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Türk Psikolojik Danışma ve Rehberlik Derneği
Turkish Psychological Counseling and Guidance Association
Genel Merkez / Central Office

TÜRK PSİKOLOJİK DANIŞMA VE REHBERLİK DERGİSİ

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TABLE of CONTENT

June

İÇİNDEKİLER

Haziran

RESEARCH	Open Access

ARAŞTIRMA	Açık Erişim

Adaptation of Collective Resilience Scale to Turkish Culture and Examination of its Psychometric Properties

Kolektif Dayanıklılık Ölçeği'nin Türk Kültürüne Uyarlanarak Psikometrik Özelliklerinin İncelenmesi

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ABSTRACT

In this study, it was aimed to examine the psychometric properties of the Collective Resilience Scale by adapting it to Turkish culture. The sample of the study consisted of 602 participants between 18 and 66 years of age, 311 of them being females and 291 males. In consequence of the confirmatory factor analysis conducted to examine the factor structure of the scale, it was determined that the fit indices were within acceptable values. Reliability analysis results indicated an adequate confidence interval. In consequence of the research, it was determined that the Collective Resilience Scale is a valid and reliable measurement and data collection tool that can be used in academic and field studies. The findings were discussed within the framework of the literature and various suggestions were made.

ÖZET

Bu araştırmada Kolektif Dayanıklılık Ölçeği'nin Türk kültürüne uyarlanarak psikometrik özelliklerinin incelenmesi amaçlanmıştır. Çalışma grubu, yaşları 18-66 arasında değişen 311 kadın ve 291 erkek olmak üzere toplam 602 kişiden oluşmaktadır. Ölçeğin faktör yapısını incelemek için yapılan doğrulayıcı faktör analizi sonucunda uyum indekslerinin kabul edilebilir sınırlar içinde yer aldığı tespit edilmiştir. Güvenirlik analizi sonuçları yeterli güven aralığına işaret etmiştir. Yapılan araştırma sonucunda Kolektif Dayanıklılık Ölçeği'nin akademik ve saha çalışmalarında kullanılabilecek geçerli ve güvenilir bir ölçme ve veri toplama aracı olduğu belirlenmiştir. Bulgular alan yazın çerçevesinde tartışılmış ve çeşitli öneriler sunulmuştur.

INTRODUCTION

In this period when COVID-19 sets the agenda, it is emphasized that the arrangements made to combat the pandemic should comply with the understanding of collective resilience (Van Bavel et al., 2020; Elcheroth & Drury, 2020). The term collective resilience refers to the ability of a community to withstand the adversities in times of disaster and emergency and to use its resources to get rid of this situation. In other words, collective resilience is the ability that enables the community to recover after disasters (Norris et al., 2008). In this study, the reliability and validity studies of the "collective resilience" questionnaire of Communities Advancing Resilience Toolkit (CART) developed by Pfefferbaum et al. (2015) are conducted, by adapting into Turkish. Before moving on to the related study, how the concept of collective resilience has developed and CART as a measurement for the concept should be discussed.

Elcheroth and Drury (2020) conducted a comprehensive field survey and devised 10 "policy principles" to combat the pandemic by focusing on the phenomenon of collective resilience. The sixth of these principles is wisely formulated as "avoid perpetuating the myth of 'collective panic'" (p.707). Because, collective resilience is essentially a concept developed against the renowned panic understanding (Drury et al., 2009). The understanding of collective panic begins with the axiom that people may show certain vulnerabilities when they become masses and emphasizes the risks these vulnerabilities pose for people themselves. Accordingly, in disasters and emergencies, people tend to give pathological, irrational, and incompatible reactions. The massive nature of these responses is collective panic (Dynes, 2003).

Essentially, this perspective is based on widely known early crowd psychology analyzes. Of these, Le Bon suggested that the masses are cognitively weaker but emotively stronger when compared to the individual (Le Bon, 1895), and Smelser (1962), one of the theorists who defended the understanding of panic, derived the prediction that mass reactions in disasters and emergencies would be disproportionate to the extent of the danger. Although Le Bon says that simple ideas and emotions tend to spread rapidly among the masses (the process of contagion), which ensures the "mental unity" of the masses, researchers who developed the understanding of panic accepted Freud's (1921) thesis that social unity and bonds in the masses disappear quickly and they also said that, in disasters and emergencies, the "instinct" for individual survival suppresses other social responses (eg, Strauss, 1944). The result is disorganized and competitive behavior, and the mass panic thesis has reached its final form, which is that people prioritize ensuring their own safety, even if at the cost of other people's (see Schultz, 1964). This understanding is still valid in social policymaking, stereotypes and popular representations (Dynes, 2003; Tierney et al., 2006).

Contrary to the collective panic understanding, the understanding of resilience emphasizes self-help, the use of common resources, and the ability of survivors to recover and continue to work despite adversities (Dynes, 2003; Wessely, 2005). The concept of collective resilience has been effectively used to explain the observations on developments following the September 11 attacks. Contrary to what this terrorist act had intended, after the attacks, social organizations in New York City continued to endure (Kendra & Wachtendorf, 2001). Likewise, Tierney (2002) pointed out that civil society networks have begun to work by themselves and improvised effective solidarity with emergency teams, explaining this as an outcome of collective resilience.

The first opposition to collective panic as an inevitable consequence is the Emergent Norm Theory (Turner & Killian, 1957). According to theory, collective behavior is a function of norms. Since disasters and emergencies are extraordinary events, daily contact norms do not apply here, new norms need to be

developed, and new norms emerge in the process of interpersonal interaction. Possible interaction processes in disaster and emergencies are the gathering of people (milling), development of rumors during gathering and the voicing of one of these rumors loudly (keynoting). These processes continue until a common definition of the situation is developed (Sherif, 1936). Yet, panic only arises from a definition of the common situation. When there is a perception that the norms of cooperation are the invalid and selfish pursuit of personal interests is legitimate, it means panic may step in. Emergent Norm Theory seems to be an important development compared to the understanding of mass panic based on the concept of instinct. However, it fails to explain several behaviors observed in many dangerous situations such as queuing up, men helping women more, and the attempt to help elderly and disabled people more. Johnson (1988) made an important contribution and argued that there is a simple continuity between normal and dangerous situations to overcome these restrictions. According to Johnson, both situations are structured by pre-existing norms and roles. Individual panic reactions are limited while ensuring sociality in dangerous situations in this way. This analysis is consistent with Sime's (1983) observation that in situations with risk of death, people prefer to stay with their loved ones rather than escape from them. Mawson (2005) considered the issue from the perspective of attachment theory and opposed the understanding of mass panic with two important observations; first, people are motivated to look for acquaintances rather than run away in danger, and second, the presence of other familiar people in the environment has a calming effect on people. Thus, he pointed out that the presence of other familiar people in disasters and emergencies works counter to the "fight or flight" response. Ripley (2005), on the other hand, observed that mutual aid, and even self-sacrifice, is common in groups with complete strangers in emergencies. In conclusion, mass panic is a rare phenomenon, although it is not deemed to be fiction altogether, and therefore it is the exception. Resilience is the norm in disasters and emergencies (Dynes, 2003; Sime, 1990).

The most comprehensive effort to explain collective resilience has been shown within the framework of Self-Categorization Theory (Drury, 2012; Drury et al., 2009). The Self-Categorization Theory states that feeling part of a group, an audience, an organization, or a nation and acting accordingly is the result of the process of self-categorizing (Turner et al., 1987). This categorization may differ on a line that is individual identity at one end and shared collective identity at the other. While personal identity categorization highlights unique features that differentiate a person from other people, collective identity categorization highlights similar characteristics that include the person into the same class with other people. The most important factor that determines whether categorization is individual or collective is context. The categorization of collective identity increases the individual's perception of similarity with other people and the sense of association with them. There are also emotional processes parallel to this perceptual process. The transformation from "I" to "we" brings along increased group loyalty and engagement. Because the group is no longer felt like the "other" but as the self (Drury & Reicher, 1999). It has long been known that the perception of "common fate" is a sufficient reason for group formation (Campbell, 1958). Therefore, in disasters and emergencies, an external threat perception (common fate) that affects everyone in the environment indiscriminately turns a group of different individuals into a unified psychological mass (Reicher, 1996). This brings with it a series of solidarity responses, namely collective resilience.

Although current theorizing shows collective resilience as an automatic result of social interaction, it can be thought that the quantity of it differs with regard to communities. Indeed, many tools have been developed to detect and increase the resilience levels of different populations (see Chandra et al., 2010

for a review of the literature). CART is one of them (Pfefferbaum et al., 2013; Pfefferbaum et al., 2016). The authors define CART as a public theory-based and evidence-based collective intervention. It was designed to bring partners together to develop community resilience and address common issues in a process that includes the phases of assessment, feedback, planning, and action. The package originally includes a community resilience questionnaire that was tested for reliability and validity, as well as other assessment and analytical tools.

CART primarily recognizes that there are four interrelated areas that contribute to community resilience: connection and caring, resources, transformative potential, and disaster management (Pfefferbaum et al, 2013). Afterward, information and communication were added to these four areas (Pfefferbaum et al., 2015). As a tool with a strong application aspect, CART defines resilience as "an attribute (eg, ability or capacity), a process, and/or an outcome associated with successful adaptation to, and recovery from, adversity" (Pfefferbaum et al., 2013, p.251). The term community resilience is not used to mean a group of resilient individuals. Community resilience refers to the ability of members to take conscious, targeted, and collective action to ameliorate the destructive effects of adverse events (Pfefferbaum et al., 2007; Pfefferbaum et al., 2008). Moreover, as with individual resilience, community resilience consists of beliefs, attitudes, and behaviors. This refers to the ability to generate resilience-enhancing resources and to learn and apply skills (Pfefferbaum et al., 2013). Therefore, resilience corresponds to a dynamic process that is desired to be maintained over time (Pfefferbaum et al., 2007; Pfefferbaum et al., 2008).

CART points out that collective resilience encompasses five intersecting areas: connection and caring, resources, transformative potential, disaster management, and information and communication (Pfefferbaum et al., 2015). The area of "connection and caring" includes relatedness, shared values, support systems, and equity. The perception that being a member of the community increases personal well-being strengthens the sense of belonging and loyalty to the community. Participation in social organizations and activities are also factors that strengthen identity along with a sense of belonging and ownership. Communities that facilitate and actively encourage the participation of their members, through the resulting cooperation and civic engagement, can better penetrate the problems, understand the needs of their members at different socio-economic levels, and instill more hope for the future in times of depression, both individually and collectively. The "resources" area includes natural, physical, informational, humanitarian, social, and financial resources. Resilient communities acquire, invest, distribute and use resources effectively. A community should have adequately diverse and allocated resources to enable basic operations even in the event of major disruptions. Social structures, roles, and responsibilities may involve the capacity to prepare for crises and react clearly in a timely manner. Even in potentially dangerous and uncertain environments, organizations must have the flexibility to respond to vulnerabilities and threats that are very difficult to predict. The field of 'transformative potential' is about identifying collective experience, examining successes and failures, evaluating performances, and making a critical analysis based on all of these. The results obtained here help the executive staff to set goals, make decisions and develop strategies. At individual, family, organization, and system levels, the critical analysis process is combined with skill-development studies, and power and devices are developed to provide the necessary transformation. The field of "disaster management" includes prevention, mitigation, readiness, disaster response, and recovery processes. "Prevention" includes all activities related to avoiding or controlling a crisis, diminishing risks concerning people and property, and reducing catastrophic effects. If completed before, on time, or after the incident, "mitigation" refers to the likelihood of occurrence of the hazard, exposure to the hazard, and finally, alleviating the loss caused by

the hazard, respectively. "Readiness" is an everlasting process aimed at identifying threats, determining weaknesses and resource needs, planning the appropriate actions, and gathering the necessary resources as much as possible. "Disaster response" refers to efforts to limit damage during or immediately after a disaster, that is, to combat the direct and short-term effects of the hazard, in order to meet basic human needs and protect and empower affected people. This is followed by a longer period of "recovery" and reconstruction, in which survivors rebuild both their own lives and their communities' (Pfefferbaum et al., 2013). Another area that reveals itself in the intersection of these areas is "communication". Communication strengthens connection and caring, it is one of the most important community resources, it enables the transmission of critical analysis, and finally, disaster management is impossible without communication (Pfefferbaum et al., 2015).

The questionnaire used in the CART toolkit was developed to determine the perceptions of partners regarding these five areas. In addition to perform a collective resilience measurement, the scale aims to identify areas of perceived strengths and weaknesses by measuring related areas and sub-areas. The design of the questionnaire is suitable for adding and removing items according to the characteristics of the relevant community. The method of applying the survey is also very flexible. It can be administered in person, on phone, or via the internet and e-mail. The translation and the reliability-validity study processes are given in detail next.

METHOD

Study Group

A total of 602 adults participated in the study, 311 of them being women (51.7%) and 291 men (48.3%). The mean age of the study group was 34.6 (range 18-66). In terms of marital status, 41.5% were married, 56.6% single, and 1.8 % divorced. Of those, 49.8% were university students or graduates, 9% were post graduates, 25.1% were high school graduates, 16.1% were others who leave school earlier.

Ethical Statement

The authors declare that they continue to work in accordance with scientific study ethics and the Helenski declaration in this study. Accordingly, the research was reviewed by the Human Research Ethics Committee of KTO Karatay University and was given permission (REF: 46409256-300). In addition, the participants participated in the study on a voluntary basis.

Measures

A pre-prepared questionnaire was used in the research. The survey consists of two parts. The first part includes demographic and socio-economic questions. These are the participant's gender, age, marital status, educational status and occupation. In the second part, there is a Collective Resilience Scale (CRS) consisting of 23 questions adapted from CART community resilience (Table 1.) On the scale, 5 items were used to measure each of connection and caring, resources, and transformative potential areas, and 4 items to measure each of disaster management and information and communication areas. Essentially, Pfefferbaum et al. used a 24-item questionnaire in their related publications (Pfefferbaum et al, 2015). In the first stage of the adaptation process, the translation-retranslation method was applied in order to ensure the linguistic equivalence of the scale. The scale, which was translated into Turkish by two domain experts who have command of both English and Turkish, independently from each other, was reduced to a single form and then translated back into English by the retranslation method, and incompatibilities

were corrected. After the linguistic equivalence was achieved, a pilot study was carried out in order to examine the item compatibilities. According to the results of the pilot study, an item was removed from the scale because it did not have sufficient factor loading. The term "community" was converted into "Turkey" in the scale. Apart from this, in Item 6 the expression "youth" was preferred instead of "families" and in Item 8, the expression "state institutions" was preferred instead of "leaders". Answers were taken on a 5-point Likert-type scale ranging from "1" (I totally disagree) to "5" (I totally agree). The survey form was structured on Google Forms and shared in different social media groups. As the implementation progressed, filters aimed at providing adequate gender and age differentiation were put in place and the research was stopped when the sample reached a sufficient number for analyses.

