favor of students attending vocational high schools) and between those earned by students in Imam Khatib high schools and vocational high schools (in favor of students attending vocational high schools). With regard

to scores for parental pressure for greater academic performance, we found there to be a meaningful difference between the scores of students from Anatolian high schools and Imam Khatib high schools (in favor of students attending Anatolian high schools) and between those earned by students from Imam Khatib high schools and vocational high schools (in favor of students attending vocational high schools).

Table 2. Results of the ANOVA conducted to determine whether scores on the gaming addiction, ders-19t, and parental pressure for greater academic performance scales differed by school type and the well-being indices of the districts in which schools were located

Score	Group	f, \bar{x}, ss Values				ANOVA Results						
		Group	N	\bar{x}	ss	Source of Variance	KT	Sd	KO	F	P	
Gaming Addiction	Well-being Index	High	217	45.82	16.32	Inter-Group	682.59	2	341.294	1.349	.26	
		Moderate	244	45.72	15.17	Intra-Group	157888.46	624	253.026			
		Low	166	48.13	16.4	Total	158571.05	626				
		Total	627	46.56	15.96							
	School Type	AHS	311	44.95	14.83	Inter-Group	1275.41	2	637.705	2.530	.08	
		IKHS	108	47.75	15.81	Intra-Group	157295.64	624	252.076			
		VHS	208	47.83	17.36	Total	158571.05	626				
		Total	627	46.84	16.0							
	Difficulties in Emotion Regulation	Well-being Index	High	217	37.58	13.51	Inter-Group	805.70	2	402.849	2.113	.122
			Moderate	244	39.18	13.64	Intra-Group	118945.66	624	190.618		
			Low	166	40.48	14.42	Total	119751.36	626			
			Total	627	39.08	13.86						
School Type		AHS	311	38.28	12.99	Inter-Group	2993.01	2	1496.506	7.998	.00	
		IKHS	108	35.58	13.39	Intra-Group	116758.35	624	187.113			
		VHS	208	41.75	14.78	Total	119751.36	626				
		Total	627	38.54	13.72							
Parental Pressure for Greater Academic Performance		Well-being Index	High	217	22.17	9.42	Inter-Group	480.33	2	240.164	2.377	.094
			Moderate	244	23.63	10.61	Intra-Group	63047.27	624	101.037		
			Low	166	24.33	10.01	Total	63527.59	626			
			Total	627	23.38	10.01						
	School Type	AHS	311	23.34	9.89	Inter-Group	1247.65	2	623.823	6.250	.002	
		IKHS	108	20.52	9.16	Intra-Group	62279.95	624	99.808			
		VHS	208	24.71	10.54	Total	63527.59	626				
		Total	627	22.86	9.86							

Standard Deviations and Correlation Values for Gaming Addiction, DERS-19T, and Parental Pressure for Greater Academic Performance Scales

Table 3 presents the descriptive statistics calculated for the scores that students earned on the Gaming Addiction, DERS-19T, and Parental Pressure for Greater Academic Performance scales.

Table 3. Descriptive statistics

Factor	Mean	SS	1	2	3
1. Gaming Addiction	46.39	15.916	1	.245*	.425*
2. Difficulties in Emotion Regulation	38.97	13.831		1	.264*
3. Parental Pressure for Greater Academic Performance	23.31	10.047			1

*P<.01

As seen in Table 3, there is a positive and meaningful relation ($r=.425$ $p<.01$) between the independent variable (i.e., parental pressure for greater academic performance) and dependent variable (i.e., gaming addiction).

Results Pertaining to SEM Fit Indices and Threshold Values

We used a SEM to analyze the mediating role of difficulties in emotion regulation in the relationship between parental pressure for greater academic performance and gaming addiction. Table 4 depicts the values of first model that resulted from the SEM and those of the revised model.

Table 4. Fit Indices and Threshold Values used in the SEM Analysis

Fit indices	Model value	Goodness of fit	Acceptable fit values
χ^2/sd	3.64	$0 \leq \chi^2/sd \leq 2$	$2 \leq \chi^2/sd \leq 5$
χ^2 "p" value	.000	$0.05 < p \leq 1.00$	$0.01 \leq p \leq 0.05$
RMSEA	.065	$0 \leq RMSEA \leq 0.05$	$0.05 \leq RMSEA \leq 0.08$
SRMR	.044	$0.00 \leq SRMR \leq 0.05$	$0.05 \leq SRMR \leq 0.10$
CFI	.950	$0.95 \leq CFI \leq 1.00$	$0.90 \leq CFI \leq 0.95$
TLI	.938	$0.95 \leq TLI \leq 1.00$	$0.90 \leq TLI \leq 0.95$

As seen in Table 4 according to the SEM conducted, the goodness of fit values were both coherent and meaningful ($\chi^2/sd=3.64$; $p= .000$; $RMSEA=.065$; $SRMR=.044$; $CFI=.950$; $TLI=.938$). During the path analysis, the data in the table was within acceptable limits and the goodness of fit values were taken into account to examine whether the fitness indices were indeed adequate (Çokluk et al. 2001). Accordingly, the results of the path analysis revealed that all of the fit index values for the model being tested were within acceptable fit intervals. This result indicates that the theoretical model is a good fit for the data.

Figure 1 reveals that pressure for greater academic performance has a direct and meaningful ($\beta =.410$, $p < .01$) impact on gaming addiction, that pressure for greater academic performance has a meaningful ($\beta =.267$, $p < .01$) impact on difficulties in emotion regulation, and that difficulties in emotion regulation has a meaningful ($\beta =.132$, $p < .01$) impact on gaming addiction. According to the SEM, parental pressure for greater academic performance and difficulties in emotion regulation had a direct and positive ($R^2 = .21$, $p < .001$) impact at a level of .410 on gaming addiction and that parental pressure for greater academic performance explained 21% of the total variance.