Data Analysis and Processing

During the adaptation process of the scale, it was determined in CFA analyzes that the data of 15 participants had extreme values, so they were decided to be excluded from the data set. After the items were extracted, skewness and kurtosis values and Mahalanobis and Cook's distance values were examined and it was determined that the data set was suitable for the analyses. SPSS 21 and Lisrel 8.8 package programs were used in the analysis process. CFI, NFI, GFI, RMR, SRMR, RMSEA, and χ 2, which are frequently used fit indices, were preferred to determine the model fit in CFA. In this regard, it was accepted that for acceptable fit in CFI were fit indices ≥.90, for the perfect fit ≥ .95, for acceptable fit in GFI ≥ .85, for the perfect fit ≥ .90, and for acceptable fit in RMR, RMSEA, and SRMR, ≤ .08 and for the perfect fit, ≤. 50 as the necessary criteria (Schumacher and Lomax, 2004).

RESULTS

Confirmatory factor analysis was run for the construct validity of CRS. Afterward, correlation analysis was used to see the relationship between collective resilience and age, gender, and education level.

CRS Fields, Substances and Distribution Measurements

Table 1 shows the areas, items, means, and standard deviations of the CRS. At the item level, while Item 17, "There are effective communication resources to reach people in Turkey (television, radio, newspapers, internet, telephone, etc.), had the highest mean (X= 4.22), Item 5, "The people in Turkey are fair to others, whatever their pasts are", under the area of Connection and Caring had the lowest mean (X=2.78). At the dimension level, the highest mean was of Disaster Management area (X=3.82). This value is significantly higher than all other area means (Between Information and Communication and Disaster Management which had the next highest mean: t (601) = 16.902, p <.0001). Although the differences between the means of other areas were statistically significant, they were not large enough to develop a discussion.

Table 1. Collective Resilience Scale: Areas, items, means, and standard deviations

	Mean (S)
Connection and Caring	3.30 (0.82)
1. People in Turkey feel like they belong to Turkey.	3.97 (1.00)
2. People in Turkey are committed to the well-being of their country.	2.94 (1.16)
3. People in Turkey have hope for the future.	3.01 (1.22)
4. People in Turkey help each other.	3.78 (1.00)
5. People in Turkey treat each other fairly, no matter what their background is.	2.78 (1.15)
Resources	3.29 (0.97)
6. Turkey supports the studies conducted for the benefit of children and young people.	3.31 (1.24)
7. Turkey has the resources necessary to solve social problems (money, information, technology, etc.)	3.09 (1.22)
8. In Turkey, government agencies are working effectively.	3.12 (1.22)
9. People can receive the services they need in Turkey.	3.30 (1.13)
10. In Turkey, the institutions to be applied to concerning people's problems are evident.	3.62 (1.13)
Transformative Potential	3.33 (0.95)
11. Turkey cooperates with other countries if necessary.	3.83 (1.00)
12. People in Turkey work together for the development of the country.	3.21 (1.10)
13. Turkey learns from her past, considering both her successes and failures.	2.97 (1.26)
14. Turkey, as a country, develops skills and finds resources to achieve its goals and solve its problems.	3.18 (1.19)
15. Turkey has priorities and objectives aimed at the future.	3.45 (1.23)
Disaster Management	3.82 (0.96)
16. Turkey is always ready to prevent disasters and social crises.	3.35 (1.27)
17. There are effective communication resources to reach people in Turkey (television, radio, newspapers, internet, telephone, etc.)	4.22 (1.01)
18. Turkey can provide emergency services in times of disaster.	3.95 (1.10)
19. Turkey has services and programs to help people after a disaster or social crisis.	3.78 (1.15)
Information and Communication	3.38 (1.02)
20. If there are disasters or social crises, information is given about what people should do in Turkey.	3.75 (1.15)
21. People in Turkey rely on public officials.	3.10 (1.18)
22. In Turkey, the state informs its citizens on important issues.	3.62 (1.21)
23. The information given by authorities in Turkey is generally accurate and fair.	3.03 (1.25)
Community Resilience	**3.42 (0.83)**

Validity Studies

Structure Validity

First-level confirmatory factor analysis was conducted to examine the model fit of CRS in Turkish culture. Modifications were made between the error scores of the 18th and 19th items, which did not have sufficient fit indices and are in the same sub-dimension. As a result, it was determined that the scale had a sufficient level of compliance. The results of the CFA analysis are presented in Figure 1.
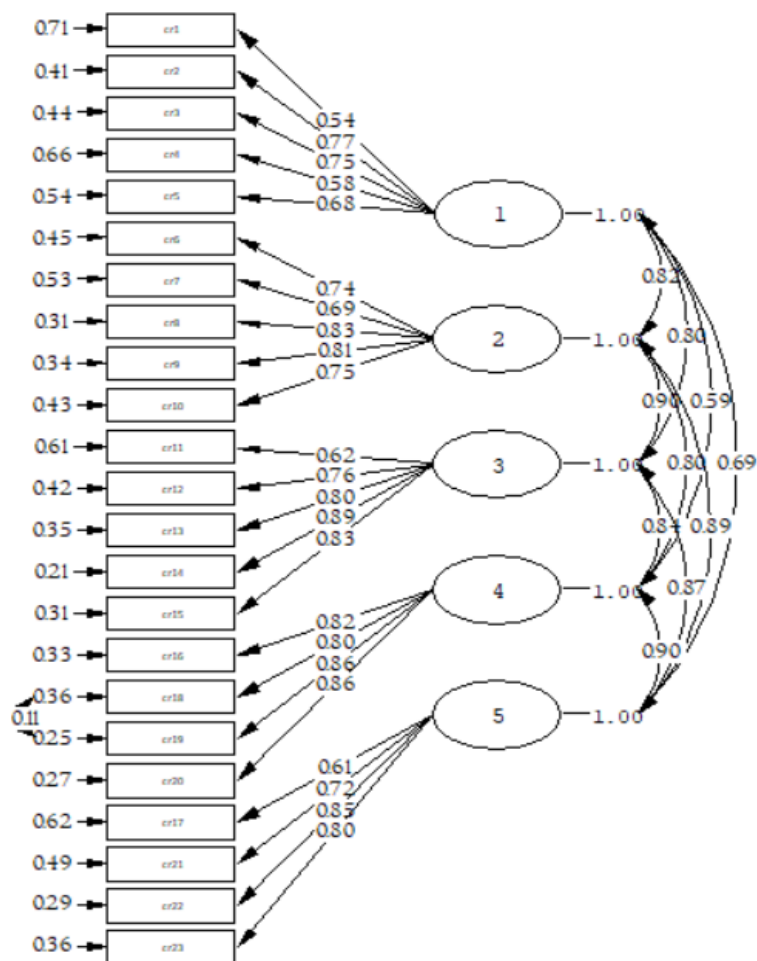
Figure 1. Path Diagram, 1= Connection and Caring, 2= Resources, 3= Transformative Potential, 4= Disaster Management, 5= Information and Communication

The path diagram of the First Level CFA in Figure 1 shows that factor loadings of the items in the five-factor structure vary .54 and. 89. These values are deemed sufficient, considering the suggestions that the factor loadings of each item should be at least.30 and above (Seçer, 2015, Kline, 2015). The model fit index values for the five-factor structure are presented in Table 2.

Table 2. Model fit indices regarding the five-factor structure

Model	X / df	RMSEA	RMR	NFI	CFI	GFI	AGFI
Five-Factor Structure	4.47	.076	.057	.98	.95	.88	.84

The CFA fit index values given in Table 2 reveals that the model fit indices related to the five-factor structure were sufficient and the model fit of the scale was confirmed; that is, it can be said that the construct validity of the scale is provided.

The correlation values between the sub-dimensions of CRS are given in Table 3.

Table 3. Pearson-r correlations between CRS areas

	1	2	3	4	5
Connection and caring	1.000				
Resources	.704**	1.000			
Transformative potential	.686**	.815**	1.000		
Disaster management	.501**	.701**	.757**	1.000	
Information and Communication	.572**	.774**	.770**	.784**	1.000

**p <.0001

Table 3 shows that there are moderate and high-level correlations between the domains of CRS. While the weakest relationship is observed between Connection and Caring and Disaster Management, the strongest relationship is observed between Resources and Transformative Potential.

Reliability Analysis

In order to examine the internal reliability of the scale, Cronbach's alpha value was calculated and split-half reliability methods were used. The findings obtained from the reliability analyses revealed that total scale internal consistency value was .95 and split-half reliability value was .90. While the internal consistency coefficients for the sub-dimensions were respectively 79, .87, .88, .90 and.82, the split-half reliability values for the sub-dimensions were 70, .81, .88, .91 and 81 respectively. Fraenkel et al. (2012) claim that reliability values for scale development and adaptation processes should at least be .70 and above. Therefore, it can be said that the scale has sufficient values in terms of reliability.

The Relationships Between CRS Fields and Gender, Age and Educational Status

The relationships between CRS fields and gender, age, and educational status are shown in Table 4.

Table 4. Correlations between CRS fields and gender, age, educational status

	Gender	Age	Education
Connection and caring	.039	**.196	**-.122
Resources	-.042	*.103	*-.102
Transformative potential	-.018	*.082	**-.142
Disaster management	-.022	.034	**-.140
Information and Communication	-.051	-.002	**-.135
CRS	-.024	.073	**-.146

*p< .05,**p<.significant at 01 level

None of the fields of CRS had a significant relationship with gender. While the areas of connection and caring, resources, and transformative potential showed positive and significant relationships with age, education showed negative and significant relationships with all the fields of CRS. However, relationships were weak. When the CRS is considered holistically, since gender did not have a significant relationship with any of the fields of CRS, it did not have with total CRS either. A similar situation also applies to age. Educational status, which had weak but significant relationships with all the fields of CRS, also showed a weak and negative relationship with the total CRS.

DISCUSSION, CONCLUSION & SUGGESTIONS

With the increasing interest in collective resilience studies, the main purpose of this research is to contribute to the expansion of the existing literature by adapting the Collective Resilience Scale to Turkish culture.

CFA, as in the original (Pfefferbaum et al., 2015), confirmed the CRS structure consisting of five areas. These are "Connection and Caring", "Resources", "Transformative Potential", "Disaster Management" and "Information and Communication", respectively. It can be said that the item factor loadings of each item in the scale ranging between .54 and .89 meet the recommended criteria (Tabachnick & Fidel, 2013) in terms of the compatibility of the scale items. Within the scope of reliability studies, Cronbachs' alpha and split-half test reliability scores were analyzed. It is seen that the obtained results are sufficient (Büyüköztürk, 2012, Fraenkel et al., 2012) and the scale meets the required standards.

Connection and Caring is primarily a field that determines individuals' level of belonging to and identification with Turkey. In the sample of the study, a very strong attitude was observed when commitment and caring were considered from this point of view (Item 1, X=3.97). Moreover, belief regarding solidarity in civil society also supported this attitude (Item 4, X=3.78). However, the belief regarding people helping each other does not reveal itself in the attitude presented in Item 2 (X=2.94). One reason may be that Item 2 expresses a rather exaggerated judgment. Instead, more unpretentious expressions like "People in Turkey are committed to the well-being of their country" can partially resolve contradictions in between. However, it does not seem right to attribute this situation entirely to the structure of the sentence, since Item 5 on the perception of equality and fairness was the item with the lowest value in the entire scale (X=2.78). Finally, the fact that Item 3 on prudential hope was below the area mean supports this last discussion (X=3.01).

The sphere of resources, in essence, includes everything from the natural to the material, spiritual to human. However, it would normally be detrimental to the practicality of the study to explore the attitudes inclusive of this whole area with a very wide spectrum. Therefore, it is contented with researching the attitudes towards the resources that all countries put forward in general. For example, Item 6 questions the perception of policies towards children and young people, who are the future of societies. Generally, the means of the items in this area were close to the sub-scale mean and also above the total mean (Resources, X=3:29). However, this level can be said to be insufficient compared to Western studies (for an example, see Pfefferbaum et al., 2016). There is an impression that the development level of the country is an important determinant of this perception. Item 7, which measures the perception that the country has the necessary resources to solve problems, and Item 8, which questions the effectiveness of state institutions have the lowest within-domain means (means 3.09 and 3.12, respectively).

One of the critical issues in the field of transformative potential is evaluations regarding past experiences. Item 13 aimed at measuring this evaluation was the weakest among all the other within-domain items (X=2.97). On the other hand, Item 11 increased the area mean most, which measures the perception regarding Turkey's co-operation studies with other countries (X=3.83). In short, although Turkey is not able to solve her problems yet, she is perceived as a country that can implement the mechanisms to compensate for this.

Disaster Management is the area with the highest evaluation compared to other fields (X=3.82). In particular, Item 18, which measures perception about disaster response, and Item 19, which measures perception about the recovery process had very high means (3.95 and 3.78, respectively). However, Item 16, which measures the perception of taking measures, mitigating the impact of possible disasters, and preparedness for such disasters, was relatively weaker (X=3.35). Item 17, under the area of communication, was the highest rated item in the scale (X=4.22). On the other hand, Item 20, under the area of Information and Communication but can also be considered under the area of Disaster

Management, had one of the highest means (X=3.75). In the first item, the adequacy of communication tools is questioned, while in the second, it is questioned whether people are informed by using these tools. No perception of a problem is observed concerning these two important areas. The high mean in Item 22, which measures the perception of the state's informing its citizens on important issues in general, also strengthens this judgment (X=3.62). However, the relatively low means of the other two items questioning the relationships between managers and people in Information and Communication remains one of the problematic areas with a political extension (Means 3.10 for Item 21, 3.03 for Item 23).

The purpose of this study is confined to the adaptation of CRS into Turkish. Collective resilience refers to the level of responsiveness of individuals when negative events occur and their ability to take conscious, targeted, and collective action. Therefore, taking measures to increase this level against natural and humanitarian disasters whose effects can be felt globally today is vital for the future of societies. Determining this level with CRS is only one of the primary steps to be taken. After that, firstly, the prevalence of CRS levels should be studied with a representative sample throughout the country and regionally, and the factors that increase/decrease it should be determined.

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Appendices

Appendix I. Collective Resilience Scale Turkish Form

Aşağıda bir seri ifade bulacaksınız. Lütfen sizin düşüncenizi en iyi temsil eden ifadeyi, sağında yer alan derecelemeye göre işaretleyiniz. Örneğin birinci ifadeye tamamen katılıyorsanız maddenin sağında 5'i daire içine alınız. Toplam 24 madde bulunmaktadır. Her Zaman 5'i, Sık Sık 4'ü, Ara sıra 3'ü, Nadiren 2'yi, Hiçbir Zaman 1'i temsil etmektedir. Lütfen her ifadeye tek bir yanıt veriniz ve boş bırakmayınız. Katkılarınızdan dolayı teşekkür ederiz.	Hiç katılmıyorum	Katılmıyorum	Ne katılıyorum ne de katılmıyorum	Katılıyorum	Tamamen katılıyorum
1.Türkiye'deki insanlar kendilerini Türkiye'ye ait hisseder.	1	2	3	4	5
2.Türkiye'deki insanlar kendilerini ülkenin refahına adamış durumdadır.	1	2	3	4	5
3.Türkiye'deki insanların geleceğe yönelik umutları vardır.	1	2	3	4	5
4.Türkiye'de insanlar birbirine yardım eder.	1	2	3	4	5
5.Türkiye'deki insanlar geçmişleri ne olursa olsun başkalarına karşı adildir.	1	2	3	4	5
6.Türkiye, çocuklar ve gençlerin yararına olan çalışmalara destek verir.	1	2	3	4	5
7.Türkiye, toplum sorunlarını çözmeye gereken kaynaklara sahiptir (para, bilgi, teknoloji, vb.)	1	2	3	4	5
8.Türkiye'de devlet kurumları etkin bir şekilde çalışmaktadır.	1	2	3	4	5
9.Türkiye'de insanlar ihtiyaç duydukları hizmetleri alabilir.	1	2	3	4	5
10.Türkiye'de insanların sorunlarıyla ilgili hangi kurumlara başvuracağı bellidir.	1	2	3	4	5
11.Türkiye, gerektiğinde diğer ülkelerle işbirliği yapar.	1	2	3	4	5
12.Türkiye'deki insanlar ülkenin kalkınması için birlikte çalışır.	1	2	3	4	5
13.Türkiye hem başarılarına hem de başarısızlıklarına bakarak tarihten ders çıkarır.	1	2	3	4	5
14.Türkiye, bir ülke olarak, sorunlarını çözüp hedeflerine ulaşmak için beceriler geliştirir ve kaynaklar bulur.	1	2	3	4	5
15.Türkiye'nin geleceğe yönelik öncelikleri ve hedefleri vardır.	1	2	3	4	5
16.Türkiye, afet ve toplumsal krizleri önlemeye her zaman hazırdır.	1	2	3	4	5
17.Türkiye'de insanlara ulaşmak için etkin iletişim kaynakları vardır (Televizyon, radyo, gazete, internet, telefon, vb.)	1	2	3	4	5
18.Türkiye, afet zamanlarında acil durum hizmetlerini sağlayabilir.	1	2	3	4	5
19.Türkiye'nin bir afet ya da toplumsal krizden sonra insanlara yardım edecek hizmetleri ve programları var.	1	2	3	4	5
20.Afet ya da toplumsal buhran olursa, Türkiye'de insanlara ne yapması gerektiğiyle ilgili bilgi verilir.	1	2	3	4	5
21.Türkiye'deki insanlar kamu görevlilerine güvenir.	1	2	3	4	5
22.Türkiye'de devlet, önemli konularda vatandaşlarını bilgilendirir.	1	2	3	4	5
23.Türkiye'de yetkililerin verdiği bilgiler genellikle doğru ve adildir.	1	2	3	4	5

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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 in accordance with the Helsinki Declaration. In line with this, the study was permitted by KTO Karatay University, Human Research Ethics Committee.
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Exploring the Effects of Social Skills Psycho-Education Program Developed for Gifted Middle School Students on Students' Social Skills

Üstün Yetenekli Ortaokul Öğrencileri İçin Geliştirilen Sosyal Beceri Psiko-Eğitim Programının Etkililiğinin İncelenmesi

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ABSTRACT

In this study, it is aimed to prepare a social skill program that can be used for gifted middle school students. In this context, this study is an experimental study conducted with 24 gifted middle school students (12 students experimental group, 12 students control group) studying at Burdur Science and Arts Center (SAC). In the study, the social skill scale developed for gifted secondary school students was used. Mann Whitney U test and Wilcoxon Signed Ranks Test, which are non-parametric tests, were used to test the effectiveness of the experimental study. As a result of the psycho-education program developed to increase the social skills of gifted middle school students was implemented for 10 weeks. After the pre-test, post-test and follow-up measurements, it has been shown that it is an effective program for increasing the social skills of gifted middle school students.

ÖZET

Bu çalışmada üstün yetenekli ortaokul öğrencilerinde kullanılabilecek sosyal beceri psiko-eğitim programının hazırlanması ve öğrencilerin sosyal becerileri üzerinde etkisinin incelenmesi amaçlanmıştır. Bu çalışma Burdur Bilim Sanat Merkezinde eğitim gören üstün yetenekli 24 (12 öğrenci deney, 12 öğrenci kontrol grubu) ortaokul öğrencisi ile yürütülen bir deneysel çalışmadır. Çalışmanın veri toplama aşamasında üstün yetenekli ortaokul öğrencileri için geliştirilen sosyal beceri ölçeği kullanılmıştır. Deneysel çalışmanın etkililiğini test etmede parametrik olmayan testlerden Mann Whitney U testi ve Wilcoxon İşaretli Sıralar Testi kullanılmıştır. Çalışmanın bulguları incelendiğinde üstün yetenekli ortaokul öğrencilerinin sosyal becerilerini artırmak için geliştirilen psiko-eğitim programı 10 hafta uygulanmış, öntest, sontest ve izleme ölçümleri sonrasında yapılan analizlerle geliştirilen psiko-eğitim programının üstün yetenekli ortaokul öğrencilerinin sosyal becerilerini artırmada etkili olduğu ortaya koyulmuştur.

Ethical Statement: Ethics committee approval was obtained from the non-interventional clinical research ethics committee to conduct the study (13.05.2020-2020/131).

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

INTRODUCTION

When it comes to special abilities, concepts such as intelligence and talent come to mind. These concepts are defined in different ways in different disciplines. While intelligence refers to the ability to reason according to psychologists, it is defined as the ability to adapt to the environment according to biologists, and it means the ability to learn according to educators (Yıldırım, 2003). While intelligence is defined differently, it is noteworthy that there are theorists addressing intelligence in different dimensions. According to Gardner (1993), the most important theorist who regards intelligence as multi-dimensional, intelligence is the capacity of the individual to produce a product that has value in one or more cultures or fields, the ability to produce effective and efficient solutions for the problems that the individual may encounter in real life and the discovery of new or complex problems that needs to solve.

Meaning the ability to do anything, the word "ability" is a broad and inclusive word in Turkish that does not imply a specific field (Bilgiç et al., 2013). This broad and inclusive word can manifest itself with the emergence of an ability that is expected to be in the individual in different ways, either superior or special. There are many definitions for the concepts of "gifted", "talented" and "skilled", which are revealed by various indicators by various diagnostic methods. These definitions can be grouped into two different categories, traditional and contemporary. The traditional definition is based on only one criterion, intelligence. A high intelligence score indicates giftedness in this definition. The contemporary definition includes more criteria. This contemporary definition is also adopted in Turkey. In the Ministry of Education's special education services regulation (2018), "gifted individual" is defined as an individual who learns faster than their peers, is ahead in the capacity for creativity, arts and leadership, has special academic ability, understands abstract ideas, likes to act independently in their interest areas, and shows a high-level performance.

Although it is thought that there are many definitions of gifted student and there are differences in these definitions, one of the most important definitions is the definition made by Gagne (2005). Gagne (2005) defines giftedness as a relatively higher capacity in at least one area of talent. In addition, Gagne (2005) states that giftedness is related to brain functioning and that it is based on certain areas of abilities and qualifications. Clark (2002) defines giftedness as the superior development and functioning of various brain parts and emphasizes that these functions can occur in the field of cognition, creativity, leadership, or the arts.

The students with gifts and talents perform - or have the capability to perform - at higher levels compared to others of the same age, experience, and environment in one or more domains. They require modification(s) to their educational experience(s) to learn and realize their potential. Student with gifts and talents (NAGC, 2021):

- Come from all racial, ethnic, and cultural populations, as well as all economic strata.
- Require sufficient access to appropriate learning opportunities to realize their potential.
- Can have learning and processing disorders that require specialized intervention and accommodation.
- Need support and guidance to develop socially and emotionally as well as in their areas of talent.
- Require varied services based on their changing needs.

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

Schools are institutions where students showing normal development, developmental retardation, and gifts all get education together. Effectively supporting and guiding the development of these students who show different development characteristics in these institutions is one of the most important goals. There are a number of regulations used by schools to achieve this goal. The most important of these regulations is the "Ministry of National Education Guidance Services Regulation".

According to the Ministry of National Education Guidance Services Regulation (2017), the main goal of guidance services (Article 4) is to train individuals who can recognize themselves, evaluate the educational and professional opportunities offered to them, and take responsibility, and to enable individuals to realize themselves by maintaining their lives as a healthy individual in society. The principles of guidance services (Article 5) are a) respect for the individual and individual differences, b) scientificness, c) confidentiality, d) preventive and protective approach with a developmental approach, e) taking needs into consideration with individual, institutional and social characteristics, f) paying attention to individuals' age, developmental characteristics and education levels with a lifelong guidance approach, g) observing professional and ethical values, and g) cooperation and coordination of the relevant parties. Found in these goals, the concept of a healthy individual refers to the individual who is healthy in their communication with others and in getting to know themselves. Furthermore, based on the developmental characteristics emphasized in the principles, the regulation is corned with both social skills and developmental characteristics.

According to the Guidance Services Program Development Booklet (2018) of the General Directorate of Special Education and Guidance Services, guidance in education institutions is addressed in three categories as preventive and developmental services, remedial services, and support services. Based on these categories, it is an indisputable fact that the works on knowing the individual and providing information have an important place. It is clear in the regulation and the program that that one of the points emphasized in the goal, principles and the guidance categories allocated in the program is about students knowing themselves and students developing good relationships with others, that is, improving their social skills. Developing social skills and good relationships is of great importance especially for gifted students. This makes it necessary to develop different programs taking the cognitive, social-affective and personal characteristics of gifted individuals into account and to implement different activities for these programs.

Social life entails individuals adaption to the situation, environment, and conditions they are in and forming healthy relationships with others. One of the basic skills that can improve and reveal individuals' adaptation is social skills. Social skills can be defined as socially acceptable and learned behaviors (Yüksel, 1999) enabling communication with others, as well as behaviors enabling individuals to successfully interact with others. By exhibiting these behaviors, individuals gain reinforcement from their environment in interpersonal situations or maintain the existing reinforcements. Social skills manifest themselves as behaviors. They also have an interpersonal quality and are behaviors that are liked by the people around them (Bacanlı, 1999).

Social skills are of great importance for a child to reveal and use their academic ability, and the classroom is a training area for developing, using, and presenting these social skills (Steedly, Schwartz, Levin & Luke, 2008). When social skills are not acquired during the education process, a decrease in school achievement, inadequate interpersonal relationships, and adaptation problems may follow (Akkök, 1999). Also, in case

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

of lack of social skills, individuals may experience problems in forming and maintaining relationships in social and affective areas, and coping with the difficulties they face (Şahin, 2001).

The inadequacy in social skills will negatively affect the individual at every stage of their lives, i.e. home, school and play. Research shows that low social skills are a major factor for learning deficiencies. These studies argued that reading social situations wrong, not being sensitive to others and suffering from social rejection are important social problem indicators for learning disability (Bryan, 1991, cited in Seven, 2008). Elksnin and Elksnin (1995) stated that social skills are related to interpersonal relationships, perception of self, peer relationships, communication skills and academic achievement. In addition, while emphasizing that positive social skills are important for healthy social development, Elksnin and Elksnin (1995) expressed those children with positive social skills will have positive relationships with their peers at school and outside school and will have high self-esteem. Furthermore, positive social skills in childhood are associated with social skills in youth and adulthood (Tawana & Moorc 2011).

Many researchers believe that gifted individuals have a higher risk of emotional and social problems, especially during adolescence and early adulthood (Delisle & Galbraith, 2002; Fornia & Frame, 2001; Neihart, 1999). These individuals are more susceptible to interpersonal conflicts and are exposed to higher stress levels than their peers due to their cognitive abilities. As a result, they feel anxious and have lower self-esteem (Moon, 2009; Peterson, 2009). Gross (2001) stated that gifted students have difficulty in establishing closer relationships with their peers, they cannot establish stable relationships and therefore they are left alone. Robinson (1996) states that gifted students are in search of friends with whom they can share their ideas; otherwise, they withdraw from unsatisfactory social environments.

Some gifted children try to hide their interests and special talents in order to be accepted by their friends and thus try not to be alone. Some are excluded because of their differences and find it difficult to have friends. Others are excluded because of their differences and find it difficult to find friends. In addition, gifted students are misunderstood by their peers and have problems due to their perfectionist characteristics (Akkan, 2012). Many researchers emphasize that gifted students are more at risk of having emotional and social problems, especially in early adolescence. Gifted students are more sensitive to interpersonal conflicts, and because of their abilities they are exposed to higher levels of stress than their peers. For these reasons, they can be more anxious and more depressed (Hallahan & Kauffman 2003).

In the literature, there are limited numbers of experimental studies on students with normal development. These experimental studies on social skills (Göktaş, 2015; Kılıç & Güngör Aytar, 2017; Ömeroğlu et al. 2014; Özdemir Topaloğlu, 2013; Tagay et al., 2010) are not on gifted students and do not include social skills program developed for these students. Since there is no social skills education program that can be used with gifted students and that can be used to increase these students' social skills, this study will be a first in this respect and will form the basis of knowledge in the related literature. Accordingly, the purpose of this study is to develop and implement a social skills psycho-education program that can be used for gifted middle school students and to test the effectiveness of the program on these students' social skills.

The following are the study hypotheses.

1st Hypothesis: There will be a statistically significant increase in the social skill total and self-confidence, sensitivity, self-criticism, social acceptance, assertiveness, courtesy rules, humour and active listening sub-dimension posttest scores of the experimental group students participating in the social skills psycho-

*Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills*

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

education application compared to the students in the control group who did not participate in the social skills psycho-education application.

2nd Hypothesis: There will be a significant difference between the social skill total and self-confidence, sensitivity, self-criticism, social acceptance, assertiveness, courtesy rules, humour and active listening sub-dimension pre-test scores and post-test scores in favour of post-test scores of the students in the experimental group participating in social skills psycho-education application.

3rd Hypothesis: There will be no significant difference between the social skill total and self-confidence, sensitivity, self-criticism, social acceptance, assertiveness, courtesy rules, humour and active listening sub-dimension pre-test scores and post-test scores in favour of post-test scores of the students in the control group not participating in social skills psycho-education application.

4th Hypothesis: There will be no significant difference between the social skill total and self-confidence, sensitivity, self-criticism, social acceptance, assertiveness, courtesy rules, humour and active listening sub-dimension post-test scores and the follow-up measurement scores obtained ten weeks after the completion of the application of the experimental group students participating in social skills psycho-education application.

METHOD

Study Design

In the current study, pretest-posttest random design with a control group, one of the real experimental designs, was used. In this design, two groups are formed from a participant pool determined, whose social skills levels are lower, in advance by means of random assignment. The participants were assigned to the experimental and control groups by taking into account the scale results. Then, preliminary measurement is taken from the participants in two groups. The experimental procedure, whose effect is tested during the application process, is given to the experimental group, but not to the control group. Finally, the final measurements of both groups are taken (Büyüköztürk et al., 2020).

Participants

This experimental study was carried out with 24 gifted middle school students (6th and 7th grade) attending Burdur Science and Art Center (SAC). The participants were selected on a volunteer basis and whether or not they would be able to continue the program. All of the participants attending Burdur SAC average for two years. There were three girls and nine boys in the experimental group, and five girls and seven boys were in the control group.