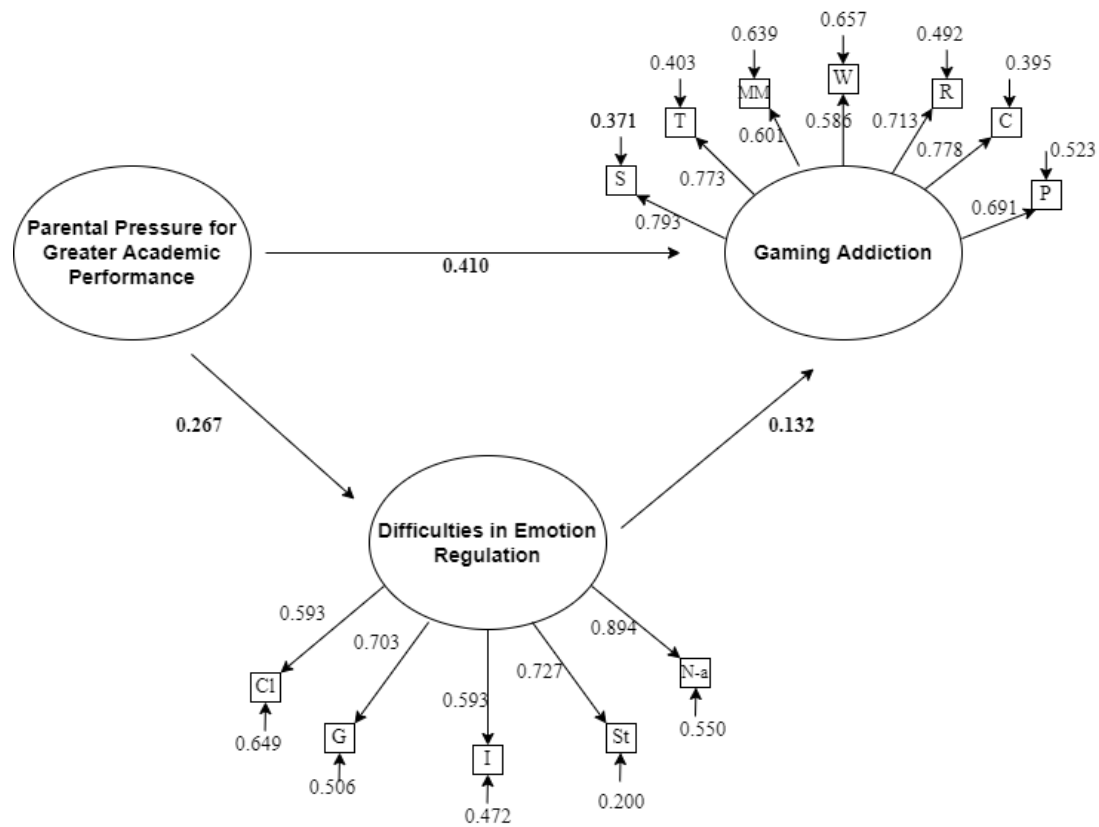


Figure 1. Pressure for Greater Academic Performance

(S: Saliency, T: Tolerance, MM: Mood Modification, W: Withdrawal, R: Relapse, C: Conflict, P: Problems, Cl: Clarity, G: Goals, I: Impulse, St: Strategies, N-a: Non-acceptance)

Figure 1. SEM pertaining to the mediating role of difficulties in emotion regulation in the relationship between parental pressure for greater academic performance and gaming addiction.

DISCUSSION

The aim of this study was to examine the mediating role of difficulties in emotion regulation on the relationship between parental pressure for greater academic performance and game addiction in high school students. The study's results found that the fit values were sufficient and within acceptable limits for the model depicting the mediating role of difficulties in emotion regulation in the relationship between parental pressure for greater academic performance and gaming addiction. These results indicate that high school students' gaming addiction levels were not high. Reaching a similar conclusion in her study with adolescents, Irmak (2014) stated that although national addiction levels were low, they were still rather high when compared with those of countries. A report published in 2016 by the Ankara Development Agency found that adolescents and young individuals made up the entirety of gamer profiles in the world and further predicts that the total number of players on gaming platforms will continue to increase until 2020. This implies that gaming disorders will only increase over time. Males were found to have higher gaming addiction rates than females, another result supported in the literature (Ekşi et al., 2020; Gökkaya & Deniz, 2014; Griffiths & Hunt, 1995; Horzum, 2011; Houge & Gentile, 2013; Irmak, 2014; Onay, Tüfekçi, & Çağiltay, 2005; Pala & Erdem, 2011).

Despite having an impact on gaming addiction levels, difficulties in emotion regulation were found, in general, not to be high. Previous studies have reached similar conclusions, emphasizing the relationship between addiction and the ability to regulate one's mood (Baker, Piper, McCarty, Majeskie, & Fiore, 2004;

Barut, 2019; Estévez, Jáuregui, Sánchez, González, & Griffiths, 2017; Irmak, 2014). Female students were found to have greater difficulty regulating their emotions than did male students. Although the results of some studies (Barut, 2019; Kapçı, 2019) exhibit similarities, the fact that other studies (Haradhvala, 2016; Haşimoğlu & Aslandoğan, 2018) have found that difficulties in emotion regulation do not differ by gender is certainly noteworthy.

The study's results articulate that parental pressure for greater academic performance was not, on average, high for high school students. Studies investigating the relationship between gaming addiction and academic performance reveal that academic performance decreases as gaming addiction increases (Ekşi et al., 2020). The literature shows that studies on parental pressure for greater academic performance are limited and that existing studies address it within the frame of perceived social support. Although several studies examining familial social support reach results that differ by gender in favor of females (Köseoğlu & Erçevik, 2015; Salazar, 2015), other studies found that there were no differences based on gender (Barut, 2019).

The results demonstrate that the SEM constructed to analyze the mediating role of difficulties in emotion regulation in the relationship between parental pressure for greater academic performance and gaming addiction was within acceptable limits. In the SEM, the external variable was parental pressure for greater academic performance, the mediating variable was difficulties in emotion regulation, and the internal variable was gaming addiction. Using this model, we sought to identify the direct and indirect effects between these variables. A Sobel test was conducted to determine with the mediating effects were indeed statistically meaningful. As a result, the path analyze found that parental pressure for greater academic performance had a considerably high and direct impact on gaming addiction that this impact decreased when difficulties in emotion regulation were included as a mediating variable in the model, and that parental pressure for greater academic performance had a low and indirect effect on gaming addiction through difficulties in emotion regulation meaning that it had a partial mediating effect on said relationship. The analysis results found that individuals subject to parental pressure for greater academic performance experienced difficulties both in overcoming gaming addiction and in regulating their emotions and that such individuals had a greater propensity to gaming addiction. In his study, Barut (2019) found that individuals suffering from high levels of video game addiction had difficulties expressing themselves and in their ability to regulate their emotions as their perception of familial social support diminished. In their study, Şahin, Keskin, and Yurdagül (2019) found that children who did receive familial social support had tendency to become gaming addicts through the mediation of feelings of loneliness.