Ethical Statement

The authors declare that they have carried out the research within the framework of the Helsinki Declaration and with the participation of volunteer students. Ethics committee approval was obtained from the non-interventional clinical research ethics committee to conduct the study (13.05.2020-2020/131).

Experimental Procedure

First, a social skills psycho-education program that can be used for gifted middle school students was developed by the researchers. Literature on social skills and gifted individuals was reviewed while developing the program. While preparing the psycho-education program, interactive-based was taken in

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

to account. For the program that developed based on the theoretical framework of the concepts, opinions of the field experts (One of them working in Burdur Science and Art Center as school counselor; one of them was Professor in Special Education Department; two of them was Professor in Guidance and Counseling Department) were taken, and a preliminary trial was conducted with five gifted middle school students. Since the program was considered as understandable and applicable, the procedure phase of the program started.

Each session of the social skills psycho-education with gifted students lasted for about 90-120 minutes and continued for 10 weeks, once a week. The procedure was carried out in an environment where all students could see each other. All students were encouraged to participate in the activities and express themselves.

First Session (Introduction)

In the first session, the purpose and content of the psycho-education program were explained, and the rules were determined with the participation of the students. For the introduction, first, each member was given a balloon and a pen and asked to write their names on the balloons. Accompanied by music, members continued the activity by standing up, dancing and playing with the balloons. When the group leader stopped the music, they were asked to show the part of the balloons where their names were written to the person opposite them and shout their names. This activity continued until each student met the other. Within the scope of introduction and warm-up activities, the members found an adjective that started with the initials of their names. They said the adjective and name of the other members, respectively, and then they said the adjective and names of themselves. Thus, each member repeated the adjectives and names that were said before them. Finally, each group member was given an A4 paper accompanied by soothing music and asked to fold the paper to five. Then the members unfolded the paper and wrote the name and the person's reminding characteristics on each layer by asking the group members. With music, sufficient time was given to the group members to gather information about all the group members. By creating a group circle, each member said a few characteristics about a person from the notes he or she had, without telling the other member's name, and asked, "Who is it?" The activity continued like this until the name of each member was found. At the end of these activities, the students' feelings and thoughts about the activities and opinions on the objectives of the first session were taken.

Second Session (Recognizing Emotions and Expressing Emotions Correctly)

In order for students to understand basic emotions better, the activity of "Who is Happy, Who is Sad" (Erkan, 2002) was carried out. For this, first, the group leader divided the members into groups of four. The leader equally distributed the newspapers and magazines she brought with her to each group. She divided the board into 10 sections as happy, sad, scared, anxious, angry, satisfied, dissatisfied, hopeful, hopeless, and confused. The members tried to express their emotions on the board. Then, they cut and tape the facial expressions from the newspapers and magazines that fit the emotions on the board.

In the second stage, the members were arranged into groups of at least two people. Each group was assigned a feeling that the other groups did not know and were asked to write a story including this feeling. A member from the group read their story to the group. Afterward, the interaction for each group was started with the following questions, respectively: "What can be the emotion in this story? Have you experienced an event similar to this? What would you feel?"

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

The members are divided into groups of four. By choosing specific emotions from the previously discussed emotions, they were asked to act out a situation that they came up with including these emotions. Each member of the group actively participated while acting out the emotions. After each group's role-play, the other members were asked what emotions they watched. At the end of these activities, the group members' feelings and thoughts about the activities and opinions on the objectives of the second session were taken.

Third Session (Self-Confidence and Assertiveness)

The group leader first asked the students to write down their three positive and three negative characteristics that affect their communication and problem solving on a blank paper. The students were given five minutes to complete this. She asked the students to share what they wrote and wrote the positive and negative characteristics expressed by the students on the board after dividing the board in two.

She asked all participants how these positive and negative characteristics would make their job easier or more difficult. The students discussed this topic. She then asked each student to write a letter to the most important positive and negative characteristics that he or she expressed during the activity or to the characteristic he or she realized during the activity. The students were told that this letter could start with the words "Hello my happiness", "My dear anger" or "My dear jealousy". Students were provided 15 minutes for this activity.

Next, the leader folded the students' letters and collected them in a bag. She then drew and read each letter from the bag that no one knew who belong to. At the end of the process, she asked the students to share their awareness about themselves. Then the group leader gave explanations to the students about what it means to be assertive and difference between assertiveness and aggressiveness and passiveness.

After making the above explanations, the group leader asked the students in what situations they acted more assertive, passive and aggressive. After receiving their answers, she asked the group members how they can be more assertive. At this stage, she talked about the importance of using the "i language" and gave information about effective communication.

After giving the above information, the group leader distributed the difficult situations form to the students and gave them 15 minutes to fill in this form. After all students filled out the form, the volunteering participants shared their opinions. The group leader divided the participants into groups of two and asked them to act out the situations they stated in the form. After each presentation, students were asked the questions of "How were your friends' presentations?", "In your view, were the reactions of the person who was in a difficult situation assertive?" and "If not, how could it be different?" At the end of all presentations and students' sharing, the group leader completed the activity by asking the students what they learned that day.

Fourth Session (Self-Criticism and Problem Solving)

The group leader asked the students to think about their own mistakes in an event (conflict-disagreement-problem-discussion) they had recently experienced and had difficulty with. She then distributed the "I am facing my mistakes" form and gave the students 15 minutes to fill in the form. The students who filled out the form asked to volunteer what they wrote. The students who shared what they wrote were asked how they felt when they shared their mistakes with the group. The group leader thanked these

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

students for their sharing. Among these students, she selected four who accepted what they wrote to be acted out. She then the group was divided into four and assigned each of these students into one group. The students who went to the groups explained their events in detail to their group. Later, the group leader enabled the group to develop and act out the scenario by making additions to the event or by taking things out. After the role-play, she asked the students who acted what they experienced. The group leader ended the process by emphasizing that it is natural to make mistakes and that what is important is to realize one's own mistakes.

Fifth Session (Interpersonal Conflicts)

The leader distributed each section of the poem titled "Difficulty doesn't work" to the students. The refrain section is the common section for all students. The students were asked to write a story about their section and draw a picture of the main idea of their section on a paper handed out to them. Then, each student shared their own story with the group, and all the pictures were hung on the wall. After all the students shared their stories with the group and hung their pictures on the wall, the group leader asked each student to prepare their own section in the form of pop song, folk song or rap song. She asked all students how they would like to sing the refrain section, and a common refrain melody was developed with the group. At this stage, the group leader assisted the group. After the students completed the melody of their own sections, each student performed their own section. After each section, the group performed the refrain section alltogether. After the performances, the leader ended the event by giving information about conflict resolution through tolerance.

Sixth Session (Social Acceptance and Sensitivity):

The group leader read the below-given situation to the students and then continued the process with questions.

"You got on a ship, and you are traveling. The ship broke down, and you got off on an island. You met people whose skin color, traditions and customs are very different. You are a stranger here. What happens afterward?"

With the following questions, the students were guided to think about what they will experience on this island

Rejection

A. They humiliated you because your physical appearance was different.

B. They forced you to try their own food.

C. In their country, your opposite sex has a say, and they treat you badly.

D. They force you to dress like themselves.

Acceptance

A. They accepted you as human.

B. They try to understand you.

C. They offer you from their meals. However, they do not force you to eat.

D. Your sex does not matter, they see you as human.

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

The students were asked the questions of "How would we feel if our physical differences (sex, physical appearance) were not respected?" and "How would we feel if our social differences (socio-cultural) were not respected?" and were asked to express how they would feel in that situation.

The leader explained to the students that there may be individuals different from us in our environment, and that these individuals may have walking, visual, hearing, speech and mental disabilities. She stated that some people live in a wheelchair, some live without sight, some can never hear, and some may be far more intelligent or less intelligent than us. Then she asked the students if there were individuals with special needs around them. In line with the answers to this question, she asked the following questions to the members:

- What would have changed in your life if you couldn't speak or see? What would you have difficulty doing?
- What would you feel if you couldn't walk or did not have an organ, for example, your arm or leg? What would have changed in your life?
- How would you feel if you were far more intelligent or less intelligent than your other friends? What would have changed in your life?

After receiving the answers to the questions, the leader first asked the students to stand up, close their eyes and walk around the room without opening their eyes. She then told the students to imagine they could not walk and asked them to move around the room. Later, she asked the students if they had difficulty in walking with their eyes closed and in moving as someone who could not walk. She then asked the students how we should treat individuals with special needs and how we could help them, and asked students with special needs individuals around them to share their experiences. The activity was ended by explaining the importance of understanding and respecting individuals with special needs.

Seventh Session (Effective Listening)

First, the leader provided information about communication skills, effective listening and the language beforehand to carry out this activity. The group leader previously had prepared badges containing expressions of positive and negative communication. The badges included statements like "do not make eye contact with me", "cut my word while talking", "act as if I do not exist", "ask off-topic questions", "listen to me effectively by making eye contact", "listen to me as if making fun of me", "constantly complete my words" and "ask appropriate questions to understand me". She put the badges on each student's collar without letting them see. Then, she asked the students sitting in a circle to make a speech to "introduce their family members". Each student was allowed to speak in turn. While the student was speaking, other members responded to them according to what was written on their badge. At the end of the process, the importance of communication was emphasized by asking students how they felt. The activity was ended by emphasizing the importance of effective listening and effective communication.

Eighth Session (Rules of Courtesy)

The group leader told the following story about the subject to the members:

"Teacher H… began to go to her classroom with joy when the bell rang. They had music class, and she was going to teach her students a new song that day. Her students loved the music class the most. They would keep asking her when they would have music class and when she would teach them a new song. When she entered the classroom, she could not believe her eyes. The students threw the biscuit bags and

Exploring the Effects of Social Skills Psycho-Education Program Developed for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

juice boxes that they ate during the recess on the floor. Trying not to step on the trash, she walked to her chair and sat down. Before she could even say "kids, we now have music lesson and we will learn a new song", Can got up and started walking around in the classroom without permission. She asked C… to sit down. Meanwhile, N.. pulled her friend G..'s hair, and G.. started to cry. The teacher asked G... what happened, but before G.. responded, İ…, A.. and F… began talking at the same time to explain what happened. However, they were talking loud and all together that the teacher did not understand anything. The teacher said that she gave only G… the permission to talk and asked the others not speak without permission. And while she was saying "Yes children, we are now starting our lesson, we will have music class", a student entered the classroom without knocking the door. The teacher asked the student, "Server, it's been 15 minutes since the bell rang, where you were?" Server told he was in the restroom. Server was playing during recess, could not find time to go to the restroom. So, he was late for class. The teacher told The server to go to his seat. As Teacher H… was dealing with these events in her classroom, time wore on. There were only 10 minutes left for the bell. The events upset her, and she was angry towards her students. Teacher H… told to her students, "During this lesson, we were going to do music. I was going to teach you a new song that you would have loved but we lost a lot of time in the classroom because some of your friends didn't follow the rules. I will not be able to teach you the song. Let this be a small minor punishment for you". The students were very sad after what she told them. They apologized to their teacher for upsetting her, saying that they would rethink what they did and follow the classroom rules from now on."

After the story, the group leader asked the questions of "What happened in the story you listened to?", "What happened because the students did not follow the rules?" and "What is the importance of following the rules?" She tried to get answers from all the students. She then asked which rules the students did not follow and what should be the etiquette rules. She wrote students' statements on the board. She put a checkmark next to the statement when similar answers were given. Then the importance of following rules and etiquette was explained, and the activity was completed.

Ninth Session (Using Humor Effectively)

The students were asked about what they laugh the most in their daily lives. The group shared their answers. What they laugh the most about was written on the board so that the entire group could the situations they laughed. Then, the students were asked about the humor-related issues they had disagreements with their friends. Afterward, they were asked about the situations where their friends laughed and had a lot of fun but where they did not find the situation funny.

In order to carry out the "Let's Laugh" activity, the students were first divided into groups of three. The leader equally distributed newspapers and magazines she brought with her to each group. Using the newspapers and magazines in their hands, the first group was asked to prepare a story containing humor, the second group was asked to prepare a poster containing humor, the third group was asked to prepare a drama containing humor, and the fourth group was asked to compose a song about humor. Then, the groups presented their products to the others. 10 minutes were given to the groups to present what they had prepared. After the presentations, the students were asked how they felt during their presentations. After getting their ideas about what they learned about humor, the activity was completed.

Exploring the Effects of Social Skills Psycho-Education Program Developed for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

Tenth Session (Termination)

Students were reminded briefly about which topics they worked on during this 10-week training period. Each student was asked about what they gained during this process and how they felt about it. The students' names were written one by one on a piece of paper and put in a bag. Each student was asked to choose a name other than their own name and write a letter for their chosen friend. All students were reminded that the letter should be written in a way that the student who received this letter would enjoy it while reading it. 10 minutes were given to complete their letters. At the end of the period, each student gave the letter to its owner. The student who received the letter read what was written to the group. Finally, the group leader evaluated the process and thanked the students. Afterward, the group work was ended.

Data Collection Tools

The data were collected through the Social Skills Scale for Gifted Middle School Students and the information form developed by the researchers.

Social Skills Scale for Gifted Middle School Students. The Social Skills Scale for Gifted Middle School Students is a 37-item 4-point Likert (never, sometimes, frequently, always) self-reporting scale developed to assess gifted middle school students' social skills. The scale has eight factors (self-confidence, sensitivity, self-criticism, social acceptance, assertiveness, rules of courtesy, humor and effective listening). According to the Exploratory Factor Analysis results, the variance explained by these eight factors together is 55.028%. Although the scale has an eight-factor structure, the total score can be obtained from the scale. According to the Confirmatory Factor Analysis performed on the scale, the eight-factor structure of the scale was confirmed and the scale had a good fit. As a result of the confirmatory factor analysis, the goodness-of-fit values of the scale were found to be as follows: X^2=871.17, X^2/df=1.45, p<.000, NFI=.71, NNFI=.86, CFI=.87, GFI=.81, AGFI=.78, RMR=.050, SRMR=.076, IFI=.88, RMSEA=.048. In the reliability analysis, Cronbach's alpha internal consistency coefficient was found as .92 for the entire scale. In Cronbach's alpha internal consistency coefficients for the sub-factors were .89 for the first factor, .77 for the second, .72 for the third, .70 for the fourth, .63 for the fifth, .70 for the sixth, .62 for the seventh and .61 for the eighth. In addition, split half-test technique was employed for the scale, and Cronbach's alpha was found as .83 for the first half and .88 for the second half (Karataş & Tagay, 2021).

Data Analysis

In the study, a social skills psycho-education program was developed for gifted middle school students, and the developed social skills program was applied to 12 students in the experimental group. Since the number of students in the group was less than 30, the data were analyzed by the Mann Whitney U Test and the Wilcoxon Signed Ranks Test, which are non-parametric tests. The Mann-Whitney U test was used because it is suitable to compare two independent groups that do not large normally distributed samples. The assumptions of the Mann-Whitney U test are; having a dependent variable that is measured at the ordinal level and an independent variable consists of two categorical independent groups. Accordingly, it was considered Mann Whitney U test is appropriate to use (Fay & Proschan, 2010). The Mann Whitney U Test was employed for the comparison of posttest scores of the experimental group and control group, whereas the Wilcoxon Signed-Rank Test was employed for the comparison of pretest-posttest scores of the experimental group, pretest-posttest scores of the control group, and posttest-

*Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills*

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

follow-up scores of the experimental group. In the study, volunteering 12 gifted middle school students were included in the experimental and control groups. When pretest scores were examined with Mann Whitney U Test to form the experimental and control groups, there was no significant difference in the pretest scores (Self-confidence U=65.000, p>.05; Sensitivity U=67.500, p>.05; Self-criticism U=54.500, p>.05; Social acceptance U=51,000, p>.05; Assertiveness U=43,000, p>.05; Rules of Courtesy U=48,000, p>.05; Humor U=56,500, p>.05; Effective listening U=64,000, p>.05; Total score U=58.500, p>.05). This indicated that there was no difference between the groups before instrumentation in terms of social skills.

RESULTS

Findings of the Social Skills Experimental Program for Gifted Middle School Students

Findings Regarding the 1st Hypothesis

The Mann Whitney U test was used to determine whether there was a statistically significant difference in the social skills scores of the experimental group students participating in the social skills psycho-education application compared to the students in the control group. The Mann Whitney U test analysis results are presented in Table 1.

Table 1. Mann Whitney U test results of experimental and control groups' social skills posttest scores

Social Skills Self-Confidence	n	Mean Rank	Sum of Ranks	U
Experimental	12	18.00	216.00	6.000*
Control	12	7.00	84.00	
Sensitivity	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	16.00	192.00	30.00*
Control	12	9.00	108.00	
Self-Criticism	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	17.79	213.50	8.50*
Control	12	7.21	86.50	
Social Acceptance	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	18.50	222.00	.000*
Control	12	6.50	78.00	
Assertiveness	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	18.33	220.00	2.000*
Control	12	6.67	80.00	
Rules of Courtesy	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	18.42	221.00	1.000*
Control	12	6.58	79.00	
Humor	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	16.92	203.00	19.000*
Control	12	8.08	97.00	
Effective Listening	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	16.42	197.00	25.000*
Control	12	8.58	103.00	
Sum	**n**	**Mean Rank**	**Sum of Ranks**	**U**
Experimental	12	18.50	222.00	.000*
Control	12	6.50	78.00	

*p<.001

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

According to Table 1, the social skills posttest scores of the experimental and control groups participating in the study were significantly increased and differed in favor of the experimental group (U=6.000, p<.001 for self-confidence; U=30.000, p<.001 for sensitivity; U=8.500, p<.001 for self-criticism; U=.000, p<.001 for Social Acceptance; U=2.000, p<.001 for assertiveness; U=1.000, p<.001 for Rules of Courtesy; U=9.000, p<.001 for humor; U=25.000, p<.001 for effective listening; U=.000, p <.001 for total score).

Findings Regarding the 2nd Hypothesis

Wilcoxon Signed-Rank Test was used to determine whether there was a statistically significant difference in the pretest-posttest scores of the experimental group students participating in the social skills psycho-education application. Wilcoxon Signed-Rank Test analysis results are presented in Table 2.

Table 2. Wilcoxon Signed-Rank test results of the experimental group's pretest and posttest scores

Social Skills	n	Mean Rank	Sum of Ranks	z
Self-Confidence **Post-test- Pre-test**				
Negative rank	0	.00	.00	-3.072*
Positive rank	12	6.50	78.00	
Ties	0			
Sensitivity **Post-test- Pre-test**	n	Mean Rank	Sum of Ranks	z
Negative rank	1	1.00	1.00	-2.989*
Positive rank	11	7.00	77.00	
Ties	0			
Self-Criticism **Post-test- Pre-test**	n	Mean Rank	Sum of Ranks	z
Negative rank	1	1.00	1.00	-2.996*
Positive rank	11	7.00	77.00	
Ties	0			
Social Acceptance **Post-test- Pre-test**	n	Mean Rank	Sum of Ranks	z
Negative rank	0	.00	.00	-2.829*
Positive rank	10	5.50	55.00	
Ties	2			
Assertiveness **Post-test- Pre-test**	n	Mean Rank	Sum of Ranks	z
Negative rank	0	.00	.00	-3.114*
Positive rank	12	6.50	78.00	
Ties	0			
Rules of Courtesy **Post- test- Pre-test**	n	Mean Rank	Sum of Ranks	z
Negative rank	0	.00	.00	-3.025*
Positive rank	11	6.00	66.00	
Ties	1			
Humor **Post-test- Pre-test**	n	Mean Rank	Sum of Ranks	z
Negative rank	0	.00	.00	-3.097*
Positive rank	12	6.50	78.00	
Ties	0			
Effective Listening **Post-test- Pre-test**	n	Mean Rank	Sum of Ranks	z
Negative rank	2	5.00	10.00	-1.497

Exploring the Effects of Social Skills Psycho-Education Program Developed for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

	n	Mean Rank	Sum of Ranks	z
Positive rank	7	5.00	35.00	
Ties	3			
Sum **Post-test- Pre-test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	0	.00	.00	-3.064*
Positive rank	12	6.50	78.00	
Ties	0			

*p<.05

According to Table 2, there were significant differences in social skills total scores and all the sub-scales except the effective listening sub-scale (z=-1.497, p>.05) in favor of the posttest scores when pretest and posttest scores of the experimental group were compared (Self-confidence z=-3.072, Sensitivity z=-2.989, Self-criticism z=-2.996, Social acceptance z=-2.829, Assertiveness z=-3.114, Rules of Courtesy z=-3.025, Humor z=-3.097, Total score z=-3.064, p<.05).

Findings Regarding the 3rd Hypothesis

Wilcoxon Signed-Rank Test was used to determine whether there was a statistically significant difference in the social skills pretest-posttest scores of the control group students in favor of the posttest. Wilcoxon Signed-Rank Test analysis results are presented in Table 3.

Table 3. Wilcoxon Signed-Rank test results of the control group's pretest and posttest scores

Social Skills	n	Mean Rank	Sum of Ranks	z
Self-Confidence **Post-Pre-Test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	0	.00	.00	-2.947*
Positive rank	11	6.00	66.00	
Ties	1			
Sensitivity **Post-Pre-Test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	6	3.92	23.50	-.411
Positive rank	4	7.88	31.50	
Ties	2			
Self-Criticism **Post-Pre-Test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	7	4.43	31.00	-.359
Positive rank	3	8.00	24.00	
Ties	2			
Social Acceptance **Post-Pre-Test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	7	4.57	32.00	-1.166
Positive rank	2	6.50	13.00	
Ties	3			
Assertiveness **Post-Pre-Test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	5	4.50	22.50	-1.317
Positive rank	7	7.93	55.50	
Ties	0			
Rules of Courtesy **Post-Pre-Test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	8	4.75	38.00	-1.876
Positive rank	1	7.00	7.00	
Ties	3			

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

Humor Post-Pre-Test	n	Mean Rank	Sum of Ranks	z
Negative rank	2	7.00	14.00	-1.710
Positive rank	9	5.78	52.00	
Ties	1			
Effective Listening Post-Pre-Test	n	Mean Rank	Sum of Ranks	z
Negative rank	6	4.33	26.00	-1.155
Positive rank	2	5.00	10.00	
Ties	4			
Sum Post-Pre-Test	n	Mean Rank	Sum of Ranks	z
Negative rank	3	5.17	15.50	-1.859
Positive rank	9	6.94	62.50	
Ties	0			

*p<.05

As seen in Table 3, when the social skills pretest and posttest scores of the control group were compared, there were significant differences between the self-confidence sub-scale scores (z=-2.947, p<.05), whereas there were no significant differences between the pretest and posttest scores of the sensitivity, self-criticism, social acceptance, assertiveness, rules of courtesy, humor, effective listening and social skills total scores. This indicated that there was no difference in the social skills scores of the control group students who did not participate in the social skills psycho-education group application except for the self-confidence sub-scale scores.

Findings Regarding the 4th Hypothesis

Wilcoxon Signed-Rank Test was used to the experimental group students' social skills posttest scores and the follow-up test scores taken after 10 weeks after the instrumentation. Wilcoxon Signed-Rank Test analysis results are presented in Table 4.

Table 4. Wilcoxon Signed-Rank test results of the experimental group's posttest and follow-up scores

Social Skills Self-Confidence Follow-test-post-test	n	Mean Rank	Sum of Ranks	z
Negative rank	11	6.00	66.00	-2.965*
Positive rank	0	.00	.00	
Ties	1			
Sensitivity Follow-test-post-test	n	Mean Rank	Sum of Ranks	z
Negative rank	10	5.50	55.00	-2.814*
Positive rank	0	.00	.00	
Ties	2			
Self-Criticism Follow-test-post-test	n	Mean Rank	Sum of Ranks	z
Negative rank	1	1.00	1.00	-1.000
Positive rank	0	.00	.00	
Ties	11			
Social Acceptance Follow-test-post-test	n	Mean Rank	Sum of Ranks	z
Negative rank	4	2.50	10.00	-1.890
Positive rank	0	0.00	.00	
Ties	8			

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

Assertiveness **Follow-test-post-test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	5	4.80	24.00	-1.715
Positive rank	2	2.00	4.00	
Ties	5			
Rules of Courtesy **Follow-test-post-test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	3	2.00	6.00	-1.604
Positive rank	0	.00	.00	
Ties	9			
Humor **Follow-test-post-test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	4	2.50	10.00	-1.841
Positive rank	0	.00	.00	
Ties	8			
Effective Listening **Follow-test-post-test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	3	2.00	6.00	-1.633
Positive rank	0	0.00	.00	
Ties	9			
Sum **Follow-test-post-test**	n	**Mean Rank**	**Sum of Ranks**	**z**
Negative rank	9	5.50	49.50	-1.471
Positive rank	2	8.25	16.50	
Ties	1			

*p<.05

As seen in Table 4, when the social skills posttest scores and follow-up test scores of the experimental group were compared, there were significant differences between the self-confidence and sensitivity sub-scales scores (z=-2.965, p<.05; z=-2.814, p<.05), whereas there were no significant differences between the self-criticism, social acceptance, assertiveness, rules of courtesy, humor, effective listening and social skills total score. This indicated that except the self-confidence and sensitivity sub-scale scores had long-term effect on the social skills scores of the experimental group students who participated in the social skills psycho-education group application.

DISCUSSION

In this study, it was aimed to develop a psycho-education program that can be applied in developing the social skills of gifted middle school students and to test the effectiveness of it on students' social skills. Within the scope of the study, a social skills psycho-educational program consisting of activities related to self-confidence, sensitivity, self-criticism, social acceptance, assertiveness, rules of courtesy, humor and effective listening was developed for gifted middle school students. The psycho-education program was implemented for ten weeks, and when its effectiveness was tested, it was revealed that it was an effective program that could be used to increase the social skills of gifted middle school students. It was observed that during the implementation of the program, the students participated in the activities with pleasure, expressed themselves comfortably as the sessions progressed and were willing to work. When they were asked to evaluate the study, they stated that it was their first time participating in this type of study and that the process was both instructive and relaxing. Interaction-based activities were also found to be appropriate for students. For these reasons, the developed and applied psycho-education program is considered to be effective.

*Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills*

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

In addition, the permanence of the experiment's effect was examined with the follow-up measurement taken 10 weeks. The analysis revealed that the effect of the experiment was long-term in every sub-scale except the self-confidence and sensitivity sub-scales. The concept of self-confidence and sensitivity are influenced by many factors such as personality traits, situational factors, surroundings and environment. The fact that students went to different places for a long vacation after the experiment and were exposed to different factors may have caused this effect and may have negatively affected their self-confidence and sensitivity.

When the results of the follow-up measurement were examined, it was determined that the effect of the experiment was long-lasting in the social skill's dimensions of social acceptance, assertiveness, rules of courtesy, humour and active listening. Assouline and Colangelo (2006) stated that gifted children also feel the need for strong adaptability and belongingness to a group in the early adolescence years, just like other children. Thus, it can be thought that social skills programs for gifted children also support students in this sense.

The fact that the experimental study was effective for a long time indicates that the program developed is appropriate for gifted middle school students. At the same time, the fact that the activities performed every week in practice were compatible and consistent with the sub-scales used may have contributed to the long-term effect of the experimental study. Furthermore, preferring the gifted middle school students who volunteered to participate in the experimental study may have contributed to the effectiveness of the study. The experimental study was conducted by the researchers going to SAC, where the students were attending. Students' being in a place where they felt safe and familiar may also have contributed to the effectiveness of the experimental study.

The basic social needs of gifted students are not different from other students, but their needs may differ due to intrinsic and extrinsic reasons. What is meant by intrinsic traits is that these students have different personal traits such as sensitivity and self-criticism. The extrinsic reasons are that they are perceived as more incompatible in their interactions with others and that they may have difficulty in coping. Due to the nature of being gifted, these students are increasingly in need of training including different approaches. It is necessary to develop and implement training programs tailored to the needs of these students; taking into account the intrinsic and extrinsic difficulties they face (Cross & Cross 2015). Physical, cognitive, social and emotional development of gifted students may not match each other. For example, although the students' cognitive development is very advanced, their physical and social emotional development may not have progressed too much. Also, although the people around the students have a lot of expectations from them, they may be struggling because they cannot fulfill this expectation. Therefore, these children may experience more frustration and anger due to the negative situations they experience. In fact, the social emotional development of these children lags behind their peers in some cases, and therefore they experience problems in revealing their potentials and abilities (Silverman, 2002).

It is stated that federal-level regulations are not sufficient for gifted students in the USA as in many countries today. More research has been done in recent years on the adequacy of educational programs developed for gifted students. In addition, the fact that these programs focus mainly on enriching students' learning is one of the criticized issues. Increasing the trainings to be carried out in order to support the social emotional development of these students is recommended for all countries and the US (NAGC, 2008).

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

In some studies, gifted students stated that they need adults in dealing with stress and social struggles. It is also mentioned that these children are inadequate in sharing their concerns, and they tend to reject and control their negative emotions. In light of this information, there is a need for programs that will support these children's social-emotional development by increasing the protective factors for them. Thus, teachers are responsible not only for gifted students' academic achievement, but also for their social and emotional development. Training with wide participation including teachers and parents as well will reduce negative perceptions and will make these students more successful in every sense (Leyden & Shale, 2012).

As mentioned earlier, studies examining mainly the social skills of gifted students are inadequate. However, there are studies examining the contribution of different educational and training programs to the social-emotional development of gifted children. Kim (2016) stated that enrichment programs have a positive effect on both academic achievement and social-emotional development of gifted children. Gallagher (2015) argued that gifted children differ from their peers including other gifted children due to their interests, abilities and intellectual perspectives, but they are emotionally challenged and need support in terms of their personal social development. For this reason, they recommend increasing the supportive environments and programs.