Based on the results, the model employed in this study found that parental pressure for greater academic performance had a high, direct effect on gaming addiction, that served a mediating role in difficulties regulating one's emotions, and that both parental pressure for greater academic performance and difficulties in emotion regulation sufficiently explained gaming addiction.

Since parental pressure for greater academic performance is thought to be both the cause and effect of gaming addiction, we believe that studying the relationship between these two variables with different variables and sample groups will help shed further light on gaming addiction. Whereas gaming addiction is nurtured by a negative family climate (Ögel, 2012), a positive family climate fosters controlled and regulated gaming in students (Irmak, 2014). Since family support is integral in addiction therapy, its importance should be emphasized in preventative or therapeutic programs, family factors thought to

cause gaming should be kept in consideration during any such programs, and family members should be included in all related processes so as to address this condition systemically.

Limitations and Directions

This study has some limitations. The first limitation is related to obtaining the study data through self-report scale tools. The other limitation is related to participants. We assume that participants have answered questionnaires correctly. Participants are only high school students in this study. Results only reflect students' perceptions as their parents did not participate in the study.

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Author Contributions

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

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

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Ethical Statement

The study was approved by the Marmara University Institute of Educational Sciences Research and Publication Ethics Committee on March 19, 2021 (No: # 2100081892 / 2021-2-28). In addition, consent forms were obtained from all participants included in the study.

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RESEARCH


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ARAŞTIRMA

Açık Erişim

Thwarted Needs and Psychological Inflexibility Predicting Psychological Distress in University Students

Üniversite Öğrencilerinde Psikolojik Stresin Yordayıcıları Olarak Engellenmiş İhtiyaçlar ve Psikolojik Katılık

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ABSTRACT

Self-determination theory proposes that thwarted autonomy, competence, and relatedness are associated with an inflexible style of coping and leads to mental health concerns. The present research aims to examine psychological inflexibility (PI) – a construct of Acceptance and Commitment Therapy – as a mediator in the relationship between the thwarted needs and psychological distress in college students. Self-report instruments in a cross-sectional design were utilized to collect data from a sample of Turkish college students (N= 223, Mage= 21.68; SDage = 4.31) during the lock-down in Turkey. The present research utilized structural equation modelling (SEM) in testing the mediating role of PI in the relationship between thwarted needs and psychological distress (anxiety and depression symptoms). Thwarted autonomy, competence and relatedness had medium correlation with psychological distress. The SEM results showed that PI mediated the relationship of thwarted competence and relatedness with psychological distress while PI did not mediate the relationship between thwarted autonomy and distress. PI can be used to mitigate the negative influences of thwarted needs on psychological distress. Potential cultural differences in the relationship of thwarted needs with psychological distress were discussed.

Article Information

Keywords

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ÖZET

Öz-belirleme Kuramı engellenmiş otonomi, yeterlilik ve ilişkisellik ihtiyaçlarını katı bir başetme tarzıyla ilişkilendirmiş ve bu ihtiyaçların akıl ve ruh sağlığı sorunlarına yol açtığını önermektedir. Bu çalışma engellenmiş ihtiyaçlar ve psikolojik stres arasındaki ilişkiyi incelemeyi ve psikolojik katılığın (PK) (Kabul ve Kararlılık Terapisi'nin bir yapısı) engellenmiş ihtiyaçlar ve psikolojik stres arasındaki aracı rolünü incelemeyi amaçlamaktadır. Kesitsel desen içinde ulaşılabilir örneklem yöntemi ile Türk üniversite öğrencilerinden anket yöntemi ile toplanmıştır (N= 223, M= 21.68; SD = 4.31). Yapısal eşitlik modeli (YEM) kullanılarak engellenmiş temel ihtiyaçlar ve psikolojik stres arasındaki PK'nın aracı rolü test edilmiştir. Korelasyon değerleri incelendiğinde engellenmiş otonomi, yeterlilik ve ilişkisellik ihtiyaçları psikolojik stres ile ilişkili olduğu bulunmuştur. YEM analiz sonuçları PK'nın engellenmiş yeterlilik ve ilişkisellik ihtiyacının psikolojik stres ile ilişkisinde aracı olduğu ama engellenmiş ihtiyacın psikolojik stres ile ilişkisinde ise aracı olmadığı bulunmuştur. PK'ya yönelik müdahaleler engellenmiş ihtiyaçların psikolojik stres üzerindeki olumsuz etkisini azaltmak için kullanılabilir. Sonuçlar ile ilgili potansiyel kültürel etkenler tartışılmıştır.

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Ethical Statement: IRB approval of the Social and Human Sciences Research and Publication Ethics Committee at the university.

INTRODUCTION

Almost half of university students report overwhelming anxiety (65.7% for any time within the last 12 months) and depression (45.1% any time within the last 12 months) during university years (American College Health Association, 2019). Existing studies identified several factors that may intensify university students' mental health concerns (Arnett, 2015; Auerbach et al., 2018). University students as emerging adults go through essential transitions like gaining autonomy, forming new relationships and achieving competency in multiple domains of their life (Arnett, 2015). The risk factors brought by the pandemic intensified these transitional challenges (Clark & Watson, 2019; Jao et al., 2018): one third of students reported moderate to severe depression and anxiety while 88% of them reported increase in their stress due to the pandemic oriented difficulties like financial problems (Lee et al., 2021). These findings show that university students are vulnerable to mental health problems like anxiety and depression (Jao et al., 2018). Interestingly, a longitudinal study showed that university students with preexisting mental health concerns reported less of an increase in psychological symptoms compared to those without preexisting mental health concerns (Hamza et al., 2021). This seeming benefit may not reside in the pandemic or mental health originated difficulties per se but may reside in university students' coping repertoire or predispositions in response to a problem (Crum et al., 2017; Lischetzke et al., 2021).

Self-determination theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2017) and psychological inflexibility (PI) model of Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl, et al., 2004) may explain university students' predispositions in coping with stress. For example, SDT points to an optimal level of challenge (Deci & Ryan, 1985). When the problems and restrictions in the environment are beyond this optimal level, individuals become rigid and passive in meeting their basic motivational needs (i.e., autonomy, competence and relatedness) (Roth et al., 2019; Ryan et al., 2016). This rigidity may predict inflexibility in staying in the present moment and engaging in value-guided actions. Therefore, the frustration of needs (e.g., the need to feel competent) (Chen et al., 2015; Ryan et al., 2016) and the diminished ability to act in accordance with values (Hayes, Strosahl, et al., 2004) may predict maladaptive behaviors, not merely the aversive environment. The present study thus explores whether thwarted needs predict psychological distress, and PI mediates the relationship of thwarted needs with psychological distress.

Thwarted Needs

SDT (Deci & Ryan, 1985; Ryan & Deci, 2017) is an evolving theory of human motivation and growth, including six sub-theories, and it proposes that human organisms have an innate drive inclined toward a unified sense of self. This sense of a unified self-structure partly depends on the satisfaction of the basic needs (i.e., autonomy, competence, relatedness). A nurturing/supportive environment enhances individuals' sense of competence, relatedness, and autonomy through an ongoing process of elaborating their self-structure or inner desires/values. Indeed, a supportive environment might be helpful for goal progress and task-oriented coping while an unsupportive environment might lead to disengagement from the task and autonomous goal motivation in university students (Gaudreau et al., 2012). This innate drive toward self-determination seeks optimal challenges, which would be supportive for creativity, intrinsic motivation and resourcefulness (Ryan & Deci, 2017) and even for the selection of and pursuing leisure activities (Iwasaki, 2003). Due to the difference between the need frustration and satisfaction in behavior, some researchers point to the need satisfaction and frustration as the "...darker and brighter sides of human functioning" (Ryan & Deci, 2000b, p. 325) The theory thus makes a distinction in need frustration

on mental health (e.g., Rouse et al., 2020). That is, need frustration may lead to passive/avoidant self and mental health concerns (Ryan & Deci, 2017): satisfaction of basic needs promise to facilitate one's psychological flexibility. Conversely, frustration of these basic needs may facilitate psychological inflexibility, thereby leading to mental health concerns (Rouse et al., 2020).

The present study, therefore, is particularly interested in the Basic Psychological Needs Theory (BPNT) (Ryan & Deci, 2017) – a sub theory of SDT. BPNT identifies three universal needs. First, the need for autonomy motivates people to engage willingly in activities with awareness and congruence. Second, the need for competence motivates people to exercise their strength in pursuing their goal-directed behaviors and to attain effective outcomes. Third, the need for relatedness motivates people to connect with others and feel respected and cared for in interpersonal relationships. Self-determination through these needs “is an energizing state that, if satisfied, conduces toward health and well-being but, if not satisfied, contributes to pathology and ill-being” (Ryan & Deci, 2000a, p. 74). Thwarted basic needs may actually lead to forming a personal style of rigid self-protective behaviors, strict regulatory mechanisms, and an avoidant motivational system. (Deci & Ryan, 1985; Ryan et al., 2016). Failure to meet basic needs eventually contributes to an increase in maladaptive behaviors and predict depressive and other psychological symptoms (Bartholomew et al., 2011; Campbell et al., 2018; Chen et al., 2015; Rouse et al., 2020; Vansteenkiste & Ryan, 2013). Vansteenkiste and Ryan (2013) proposed that “... need frustration evokes ill-being and increased vulnerabilities for defensiveness and pathology” (Vansteenkiste & Ryan, 2013, p. 2). Within the context of the present study, the need frustration may have an emotional cost of mental health concerns (Campbell et al., 2018) through compensatory attempts to overly control one's behavior and emotions as well as rigid behavioral patterns of inflexibility (Campbell et al., 2018; Chen et al., 2015; Ryan et al., 2016; Vansteenkiste & Ryan, 2013). In the present study, this rigid behavioral pattern is studied within the construct of psychological inflexibility.

Psychological Inflexibility

Psychological flexibility (PF) is a seminal concept to Acceptance and Commitment Therapy (Bond et al., 2006; Hayes, Strosahl, et al., 2004; Hayes & Gifford, 1997). PF consists of six behavioral response processes. These six behavioral responses – “hex-a-flex” model – includes acceptance, defusion, flexible attention to the present moment, self-as-context, valued living and committed action (Hayes et al., 2006). Even though challenging life experiences provoke distress, individuals with high PF endure stressful situations openly and act consistent to their valued goals and present-moment experiences (Bond et al., 2006; Doorley et al., 2020). PF is a dynamic process built in language/thinking stream (i.e., Relational Framework Theory) that helps individuals deal with fluctuating daily challenges: This framework of language facilitates mental resources, perspectives and balance between desires and situational demands (Hayes, Follette, et al., 2004; Kashdan & Rottenberg, 2010). Researchers caution that low PF does not infer the presence of psychological inflexibility (PI) (Cherry et al., 2021): PI and PF are two separate constructs. PI and PF are built in the human language and cognitive patterns like schemas and the actual events activate a network of thinking (Hayes et al., 1996). Within a sample of university students, Kashdan and colleagues (2006) showed that PI mediated the relationship of emotion regulation strategies and predicted diminished daily positive experiences/events and increased negative affective experiences. For individuals with high PI, the symbol of the distressing event is likely to spread the associated negative networks of memories and emotions (Hayes et al., 1996) and associate the risk factors with maladaptive behaviors (Kingston et al., 2010). Therefore, it is important how a given context activates the thinking

pattern, meaning that some people are prone to become rigid and inflexible in responding to the daily problems. In the present research, it was hypothesized that university students with need frustration would be likely to engage in psychological inflexibility and report higher level of psychological distress.

The Present Research: Psychological Inflexibility as the Mediator of Thwarted Needs

PI is a behavioral response pattern in perceiving the problems in the environment (Ciarrochi et al., 2010) and a process of appraising the situation (Hayes et al., 1996). Individuals with PI thus tend to be less adaptive and more rigid in responding to emotional experiences (Masuda et al., 2010) due to rigidity in using their mental resources, taking perspectives in balance between desires and situational demands (Hayes, Follette, et al., 2004; Kashdan & Rottenberg, 2010). That is, individuals who are high on PI tend to disengage from context specific behaviors, which in turn creates a gap between appraised and actual meaning of the situation (Hayes et al., 2006). Chawla and Ostafin (2007) suggested examining the core processes in PI as a factor in the etiology of mental health disorders. The present research hypothesizes that one of the underlying dynamics in PI might be the construct of need frustration as described in SDT. Deci and Ryan (1985) defines rigidity and avoidance as the central characteristics of thwarted needs. That is, people with underachieved self-determination are not able to endure tension and pressure in order to preserve self-determined, intrinsically motivated behaviors. Indeed, the autonomy and capacity in managing distressful situations were found to be associated with the experience of distress like anxiety, showing that compromised autonomy may serve as a vulnerability factor to stressors (Kunst et al., 2019). Need frustration may fuel rigidity, passivity and inflexibility (Deci & Ryan, 1985).