As it is known, social skills have key importance for the adaptation of individuals, and if children's social skills are insufficient, their adaptation and thus their achievement will also be negatively affected. Students with high social skills will be more confident and will have better problem-solving skills at school and in life. This will enable them to be more successful both academically and socially.

Conclusion and Suggestions

In conclusion, in the study, a psycho-education program that can be used in developing the social skills of gifted middle school students was developed. This program was found to be effective after testing its effectiveness on students' social skills. According to the results of this study, the following recommendations can be made: The study was conducted with gifted middle school students. Since there are no social skills programs for gifted elementary and high school students in the literature, experimental studies with these age groups can be planned in the future. In addition, it can be ensured that the psycho-education programs developed for gifted students are be popularized and are continuous. When the permanence effect of the experiment was tested, it was revealed that there were no long-term effects in the self-confidence and sensitivity sub-scales. Therefore, it may be beneficial to plan experimental or informative studies on gifted middle school students' self-confidence and sensitivity.

As with any study, this study has its limitations. This study was conducted with the volunteering SAC throughout Turkey and with volunteering middle school students. Therefore, this study is limited to the data obtained from these students. In addition, this study is limited to data obtained from the Social Skills Scale for Gifted Middle School Students.

Exploring the Effects of Social Skills Psycho-Education Program Developed
for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Exploring the Effects of Social Skills Psycho-Education Program Developed for Gifted Middle School Students on Students' Social Skills

Karataş & Tagay (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Author Contributions

ZK: The idea of preparing psycho-education program about social skills for gifted students, preparing, application and evaluation of the program, reporting and making corrections.

ÖT: Preparing, application and evaluation of the program, reporting and making corrections.

Conflict of Interest

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

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Ethical Statement

The authors declare that they have carried out the research within the framework of the Helsinki Declaration and with the participation of a volunteer counselor. In line with this, the study was permitted by Burdur Mehmet Akif Ersoy University, Non-Interventional Clinical Research Ethics Committee

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The Psychometric Properties of Parental Stress Scale-Turkish Form

Ebeveyn Stres Ölçeği Türkçe Formu'nun Psikometrik Özellikleri

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ABSTRACT

The aim of this study is to adapt the Parental Stress Scale developed by Berry and Jones (1995) to Turkish parents. The study was carried out with 534 parents. The scale's validity was examined with exploratory and confirmatory factor analysis. The discrimination, difficulty, and informativeness of the items were examined using the Item Response Theory. Independent samples t-test between the lower and upper 27% scores was performed to test the discrimination of the scale. It has been found that there was a negative relationship between the Parental Stress Scale and the Satisfaction with Life Scale scores, and a positive relationship between the Parental Stress Scale and the Perceived Stress Scale scores. The internal consistency coefficient of the scale and subscales were found to be between .70 and .81 respectively. The results showed that Parental Stress Scale is a valid and reliable tool for measuring parental stress level of Turkish parents.

ÖZET

Bu çalışmanın amacı, Berry ve Jones (1995) tarafından geliştirilen Ebeveyn Stres Ölçeği'nin Türk ebeveynlere uyarlanmasıdır. Çalışma 534 ebeveyn ile gerçekleştirilmiştir. Ölçeğin geçerliliği, açımlayıcı ve doğrulayıcı faktör analizi ile incelenmiştir. Maddelerin ayırt ediciliği, güçlüğü ve bilgilendiriciliği Madde Cevap Kuramı kullanılarak incelenmiştir. Ölçeğin ayırt ediciliği, ayrıca alt ve üst % 27 puanları arasındaki fark bağımsız gruplar t-testi yapılarak sınanmıştır. Ebeveyn Stres Ölçeği ile Yaşam Doyumu Ölçeği puanları arasında negatif, Ebeveyn Stres Ölçeği ile Algılanan Stres Ölçeği puanları arasında pozitif yönde ilişki olduğu bulunmuştur. İç tutarlılık katsayısının ölçeğin tamamı ve alt ölçekler için .70-.81 arasında olduğu gözlenmiştir. Bu bulgular, Ebeveyn Stres Ölçeği'nin Türk ebeveynlerin stres düzeyini ölçmek için geçerli ve güvenilir bir araç olduğunu göstermektedir.

INTRODUCTION

Lazarus and Folkman (1984) defined stress as the negative effect of the well-being when the resources are forced or exceeded in a relationship between the individual and his/her environment. When the stress is evaluated in context of parent-child relationships, the parents who have high stress levels have problems in their communication with their children and use inappropriate education methods, which leads to the deterioration of communication within the family (Gabriel et. al., 2006; Webster-Stratton, 1990). Stress is considered as a risk factor for psychological disorders, especially for children, in addition to its negative effects on family life (Cina et.al., 2009, p.40).

Being a parent is desired by many adults. Even though parenting is often a conscious choice, there are dramatic changes that come with parenting. One of these changes is the perceived stress that parents have to cope with. Family stress can be defined as pressure, tension and feeling stressed in the face of parenting duties (Rao & Beidel, 2009). Not only changes the relationship between spouses, but also add parenting roles in their life (Glading, 2002). According to the Parental Role Development Model (Mowder, 1996), parenting roles are defined as commitment (approaching the child with care and compassion), education (being a guide and model to the child), protecting with general welfare (meeting the basic needs of children), responsibility (being ready for meeting the needs of children in time) and sensitivity (overlapping of parenthood perceived by children with responsibilities fulfilled by parents). It is a fact that all these parental roles/duties can effect other areas of life as well. In the Parental Stress Model developed by Abidin (2012), parental stress is analyzed under two headings as a child area and a parent area. In this proposed model, attention deficit/hyperactivity, supported parent, mood, acceptability, compatibility and demanding are factors in children's area; competence, attachment, role restriction, depression, partner relationship, isolation, health are factors in the parental area.

However, parents' beliefs about the personality of the child also affect their expectations towards the child (Hortaçsu, 1997, p.71). As a result of studies on the causes of parental stress, the child's distruptive behaviors (Crnic & Low, 2002), child characteristics such as difficult temperament and emotion dysregulation (Chang et. al., 2004; Ostberg & Hagekull, 2000) are predictors of parenting stress. According to some researchers, the effect of parenting stress on parenting role and child behavior is stronger than work stress or other stresses of life (Deater-Deckard et al., 1998). Generally, parents of young children report higher levels of stress, depression, and anxiety than their childfree counterparts, although this is also an area of life many parents find ultimately meaningful and rewarding (Abidin, 1990; Deater-Deckard et al., 1998; Henderson & Uecker, 2016; Ostberg et al., 1997; Umberson et al., 2010). There is also a growing body of literature on parental health and well-being in midlife and later life (Fingerman et al., 2016; Pillemer et al., 2017; Smith & Grzywacz, 2014). In addition to this, high parental stress level negatively affects the self-efficacy of the parent (Petermann et al., 2006, p. 5). Gabriel and Bodenmann (2006) regard parent's ability to cope with stress as an important part of parental competencies.

When studies on parental stress are examined, it is understood that the stress experienced by parents is important for the development of both parents and children. Therefore, studies on parental stress are considered to be very important. In Turkey, it was seen that there are two instruments for measuring parenting stress directly. One of them is the Parental Stress Index-Short Form developed by Abidin (1990, 2012) and the Turkish adaptation study of the scale carried out by Çekiç et al. (2015). The other tool is the Parenting Stress Scale developed by Özmen and Özmen (2012).

The first measurement tool for measuring parenting stress was developed by Abidin (1990). The Parental Stress Index-Short Form was developed to reveal dysfunctional parent-child relationships. This measurement tool with 36 items consists of Parental Distress, Dysfunctional Interaction, and Difficult Child subscales. Later on, the number of items in the scale was increased and revised (Abidin, 2012). The sub-subscales of the revised form are included in the Parental Domain and Child Domain representing parent and child characteristics. Child Domain includes the subscales of Distractibility/Hyperactivity, Child's Reinforcement of the Parent, Acceptability of the Child, Mood, Adaptability, and Demandingness; while the subscales of the Parental Domain consist of Sense of Competence, Attachment to the Child, Role Restrictions, Parental Depression, Spouse Relationship, Social Isolation, and Health. The test-retest reliability of the scale for Total Stress, Child Domain and Parental Domain is .96, .63, and .91 respectively. The Turkish adaptation study of the Parent Stress Scale-Short Form (Abidin, 2012) was carried out by Çekiç et al. (2015). The construct validity of the Turkish form of the scale was tested by confirmatory factor analysis (CFA). Goodness of fit indices as a result of CFA for Child Domain found to be χ2/df=1.693, GFI = 0.84 AGFI = 0.82, CFI = 0.85, SRMR = 0.056 and RMSEA = 0.042; while for the Parental Domain as χ2/df = 1.720, GFI = 0.82, AGFI = 0.80, CFI = 0.88, SRMR = 0.052 and RMSEA =0.043. Within the scope of validity studies, the scores of the psychiatry group and the parents in the normal group were compared. As a result of the analyses, significant relationships were found between the scores of those two groups. Test-retest reliability of the scale for subscales and total score was observed to range from .56 to .92.

Another instrument used to measure the stress level of parents in Turkey is the Parenting Stress Scale developed by Özmen and Özmen (2012). As a result of the exploratory factor analysis (EFA), it was observed that the scale showed a single factor structure that explained 32.20% of the total variance, while the goodness of fit values were acceptable as a result of the CFA (X2 / df = 252.98 / 104 = 2.43, RMSEA = 0.05, RMR = 0.03, RMS = 0.04, GFI = 0.93, AGFI = 0.91 and CFI = 0.91). Factor loadings of the 16 items ranged between .34 and .58. The internal consistency coefficient of the scale was .85, and the split-half reliability was calculated as .82.

When those two research instruments measuring parenting stress in Turkey are examined, it is observed that the validity and reliability analyses of both scales yield very good results. However, it is assumed that the development or adaptation of new instruments to measure parenting stress will contribute to further new studies. Thus, in this study, psychometric properties of the Parental Stress Scale developed by Berry and Jones (1995) were examined in Turkish parents.

METHOD

This study aims to determine the psychometric properties of Parental Stress Scale in a Turkish sample. In this section, the participants, data collection procedure, data collection tools, and the data analysis were described.

Participants

The participants consisted of a total of 534 parents whose children continue to formal education, of whom 369 were mothers (69.1%) and 165 were fathers (30.9%). The age of the participants ranged from 23-62 and the mean age was found 38.14 for the whole sample.

Ethical Statement

This study was completed in accordance with the Helsinki Declaration. In line with this, the study was permitted by Istanbul Medipol University, Social Sciences Ethics Committee (Date: 07/01/2020, Ref: 21).

Data Collection Tools

Parental Stress Scale (PSS). The instrument developed by Berry and Jones (1995) is a 5-point Likert scale consisting of 16 items. The internal consistency coefficient of the original scale was found to be .83, the mean of item-total correlations to be .23, and the mean of item remainder correlations to be .43. The test-retest correlation applied with an interval of six weeks was calculated as .81. For the validity analysis of the scale, Parenting Stress Index (Abidin, 1990), Perceived Stress Scale (Cohen et al., 1983), UCLA Loneliness Scale (Russell et al., 1980), Marital Satisfaction and Loyalty Scale (Monroe & Jones, 1990), Guilt Inventory (Kugler & Jones, 1992), and Social Support Questionnaire were used. Significant relationships were found between the Parental Stress Scale and the scores obtained from these scales. The construct validity of the scale was performed by exploratory factor analysis. The EFA was carried out with 18 items, two items (items 2 and 4) with factor loadings below .40 were excluded from the scale. It was observed with EFA that the scale was composed of 4-factors that explained 53.8% of the total variance and whose eigenvalue was greater than 1. These factors included parental rewards (items 1, 5, 6, 7, 8, 18), parental stressors (items 3, 9, 10, 11, 12, 16), lack of control (items 14, 15, 16), and parental satisfaction (items 13, 17, 18). Since items 16 and 18 took a factor load of over .40 on two different factors, these items were placed on both factors.

Satisfaction With Life Scale (SWLS). In this study, the Satisfaction with Life Scale (Diener et al., 1985) was used to test the convergent and discriminant validity of the Parental Stress Scale. The SWLS is used to measure the satisfaction of the person as a whole. The scale is Likert-type and consists of 5 items. SWLS has a single-factor structure that explains 66% of the total variance. The internal consistency coefficient of the original scale is .87, and in Turkish form, this coefficient was determined as .89 (Köker, 1991).

Perceived Stress Scale (PSS). The Perceived Stress Scale (PSS- Cohen et al., 1983) is another instrument that is used in the validity study of the Parent Stress Scale. Turkish adaptation study of the PSS was conducted by Eskin et al. (2013). The scale is a Likert-type scale consisting of 14 items and 2 factors. The internal consistency coefficient of the Turkish form of the scale was found to be .84, and test-retest reliability as to be .87. The highest score that can be obtained from the scale is 70, and the lowest score is 14.

Data Collection Procedure

The data collection procedure has been started with the ethical approval. After Istanbul Medipol University Institute of Social Sciences Ethics Committee has decided that the study is ethically appropriate (in 07/01/2020, decision number:21), measurement instruments were delivered to parents by using online forms. The participants of the study were determined based on a snowball sampling method on a voluntary basis. Snowball sampling is a recruitment method that employs research into participants' social networks to access specific populations (Browne, 2005).

Data Analysis

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were utilized to validate the factor structure of the Parental Stress Scale. As being reported in the literature (e.g., Hu & Bentler, 1999; Kline, 2015), for the CFA; GFI, AGFI, and CFI ≥ .90 and SRMR and RMSEA≤ .08 were considered an indication of the acceptable fit. After establishing the factorial structure of the Parental Stress Scale, the discrimination, difficulty, and informativeness of the scale were examined using the Item Response Theory (IRT; Chalmers, 2012). The basic aspects of the IRT parameters can be described by the item characteristic curve (ICC), which is a curve shaped like an "S" and an α value > 1.0 is considered as highly discriminant (Baker, 2001). And for discriminant validity lower and upper 27% cut-off points of the scale are examined with an independent samples t-test. The correlations between the Parental Stress Scale, satisfaction with life and perceived stress were examined to establish the concurrent validity of the scale. Cronbach's alpha and composite reliability were examined for the reliability of the Parental Stress Scale. Furthermore, corrected item-total correlation coefficients for each item were also examined. The analyses of the present study were run using IBM SPSS Statistics 22.0, Amos Graphics 23 and Stata 16.

RESULTS

Validity Results

The original English version of the scale was translated into Turkish by the authors and five Ph. D. experts in the field. In the EEF, evaluations regarding the appropriateness of the translations of the items were carried out with a 5-point Likert scale (1= Absolutely not suitable, 5= Exactly appropriate). After this stage, an opinion was obtained from a Turkish linguistics expert about the compatibility of the items with Turkish. In addition, two measurement and evaluation experts stated their opinions for the overall form, item structure, and rating. The Turkish scale was finalized considering the data and the suggestions obtained by the utilization of these forms.