SDT explains the motivational dynamics in seeking autonomy, competence, and relatedness in their environment while ACT explains the dynamic structure of how an individual responds to their environment. SDT views human growth within a dialectic perspective. This dialectic perspective "...concerns the ongoing struggle of the synthetic function of self to assimilate and accommodate to a world of both inner drives and urges, and outer demands and seductions" (Ryan et al., 2019, p. 119). The failure in navigating this struggle results in rigidity, deterioration in one's perceived competence and intrinsic motivation (Deci & Ryan, 1985), hypothetically higher tendency toward PI. Consistent with SDT's premises (Ryan & Deci, 2017), individuals with high PI would explain distressing experiences with negative judgmental thoughts and feelings while trying to compromise painful present moment experiences. Individuals' internal dialogues and judgmental interpretation of the situation would control them more than by the actual restrictions in the environment. Kashdan and Rottenberg (2010) thus note that the need frustration or need satisfaction is static, meaning that it does not change day to day. They discuss that those "static approaches fail to capture the dynamic, fluctuating, and contextually-specific behaviors that people deploy when navigating the challenges of daily life" (Kashdan & Rottenberg, 2010, p. 866). However, PI composes the dynamic nature of coping with stressful situations. Therefore, need frustration includes a motivational system internalized throughout years of interaction with the environment (Ryan & Deci, 2017) and PI is situation specific and acts more like a mediator of the internalized motivational system.

Drawing from the above-mentioned research findings, the present research hypothesizes that university students with frustrated needs are likely to suppress their thoughts and avoid experiencing the present moment, which in turn predicts high levels of psychological inflexibility, which in turn predict anxiety and depression. Figure 1 presents the hypothesized structural equation model (SEM).

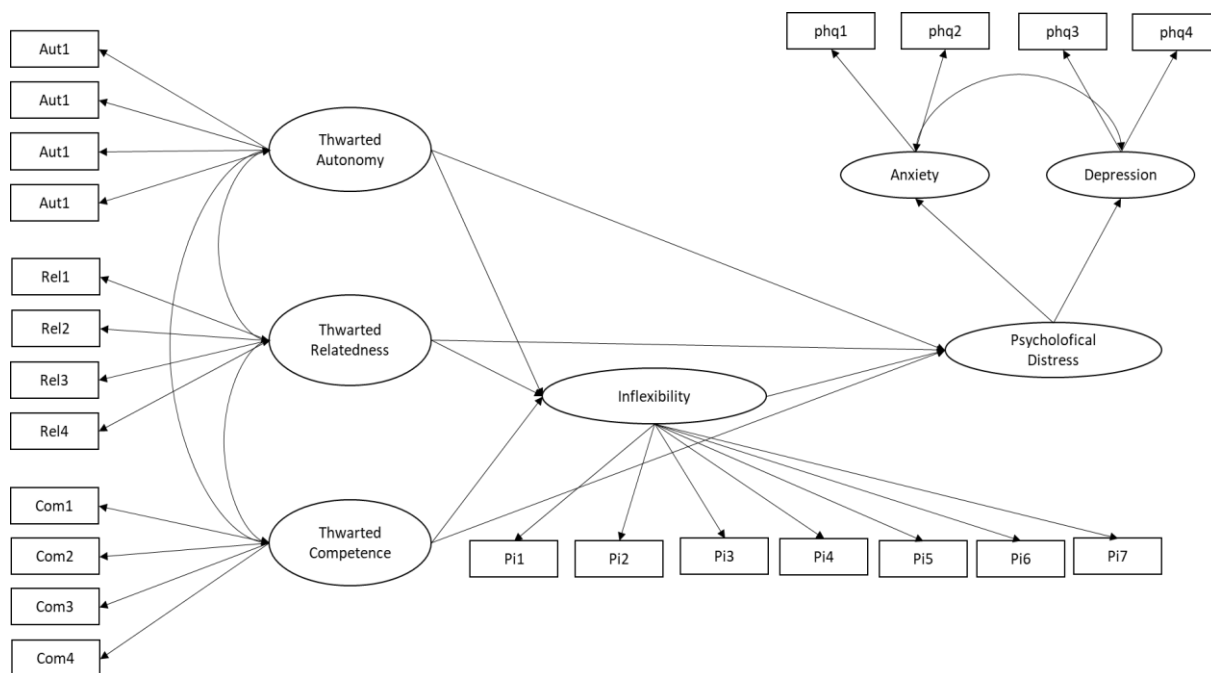


Figure 1. Structural equation modelling of predicting psychological distress from need frustration through psychological inflexibility

METHOD

In order to estimate the required sample size, a power analysis in R statistical program (“pwr.r.test” function) was conducted. Expecting a medium effect size (.30) in correlational models according to Cohen’s (1992) criteria, a significance level of .05, and a power at .80, calculations suggested a sample size of 85 participants at least. Another estimation of sample size on an online tool (Soper, 2021) with 23 indicators, five latent variables, a power at .80, significance level of .05 and expected effect size of .30 suggested at least 150 observations for structural equation models. This study with the current sample size of 223 exceeded the suggested sample sizes. Table 1 presents the correlation coefficients and descriptive findings.

Participants for this study were recruited from a Turkish public university and 223 Turkish students participated in this study. Out of 223 participants, 165 of them were female and 58 were male (Mage= 21.68; SDage = 4.31). For socio-economic status (SES), 29 of them classified themselves as low income, 181 as middle income and 13 as high income. In terms of year at university, 221 were undergraduate and two were graduate students, and out of 221 undergraduate students, 66 were freshman, 67 were sophomore, 52 were junior, 35 of them were senior and three of them did not report their year at the university.

Ethical Statements

The study was approved by the Istanbul Medeniyet University Social and Human Sciences Research and Publication Ethics Committee at June 5, 2020. In addition, consent forms were obtained from all participants included in the study.

Ethics Committee Name: Istanbul Medeniyet University Social and Human Sciences Research and Publication Ethics Committee

Approval Date: 05.06.2020

Measures

The present research included three measures along with a demographic form. This section provides the details of the measures.

Basic Psychological Needs Satisfaction and Frustration Scale. Basic Psychological Needs Satisfaction and Frustration Scale (BPNSFS; Chen et al., 2015) includes 24 items rated on a 5-point Likert type scale, ranging from 1, “not true at all” to 5, “completely true.” The BPNSFS includes six subscales: three subscales include autonomy, competence and relatedness satisfaction and three other subscales include frustration of these needs. The original development study reported internal consistency of the scale as ranging from 0.64 to 0.88 (Chen et al., 2015). Selvi and Bozo (2020) translated the BPNSFS into Turkish and reported good psychometric properties. Because we were interested in frustrated needs, we used 12 items assessing one’s report of autonomy (e.g., “I feel forced to do many things I wouldn’t choose to do”), competence (e.g., “I feel like a failure because of the mistakes I make”) and relatedness (e.g., “I feel the relationships I have are just superficial”) needs frustration. In the present study, Cronbach’s alpha coefficients for the scales were .87, .90 and .89, respectively. Higher scores indicate higher thwarted needs.

Acceptance and Action Questionnaire-II. Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011) includes seven items (e.g., “I worry about not being able to control my worries and feelings.”) rated on a 7-point Likert-type scale, ranging from 1, “never true” to 7, “always true.” The higher scores on the scale represent higher psychological inflexibility. The original study reported good psychometric properties for a single factor version of the AAQ-II and internal consistency was 0.84 (Bond et al., 2011). Yavuz and colleagues (2016) translated the instrument into Turkish and reported good psychometric properties and internal consistency as 0.84. The present study revealed an internal consistency of 0.88.

Patient Health Questionnaire-4. Patient Health Questionnaire-4 (PHQ-4; Kroenke et al., 2009) is a screening measure of depression (e.g., “Over the last 2 weeks, how often have you been bothered by little interest or pleasure in doing things?”) and anxiety (e.g., “Over the last 2 weeks, how often have you been bothered by feeling nervous, anxious or on edge?”) symptoms. The scale consists of four items rated on a scale of 0, “not at all” to 3, “nearly every day.” The PHQ-4 is a brief, valid and reliable tool to assess anxiety and depressive symptoms (Kroenke et al., 2009). Demirci and Ekşi (2018) translated the measure into Turkish and reported valid and reliable indicators. Internal consistency in the present study was 0.85. The present study utilizes the PHQ-4 to assess one’s psychological distress as a composite tool. Higher scores indicate higher psychological distress.

Procedures and Data Analysis Plan

The informed consent and invitation for the present research were delivered to the students along with the announcement. The author has not intervened in the recruitment process of the participants. Participants filled the questionnaires voluntarily and individually through Google Forms, and they did not receive an incentive for their participation. The Google Form did not keep record of the participants’ identifying information as the potential participants were informed.

Following data screening, assumptions for linear models and SEM (e.g., outliers, multicollinearity, multivariate normality) were tested and no gross violations of the assumptions were observed. There was no missing data. After the data screening completed, the SEM presented in Figure 1 was analyzed in R using the Lavaan package. Structural equation model (SEM) represents a series of regression analysis and examines the hypothesized interrelated relationships among the variables simultaneously (Hair et al.,

2019). A two-step model testing was used: Measurement model was tested first and then the structural model was tested (Kline, 2016). The measurement model includes the assessment of latent variables by observed variables and the structural model defines the hypothesized relationships (paths) between the latent variables (Hair et al., 2019). The structural model in the present study includes a test of the relationships among thwarted needs of autonomy, competence and relatedness, psychological inflexibility, and psychological distress. To test the model fit for measurement and structural models, the commonly used criteria in the field was followed (Hu & Bentler, 1999; Kline, 2016). The indexes of chi-square test ($\chi^2/p > 0.05$ and $\chi^2/df < 3$), root mean square error of approximation (RMSEA < .10), the standardized root mean square residual (SRMR < .05), the comparative fit index (CFI > .90) and the Tucker-Lewis index (TLI > .90) were used in assessing the model fit.

RESULTS

Descriptive Statistics

Table 1 presents the descriptive statistics and correlation coefficients between the variables. Gender and age did not significantly correlate with the study variables except for a significant correlation between gender and psychological inflexibility and between age and psychological distress. Due to unequal distribution, gender was not added into the model. Correlation coefficients show that variables revealed moderate to large correlation coefficients – ranging from $r = .26$ to $.60$. Thwarted autonomy, relatedness and competence had moderate correlation with psychological distress and large correlation with PI. The present research hypothesized that PI would mediate the relationship of thwarted needs with psychological distress.

Table 1. Correlation coefficients and descriptive statistics for study variables

	Correlation Coefficients								
	1	2	3	4	5	6	7	8	9
1 Gender	--								
2 Age	0.00	--							
3 Distress	-0.10	-0.14*	--						
4 Anxiety	-0.17*	-0.08	0.91***	--					
5 Depression	0.00	-0.17*	0.91***	0.66***	--				
6 Inflexibility	-0.14*	-0.01	0.52***	0.48***	0.46***	--			
7 Autonomy	-0.01	-0.05	0.32***	0.26***	0.34***	0.41***	--		
8 Relatedness	0.02	-0.07	0.26***	0.21***	0.26***	0.45***	0.37***	--	
9 Competence	-0.01	-0.08	0.31***	0.22***	0.34***	0.60***	0.44***	0.47***	--
	Descriptive Statistics								
<i>M</i>	0.26	21.68	1.61	2.82	3.62	3.73	3.44	2.23	2.88
<i>SD</i>	0.44	4.31	0.82	1.83	1.79	1.44	1.11	1.19	1.20
<i>Skewness</i>	--	3.44	0.00	0.23	-0.23	0.18	-0.22	0.83	0.21
<i>Kurtosis</i>	-0.82	12.21	-0.94	-1.03	-0.96	-0.80	-1.01	-0.37	1.02
<i>Alpha</i>	--	--	.85	.82	.74	.88	.87	.89	.90

Note. N= 223; Gender was coded as women = 0, men = 1; * $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$.

Test of the Measurement Model

The measurement model included need frustration with three latent variables, psychological inflexibility and psychological distress. Psychological distress included a second-order factor structure with two indicators and each indicator had two items. Estimation of the measurement model through confirmatory factor analysis showed a good fit for need frustration $\chi^2(51) = 122.79$, $p < 0.001$, RMSEA = 0.08; CFI

= 0.96; TLI = 0.95; SRMR = 0.05 and psychological distress, $\chi^2(1) = .10$, $p > 0.001$, RMSEA = 0.00; CFI = 1.0; TLI = 1.0; SRMR = 0.00. The fit statistics for psychological inflexibility (PI) indicated a mediocre fit, $\chi^2(14) = 112.98$, $p < 0.001$, $\chi^2/df = 8.07$, RMSEA = 0.18; CFI = 0.87; TLI = 0.81; SRMR = 0.07. The fit statistics for psychological inflexibility is further examined with modification function (“modificationIndices ()”) in the Lavaan package in R. The modification suggestions with a value greater than 25 were defined in the model. Modification suggestions indicated a relationship between the residuals of item 1 and 4 of the PI ($M_i = 63$). This modification considerably improved the fit statistics, $\chi^2(13) = 52.85$, $p < 0.001$, $\chi^2/df = 4.06$, RMSEA = 0.11; CFI = 0.95; TLI = 0.92; SRMR = 0.05. All items loadings on their respective latent variables were above .70, except for Item 1 (.66) and 6 (.64) for psychological inflexibility and Item 3 (.67) for psychological distress. Based on these findings, the measurement model shows an acceptable fit to the data.