To determine whether the structure obtained from the scale is appropriate for exploratory factor analysis, firstly Kaiser-Meyer-Olkin (KMO) coefficient and Barlett test were performed. The KMO value of the 16-item scale was found to be significant at the level of .82 and the Barlett Test at the level of p <.001. These findings showed that there is a sufficient correlation between the items to perform factor analysis on the current sample. By the factor analysis, it was aimed to determine whether the items in the scale would be separated into fewer factors that exclude each other and to determine the dimensions of the scale. In EFA, principal axis factoring and varimax axis rotation technique were chosen in the same way as the original scale. According to the first EFA findings, it was found that the scale's Turkish form has an eigenvalue greater than 1 and consists of 3 factors explaining 39% of the total variance. Then, the number of factors was determined as 4-factors as in the original scale and a second EFA findings were generated. It was observed that the four-factor structure explained 56.23% of the total variance. According to EFA, eigenvalue and explained variance values were found to be 4.49 and 28.04% for Factor 1, 2.22 and 13.85% for Factor 2, 1.20 and 8.14% for Factor 3, .99, and 6.21% for Factor 4. Factors and item factor loadings are shown in Table 1.

Table 1. Factors and factor loadings of PSS resulting from the EFA.

Original no	itemNew item no	1. Factor	2. Factor	3. Factor	4. Factor
10	8	.72			
11	9	.61			
16	14	.61			
12	10	.59			
9	7	.55			
3	2	.43			
6	4		.78		
7	5		.61		
5	3		.48		
1	1		.48		
8	6		.40		
15	13			.75	
13	11			.69	
14	12			.47	
17	15				.61
18	16				.53

As a result of EFA, it was seen that the Parental Stress Scale was divided into factors similar to the original scale in the Turkish sample. However, it was found that the 11th item was in the 3rd Factor, unlike the original scale. After the EFA, the validity of the scale was also examined with a CFA. Initially, the first model, in which the 11th item was in the 4th factor as in the original scale, was tested. Goodness of fit values of the first model were found to be $\chi2/df = 2.20$, RMSEA = .063, GFI = .92, AGFI = .89, CFI = .90 SRMR = .07 (In figure 1). Item factor loadings were significant and above .30. After examining the first model, the second model in which the 11th item was placed in the 3rd factor as in the EFA result of the Turkish sample, was tested. The goodness of fit values of second model were found to be $\chi2/df = 1.92$, RMSEA = .055, GFI = .93, AGFI = .90, CFI = .92 and SRMR = .06 (In figure 2). The factor loadings of all items were significant and were between .38 and .91. Because the goodness of fit indices of these two confirmatory models were very close, the chi-square difference test was performed and results showed that there is a statistical difference between the two models at $p<.001$ level.
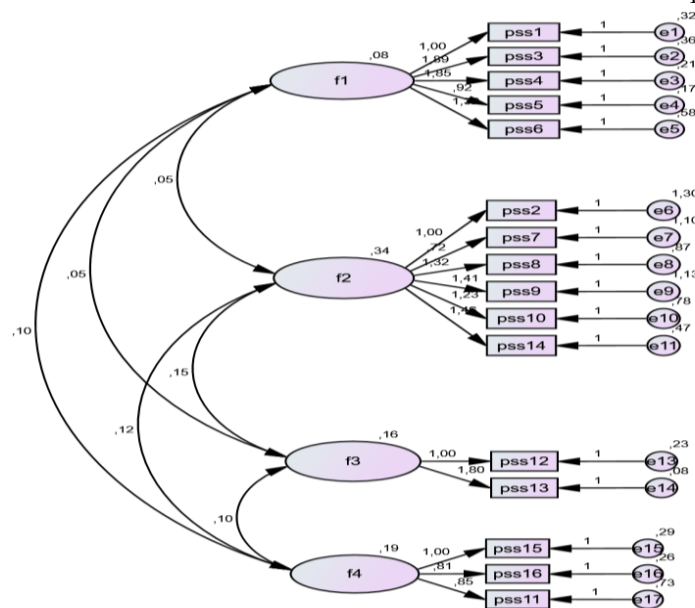
Figure 1. Standardized estimates for Model 1.
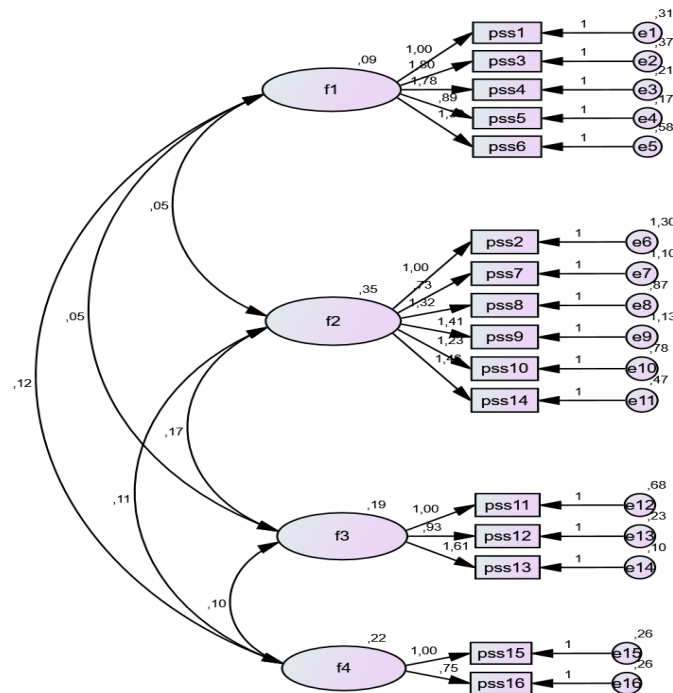
Figure 2. Standardized estimates for the proposed model.

Table 2. Item response theory parameter estimates for the Parental Stress Scale-Turkish Form

Item	Item parameter estimates				
	a	b_1	b_2	b_3	b_4
1	1.44	.77	2.95	3.39	4.05
2	.92	-2.57	-1.00	-.33	1.83
3	.88	.81	3.34	4.08	4.81
4	1.16	1.35	2.88	3.53	4.42
5	.91	2.58	4.50	5.45	6.67
6	1.00	.34	2.08	3.79	5.04
7	1.23	.35	1.60	2.18	2.83
8	1.25	-.93	.41	1.10	3.20
9	1.20	-1.00	.41	.85	2.30
10	1.50	-1.16	.47	1.24	2.51
11	1.32	.65	2.02	2.54	3.36
12	2.65	1.19	1.91	2.35	2.87
13	3.31	.55	1.51	1.98	2.64
14	2.08	-.36	.94	1.38	2.47
15	1.11	.39	3.21	4.12	4.34
16	1.13	.47	3.27	4.55	5.53

The discriminant validity of the Turkish form of the Parental Stress Scale was performed by Item Response Theory and we conducted a t-test to examine the difference between the mean scores of the upper and lower 27% groups of the Parental Stress Scale. According to Item Response Theory (IRT), as displayed in Table 2, 13 items of the 16 items' α values were higher than 1.0 and 3 items' (2,3 and 5) α values were between .88 and .92. In addition, t-test results showed that between the upper and lower 27% groups of the total scale there was a statistically significant difference (t = 40.84, df = 31, r = .000, p<.01).

Satisfaction with Life Scale and Perceived Stress Scale were used for the convergent-divergent validity of the Parental Stress Scale Turkish form. There was a positive correlation between the Parental Stress Scale and the Perceived Stress Scale (r = .34, p <.01). As a result of the divergent validity analysis, it was found that there was a negative correlation between the Parental Stress Scale and the Satisfaction with Life Scale (r = -.37, p <.01).

Reliability Results

The internal consistency coefficients of the Parental Stress Scale were calculated separately for the 4 factors emerged in the validity studies and also calculated for the entire scale. As a result of the analysis, it was found that the Cronbach alpha internal consistency coefficient was to be .76 for Factor 1, .72 for Factor 2, .70 for Factor 3, 71 for Factor 4, and .81 for the whole scale. Corrected item correlations varied between .36 and .63.

DISCUSSION, CONCLUSION & SUGGESTIONS

In this study, the psychometric properties of the Parental Stress Scale developed by Berry and Jones (1995) were examined in a sample of Turkish parents. The adaptation process of the original scale to the Turkish sample started with the linguistic equivalence study. The construct validity was examined with EFA and CFA analyses; while criterion validity was tested with the Satisfaction with Life Scale and Perceived Stress Scale. After that, Cronbach alpha internal consistency coefficients between the upper and lower 27% groups were calculated.

According to the results obtained from EFA conducted to test the construct validity, the scale gave the best values in a 4-factor construct similar to the original scale. These factors and the variances explain 14.88% of the parental rewards subscale, 12.96% of the parental stressors subscale, 9.83% of the lack of control subscale, 5.56% of the parental satisfaction subscale, and 43.2% of the total variance. In social sciences, multi-factor scales are expected to explain 40% to 60% of the variance (Büyüköztürk, 2002; Çokluk et al., 2010). In the light of this information, it is seen that the scale adequately explains this variance. The 11th item (my child's behavior is often stressful for me) that is under the parent satisfaction subscale in the original scale, was placed in the lack of control subscale in the Turkish sample model (Model 2). It was observed that this replacement increased the factor loading and led to the better goodness of fit values of this model (Model 2) than the Model 1. (Goodness of fit values for Model 1: $\chi2/df$ = 2.258, RMSEA = .06, GFI = .93, AGFI = .90, CFI = .91 SRMR = .072; Goodness of fit values for Model 2: $\chi2/df$ = 1.562, RMSEA = .04, GFI = .94, AGFI = .93, CFI = .96 and SRMR = .046). Based on obtained results, the scale appeared to fit well in Turkish parents (Hu & Bentler, 1999; Kline, 2015). It is assumed that this finding has links to the fact that Turkish parents mostly feel responsible for their child's behavior. Especially in societies where self-construal is relational, such as the Turkish society, the behavior of the child is not separate from the parent, rather it is thought that it is an expected result to be regarded as a reflection of parental behavior.

The discriminant validity of the scale was studied for each item with IRT, and for whole scale comparing upper and lower %27 groups. According to IRT results, 13 items' α values were above 1 which is accepted as 'discriminant' (Baker, 2001). The other three items' α values were between .88 and .92. Basic aspects of the IRT parameters can be described by the item characteristic curve (ICC), which is a curve shaped like an "S" was used in ICC analysis and was carried out using the Graded Response Model (GRM). The ICC's of the items are showed in Appendix A. T-test results between the upper 27% and lower 27% groups showed a significant difference. Although 3 items' α values were lower than 1, they were very

close to 1 and the difference between upper and lower %27 cut-off points was significant. Thus, Parental Stress Scale has discriminant validity for Turkish parents.

Reliability analysis of the 4-factor structure of the Parent Stress Scale Turkish Form was performed with the Cronbach alpha internal consistency coefficient. As a result of the analysis, the Cronbach alpha internal consistency coefficients were found to be .76, .72, .70, .71 and .81 respectively. The internal consistency coefficient of the scales used in social sciences above .70 indicates that the scale is reliable (Büyüköztürk, 2010). And corrected item-total correlations were above .30 for each item. Findings of this study showed that the Parental Stress Scale Turkish Form is also reliable.

All these findings demonstrate that the Parent Stress Scale Turkish Form is a valid and reliable tool for Turkish parents. However, this study also has some limitations. In this research, the sample was composed of parents selected with a snowball sampling method. Similar studies to be carried out in the future are suggested to be designed with random sampling method. Besides, parents whose children do not attend formal education, such as parents with adult children, are suggested to be involved in similar studies. By including these participants, it is thought that the examination of validity and reliability will contribute both to the generalizability of the results and to the relevant literature. It is hoped that the scale will be used in further studies of parental stress in Turkish context.

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Appendices

Appendix I. Item characteristic curves (ICC) of Parental Stress Scale Turkish Form
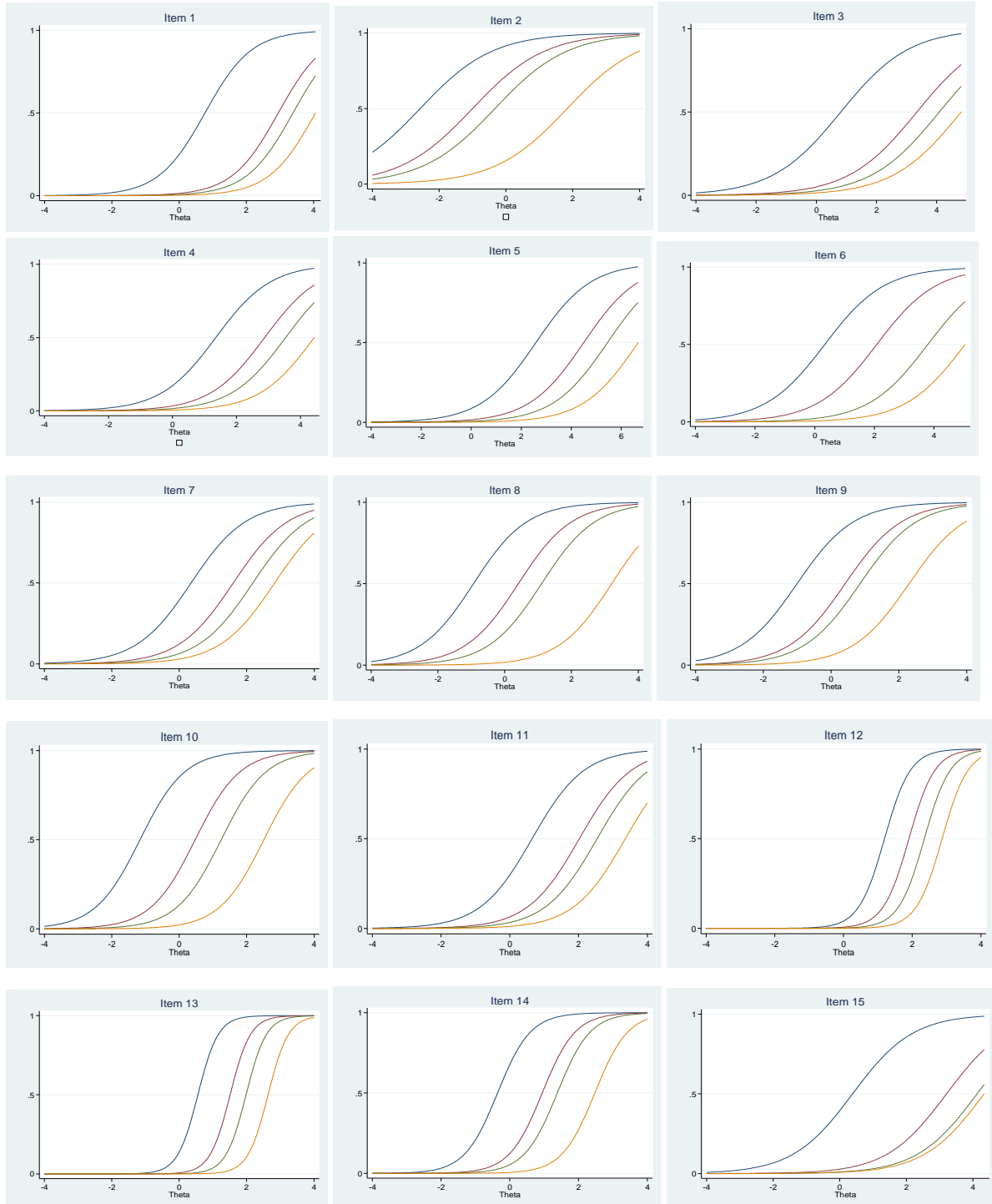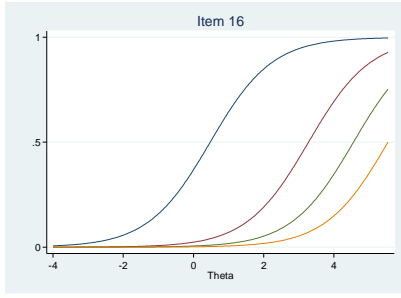
Appendix II. Parental Stress Scale Turkish Form