Test of the Structural Model

As Figure 1 shows, the hypothesized model in the present research tests whether thwarted autonomy, relatedness and competence predict PI, which in turn predicts psychological distress. Thwarted autonomy, relatedness and competence were allowed to correlate. Figure 2 presents R output of the analysis of the hypothesized model. Table 2 presents both significant and nonsignificant direct and indirect (mediated) relationships.

The model fit statistics provide information whether the model fits to the data. The test of the model fit with 5000 bootstrap revealed acceptable fit statistics, $\chi^2(217) = 472.58$, $p < 0.001$, $\chi^2/df = 2.17$, RMSEA = 0.07 (.06 - .08); CFI = 0.92; TLI = 0.91; SRMR = 0.06. The findings regarding the parameter estimates showed that thwarted autonomy ($\beta = .15$, $p > .05$), relatedness ($\beta = .04$, $p > .05$) and competence ($\beta = -.17$, $p > .05$) did not have significant direct relationship with psychological distress. Competence had a large ($\beta = .53$, $p < .001$) and relatedness ($\beta = .15$, $p < .05$) had a small direct relationships with PI while autonomy ($\beta = .13$, $p > .05$) was not significantly related with PI. PI had significant large direct relationship with psychological distress ($\beta = .66$, $p < .001$). Overall, these results showed that thwarted competence and relatedness have unique contributions to PI. Similarly, higher scores on PI predicted higher scores on psychological distress.

Table 2. Direct and indirect (mediating) relationships

Predictor	Mediator	Criterion	<i>b</i>	<i>se</i>	β	z
Autonomy →	--	Distress	0.13	0.09	0.15	1.543
Relatedness →	--	Distress	0.03	0.07	0.04	0.404
Competence →	--	Distress	-0.12	0.10	-0.17	-1.241
Autonomy →	--	Inflexibility	0.18	0.13	0.13	1.340
Relatedness →	--	Inflexibility	0.18*	0.09	0.15	1.994
Competence →	--	Inflexibility	0.59***	0.12	0.53	5.042
Inflexibility →	--	Distress	0.40***	0.09	0.66	4.335
Autonomy →	Inflexibility →	Distress	0.07	0.05	0.08	1.306
Relatedness →	Inflexibility →	Distress	0.07 ^a	0.04	0.10	1.890
Competence →	Inflexibility →	Distress	0.24**	0.07	0.35	3.364

Note. N= 223; ^a $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

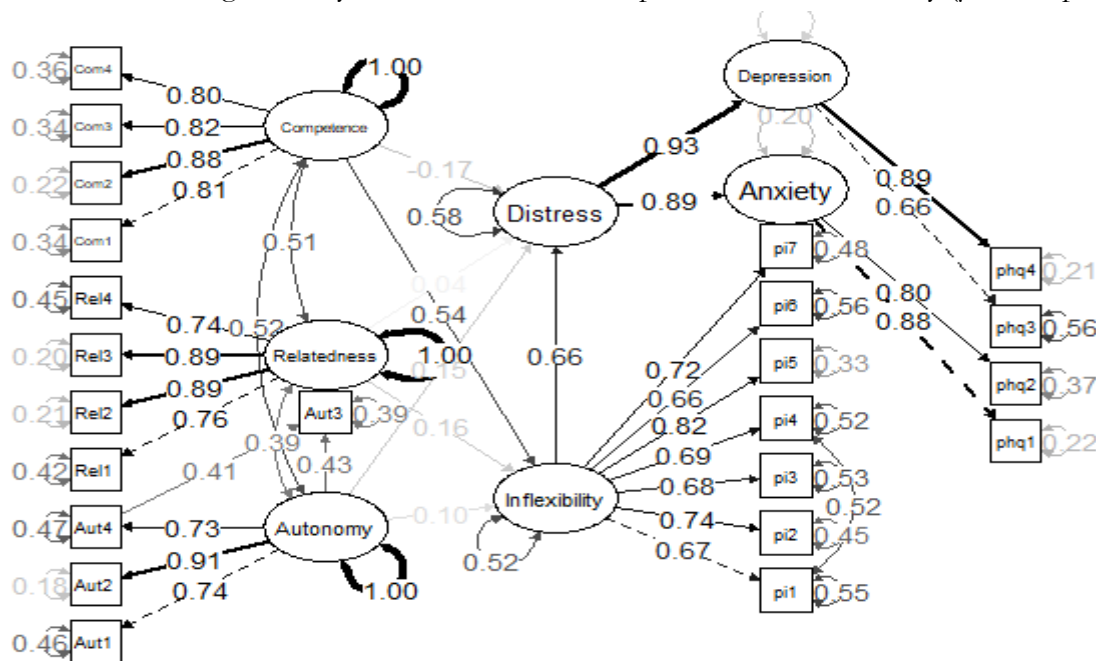
Distress = Anxiety and depression symptoms of PHQ-4 were used as the indicator of psychological distress.

Autonomy, competence and relatedness consist the 12 items of The BPNSFS – Frustration Scales.

Inflexibility represents psychological inflexibility.

The hypothesized model includes indirect paths as shown in Figure 2 from thwarted autonomy, competence and relatedness to psychological distress through PI. Table 2 presents detailed findings.

Indirect paths represent the mediating role of PI between the thwarted needs and psychological distress. The results indicated that PI was a significant mediator in the relationship of thwarted competence ($\beta = .35, p < .001$) and marginally significant mediator for relatedness ($\beta = .10, p = .051$) with psychological distress, but PI did not significantly mediate the relationship of thwarted autonomy ($\beta = .06, p > .05$). PI



mediating the relationship of thwarted competence with psychological distress had the largest mediation path coefficient.

Figure 2. The SEM results with standardized coefficients (standard errors) and residuals

DISCUSSION

Research in Western cultures established the link between need satisfaction and psychological distress, leaving little doubt about the benefit of need satisfaction for wellbeing (Deci & Ryan, 1985; Ryan & Deci, 2000a; Vansteenkiste & Ryan, 2013). However, the detriment of need frustration for mental health is a relatively less studied concept (Bartholomew et al., 2011) despite the growing supportive findings (Bartholomew et al., 2011; Chen et al., 2015; Vansteenkiste & Ryan, 2013). Theoretical papers emphasized the role of self-determination in well-being and mental health concerns (Ryan & Deci, 2017), particularly the role of autonomy (Beck et al., 2003; Deci & Ryan, 1985; Gaudreau et al., 2012; Kunst et al., 2019; Ryan & Deci, 2017). In the theoretical papers, the need for autonomy appears as the core structure as a starting point for self-determination (e.g., Deci & Ryan, 1985). To reiterate, consistent with research findings (Campbell et al., 2018) and theoretical premises (Ryan & Deci, 2017), thwarted autonomy, competence and relatedness were particularly hypothesized to predict anxiety and depression symptoms. While thwarted needs were moderately correlated with psychological distress, the present findings emphasized that thwarted needs were not significantly related to psychological distress controlling the influence of psychological inflexibility. In the present sample of university students, adding psychological inflexibility to the model, none of the thwarted needs had unique contributions to psychological distress – anxiety and depression symptoms. These findings do not claim that thwarted needs are not important

to anxiety and depression, but point to other processes that exacerbate mental health concerns like the mediating role of psychological inflexibility.

Several researchers pointed to the mediator role of PI in the relationship between risk factors and maladaptive behaviors (Kashdan et al., 2006; Kingston et al., 2010; Spinhoven et al., 2014). Similar to previous studies, psychological inflexibility was associated with psychological distress (Bond et al., 2011; Hayes, Follette, et al., 2004; Morris et al., 2015; O’Toole et al., 2017). The present findings further supported that PI mediated the relationship of thwarted competence and relatedness with psychological distress, but it did not mediate the relationship of thwarted autonomy with psychological distress. The strength of the relationship of need frustrations with psychological distress was strongest for the competence while the mediating role of relatedness was barely significant and autonomy was nonsignificant. These findings provide support that thwarted competence and relatedness contribute to inflexible and avoidant responses (Ryan et al., 2015), and this inflexibility is associated with symptoms of anxiety and depression. The nonsignificance of thwarted autonomy may be associated with the peculiar context of the pandemic and the context of Turkish culture.

The characteristics of Turkish culture may explain the seeming less importance of autonomy compared to competence and relatedness. Turkish culture is characterized with collectivistic tendencies (Kagitcibasi & Ataca, 2005) and encourages interdependence, in-group harmony and relational connection (Citlak et al., 2008; Kagitcibasi & Ataca, 2005; Sunar, 2002). Therefore, autonomy as a basic need may be less of importance compared to the significance of thwarted competence and relatedness. That is, university students as emerging adults might be okay with compromising their autonomy. The thwarted competence and relatedness might be more significant to cultural values. The basic universal needs may have similar benefits across cultures (Benita et al., 2020; Chen et al., 2015), but the present research thus proposes potential differing pathways from individual need frustration to mental health problems. Rouse et al. (2020) indeed pointed to the different profiles: Individuals with high autonomy frustration and low autonomy satisfaction reported the highest level of depression symptoms. While Rouse and colleagues point to the different profiles of need frustration vs. need satisfaction, the present findings also suggest different significance of thwarted needs according to the cultural context. In addition, the context of the study may also had an impact on the results. Participants who provided data were with their families due to the lock down of universities and dorms. Because their autonomy was inevitably compromised, their sense of competence and relatedness might have gained saliency.

Future Research Recommendations

The current research is conducted within a sample of Turkish university students. Future researchers may test the present findings in other cultures and age groups. The present research also points to potential cultural moderation of the findings, yet there is no way to test this assumption in the present study because the present study did not include any measurement of cultural characteristics. Future researchers may look deeper into how cultural constructs facilitate basic universal needs’ relationship with PI and psychological distress. In addition, present research was particularly interested in need frustration and psychological inflexibility – often called the dark side (Bartholomew et al., 2011; Kashdan & Rottenberg, 2010; Ryan & Deci, 2000b)– in predicting anxiety and depression symptoms and did not include the brighter side of them – need satisfaction and psychological flexibility. Future researchers may contrast dark and bright sides of ACT and SDT in predicting psychological distress and other mental health problems.

Potential Implications for Counselors

These findings have several important implications for counselors working with university students. University students go through several transitions and endure pressure of these transitions to adult life (Arnett, 2015). Within the context of these transitions, university students may experience frustrations in their autonomy, competence and relatedness, which may compromise their wellbeing. University counselors may help university students be more adaptive in responding to emotional experiences, using their mental resources, and taking perspectives against the situational demands of university life (Hayes, Follette, et al., 2004). In addition, given that previous researchers produced universal understanding of need frustration, it is important for counselors to consider their clients' cultural background. Instead of viewing the basic needs as a solidified construct across individuals in the development of psychological distress, counselors may consider the nuances of socio-cultural context and individual differences like psychological inflexibility in the function of need frustration. Counselors may work with clients to make sense of their cultural framework in that they can assess and deal with the functional and dysfunctional roles of psychological inflexibility in clients' mental health concerns and navigating self-determination. That is, counselors may help clients understand their repertoire of coping with life difficulties and their behaviors in seeking autonomy, competence and relatedness. Furthermore, research is scarce to inform variations in self-determination. Counselors may review the present findings as a starting point to help clients from similar cultural backgrounds.

Limitations

This research has several limitations worth noting. The present research included a sample of Turkish university students recruited by a convenience sampling procedure. Therefore, the results of this study should be cross-validated across different samples and populations in order to strengthen the external validity. Instrumentation might be another noteworthy limitation of this research. Participants completed the AAQ-2, which measured PI as a unified construct. However, the AAQ-2 received several criticisms in recent years (Cherry et al., 2021). Even though previous research pointed to the strength and good psychometric properties of the AAQ-2 (Bond et al., 2011), some researchers advise researchers to consider other instruments available in the field and assess PI in multiple dimensions (Cherry et al., 2021).

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Author Contribution

This study was conducted by all the author(s) working together and cooperatively. All of the author(s) substantially contributed to this work in each step of the study.

Conflict of Interest

It has been reported by the author that there is no conflict of interest.

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The study was approved by the Istanbul Medeniyet University Social and Human Sciences Research and Publication Ethics Committee at June 5, 2020. In addition, consent forms were obtained from all participants included in the study.

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