1*	Bir ebeveyn olarak bu rolden mutluyum
2	Çocuğuma bakmak bazen gerektiğinden çok daha fazla zaman ve enerjimi alıyor.
3*	Çocuğuma oldukça yakın hissediyorum.
4*	Çocuğumla vakit geçirmekten hoşlanıyorum.
5*	Çocuğum benim için önemli bir mutluluk kaynağıdır.
6*	Çocuğumun olması bana gelecek hakkında daha net ve daha iyimser bir bakış açısı sağlıyor.
7	Hayatımdaki en büyük stres kaynağım çocuğumdur.
8	Çocuk sahibi olmak hayatımda çok az zaman ve hareket alanı bırakır.
9	Çocuk sahibi olmak maddi açıdan büyük bir yüktür.
10	Çocuğumla hayattaki diğer sorumluluklarım arasında denge kurmak zordur.
11	Çocuğumun davranışları benim için çoğu zaman utandırıcı ve stres verici oluyor.
12	Geriye dönebilseydim çocuk sahibi olmamaya karar verebilirdim.
13	Ebeveyn olma sorumluluğum bana boğulmuş hissettiriyor.
14	Çocuk sahibi olmak hayatım hakkında daha az seçenek ve daha az kontrol anlamına geliyor.
15*	Ebeveynliğimden memnunum.
16*	Çocuğumu eğlenceli buluyorum.

*These items should be coded as reversed.

Parental rewards: 1,3,4,5,6

Parental stressors: 2,7,8,9,10,14

Lack of control: 11,12,13

Parental satisfaction: 15, 16

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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.

Ethical Statement

This study was completed in accordance with the Helsinki Declaration. In line with this, the study was permitted by Istanbul Medipol University, Social Sciences Ethics Committee.
Ethics Committee Name: Istanbul Medipol University, Social Sciences Ethics Committee.
Approval Date: 07/01/2020
Approval Document Number: 21

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

İlkokul Öğrencilerinin Algılanan Anne Baba Tutumları ve Olumsuz Değerlendirilme Korkuları ile Öz Yeterlik Algıları Arasındaki İlişkinin İncelenmesi

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ABSTRACT

This study carried out to examine the relationship between the perceived parental attitude, fear of negative evaluation levels, and perception of self-efficacy of the 3rd and 4th-grade elementary school students. The study sample consisted of 403 elementary school students who were educated in İstanbul in the 2018-2019 academic year. In the study; the Parental Attitude Scale, The Fear of Negative Evaluation Scale, and the Self-efficacy Scale for Children were used. According to the findings of the study, a positive significant relationship was found between parental attitudes and self-efficacy and a negative significant relationship between parental attitudes and fear of negative evaluation. Alsono statistically significant relationship was found between self-efficacy and fear of negative evaluation. In addition, while a significant relationship was found between gender and parental attitudes and fear of negative evaluation in favor of girls, it was concluded that self-efficacy did not differ in terms of gender.

ÖZET

Bu çalışma ilkokul üçüncü ve dördüncü sınıf öğrencilerinin algılanan anne baba tutumları, olumsuz değerlendirilme korkuları ile öz yeterlik algıları arasındaki ilişkiyi incelemek amacıyla yapılmıştır. Araştırmanın örneklemi 2018-2019 eğitim öğretim yılında İstanbul ilinde eğitim gören 403 ilkokul öğrencisinden oluşmaktadır. Çalışmada gerekli verileri toplamak amacıyla Anne Baba Tutum Ölçeği, Olumsuz Değerlendirilme Korkusu Ölçeği ve Çocuklar için Öz Yeterlik Ölçeği kullanılmıştır. Araştırma bulgularına göre anne baba tutumları ile öz yeterlik algısı arasında pozitif yönde anlamlı ilişki ve anne baba tutumları ile olumsuz değerlendirilme korkusu arasında negatif yönde anlamlı bir ilişki oluğu belirlenmiş, öz yeterlikle olumsuz değerlendirilme korkusu arasında istatistiksel açıdan anlamı ilişki saptanmamıştır. Bunun yanı sıra cinsiyet değişkeni ile de anne baba tutumları ve olumsuz değerlendirilme korkusu arasında kızlar lehine anlamlı ilişki tespit edilirken, öz yeterlik algısının cinsiyet açısından değişiklik göstermediği sonucuna ulaşılmıştır.

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

INTRODUCTION

One of the most important characteristics of healthy individuals is that they have good mental health. The protection of mental health has a very important place for individuals to establish healthy relationships with their environment, to continue their social life actively, to be productive in their work, family, and social life; in short, to continue their lives healthily. Although all the factors in the environment have a share in protecting the mental health of the individual, the family and close environment is of critical importance here.

Children; grow and develop in and as a part of a dynamic system consisting of psychological interactions between family members (Özgüven, 2010). Therefore, to understand the behavior and mental state of the child better, it is necessary to know the family environment and the dynamics of this environment. Studies have shown that positive family attitudes contribute to children's "personality development, self-esteem, self-efficacy perceptions, self-confidence, psychological resilience, school achievements (Cüceloğlu, 1998; Dam, 2008; Eroğlu & Odacı, 2019; Nimsi, 2006; Sağat, 2016; Yıldırım, 2019); while negative parental attitudes increase children's susceptibility to depression, affect their level of perfectionism, increase their level of anxiety and aggression, increase their social anxiety levels, and cause behavioral problems to appear (Dursun, 2010; Gökkaya, 2016; Grusec, 2010; Kayan, 2012; Rosli, 2009; Tunca, 2020). Parental attitudes are the cluster of attitudes and behaviors towards the child that creates an emotional environment in which parental behaviors are expressed (Darling & Steinberg, 1993; Yılmaz, 2000). Parental attitudes have generally been the subject of studies by discussing them under three main headings, two extreme points and in the middle of these two points. These are "democratic, authoritarian and extremely tolerant" parent attitudes (Baumrind, 1966; Kaya, 1997; Kuzgun & Eldeklioğlu, 1999; Özgüven, 2010; Ulusoy et al., 2005; Yavuzer, 2010, 2012; Yılmaz, 2000; Yörükoğlu 2011).

According to studies, children who grow up in democratic families develop a happy, friendly, non-depressive, and constructive personality (Özgüven, 2010; Yavuzer, 2010). On the other hand, children who grow up in a tolerant family environment know no limits and they are neglected and have very poor progress in terms of development (Ulusoy et al., 2005; Yılmaz, 2000). Authoritarian parental attitude causes children to decrease their self-confidence and develop various behavioral problems (Kaya, 1997; Yörükoğlu 2011). In addition to these parental attitudes are significantly effective in the development of social anxiety in the child (Fyer, et al., 1993). Parental attitudes are also a factor in the emergence of fear of negative evaluation (Erkan, 2002) and the low or high perception of self-efficacy of the child. In addition, it was stated that individuals coming from protective, willing, and authoritarian families experience more fear of negative evaluation and that this fear is at a low level in individuals from democratic families (Erkan, 2002; Festa & Ginsburg, 2011; Gülşen, 2013; Kılıç, 2005; Koydemir, 2006).

The concept of self-efficacy which emerges as one of the elements that play an important role in the social development of the child and child's communication with the environment was defined by Bandura (1999) as "The belief in the capacity of the individual to organize and conduct the behaviors required to manage the situations to be encountered in the future." The concept of self-efficacy has been discussed in a wide range in the literature and has been examined in different categories according to various situations, such as; self-efficacy for general situations (Luszczynska et al., 2005), self-efficacy for academic achievement (Kırıkkanat & Soyer, 2017), academic self-efficacy (Ekici, 2012), emotional self-efficacy (Petrides et al., 2006), social self-efficacy (Palancı, 2004), self-efficacy for career and talent development (Yıldız, 2015), interpersonal self-efficacy (Çapri & Kan, 2006), teacher self-efficacy (Kurt et al., 2013),

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

computer self-efficacy (Işıksal & Aşkar, 2003). The environment in which the individual grows up and especially parental attitudes are very effective in shaping the "perception of self-efficacy" that begins to develop at an early age. According to the findings obtained from the studies, if negative parental attitude prevails in a family environment if family functions are not fulfilled healthily, if there is a lack of interest, love, and support, individuals who grow up in such families are likely to have a low self-efficacy perception (Seifi, 2016; Yörük, 2012). On the other hand, if democratic attitude prevails in the family environment, if there is a sufficient level of tolerance, love, and respect in the family environment, and if individual rights and freedoms are cared for, self-efficacy perception is also at a high level in individuals who grow up in this family environment (Ceylan, 2013; Yalnız, 2004; Yıldırım, 2018).

This study aims to examine the relationship between perceived parental attitudes and fear of negative evaluation and self-efficacy with the gender variable of 3rd and 4th-grade primary school students. The perception of self-efficacy, which has started to develop since childhood, gains more importance with starting school. As the child starts school, social networks expand, the evaluation of others gains importance and the perception of self-efficacy begins to take shape. In shaping this perception, positive or negative attitudes of parents towards children from birth play a critical role. Considering the effect of the family environment in which the child grows up and the way the individual is evaluated from an early age on his social development, it is thought that fear of negative evaluation and perceived parental attitudes may be closely related to the perception of self-efficacy. In this context, such a study was needed to determine the effects of these concepts on each other, and it was deemed important to determine students' fear of negative evaluation levels and self-efficacy perceptions. This study was deemed important in terms of understanding the connection between parental attitudes and fear of negative evaluation and self-efficacy in children, and analyzing these three variables by gender to reach distinctive findings.

METHOD

Research Model

The research, carries the characteristics of causal-comparative type from quantitative research types, according to philosophy it's based on, while it carries the characteristics of relational research type according to it is level. The Researcher tries to explain the relationship between variables in quantitative research and there are various quantitative research methods. Survey studies are one of these methods and to determine some characteristics of a targeted audience, it's made by collecting data. Relational researchers arethe researches that examine- relationships and connections (Büyüköztürk et. al., 2013).

Study Group

The study population "consists of three and fourth-grade primary school students in Üsküdar, İstanbul". In the second term, there were 4778 third grade students and 4767 fourth grade students and in total 9545 students in Üsküdar district for 2018-2019. (Data were obtained from Üsküdar District National Education Directorate Strategy Development Department). According to this number, the size of the sample to be included estimated by using "the calculation formula which is given Büyüköztürk et al., 2013. With this formula, it was determined that the research should be done with a minimum of 370 participants. Because of the possibility of extreme values and potential loss of data (such as; inattentive and random filling, not completing the scales by the subjects, not filling the scales, etc.); it's concluded that more data was needed and 440 people were applied scale and the data of 403 people were taken into

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

consideration. 17 people's data were not included in the analysis because 17 people did not respond to the scales. So the sample of this study consists of 403 primary school third and fourth-grade students studying at an elementary school in the district of Üsküdar in Istanbul in the 2018-2019 academic year 51.3% (207) of the students participating in the research are girls; while 48.3% (206) of them are male students.

Ethical Statement

This study was completed by the Helsinki Declaration. In line with this, the study was permitted by Yeditepe University, Social and Human Sciences Ethics Committee (REF: 75078252-050.01-510-31).

Data Collection Tools

In the study; to determine student's fear of negative evaluation levels; "Fear of Negative Evaluation Scale," which was developed by Erkan (2002) was used, to determine parental attitudes "Parental Attitudes Scale" which was adapted to Turkish by Yılmaz (2000) was used, to measure the self-efficacy perception of the participants, "Self-Efficacy Scale for Children" which was developed by Çetin (2007) was used. The psychometric properties of data collection tools are listed below.

Parental Attitude Scale (PAS). To determine the perceived parental attitudes of the participants, the Parenting Attitude Scale, which was developed by Lamborn et al. (1991), and was translated and adapted into Turkish by Yılmaz (2000) was used. This scale is a 26-item Likert-type tool developed to determine the parents' attitude perceptions of elementary, high school, and university level students. The scale includes three subscales which are composed of acceptance/involvement, psychological autonomy, and strictness/supervision. The first dimension and the third-dimension items are quartet Likert type, and the second item is seven-point Likert type and the remaining items are triple Likert type rating scale. The odd-numbered items up to the 19th item of the scale are included in the "acceptance/interest" dimension. Even-numbered items are included in the "psychological autonomy" dimension. Other items are included in the "strictness / supervision" dimension. The highest score that can be obtained from PAS is 104, while the lowest score is 26. High scores from the scale indicate that the parental attitude perceived by the student is -democratic attitude, while low scores mean that the authoritarian attitude is perceived higher. Test-retest reliability coefficients and Cronbach's alpha internal consistency values for the primary school sample of the scale were found as; .75 and .93 in "strictness / supervision" dimension, .74 and .60, and.75 in "acceptance-involvement" dimension and .79 and .67 in "psychological autonomy" dimension.

The Fear of Negative Evaluation Scale (FNES). In this study, to determine the level of fear of negative evaluation of the third and fourth-grade students in elementary school, the "Fear of Negative Evaluation Scale" which was developed by Watson and Friend in 1983, and was adapted to Turkish in 2000 by Erkan was used. The scale prepared in "True" and "False" format and consists of 30 items; there are 17 "True" and 13 "False" items. The numbers of items considered to be true are; 2,3,5,7,9,11,13,14,17,19,20,22,24,25,28,29,30; The numbers of items considered to be false are; 1,4,6,8,10,12,15,16,18,21,23,26,27. Each "True" question is calculated as (1) point, and each false question is calculated as (0) point in the scale. The minimum score can be obtained from the scale is 0, and the maximum score is 30. Taking a high score from this scale means having high social anxiety. The reliability and validity of the FNES were analyzed by the research made by Erkan et al. (2003). The validity and reliability studies of the FNES" were conducted on a sample of 272 persons. The internal consistency

Investigatton The Relationship Between The Perceived Parental Attitude, The
Fear of Negative Evaluation and The Self-Efficacy Perception of The
Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

coefficient of KR-20 was found to be .88, and the Test-retest reliability of the scale was found to be .82. The validity study of the scale was performed by the criterion-related validity method. The correlation coefficient between the Trait Anxiety Inventory and FNES was determined as .49 and the correlation coefficient with the State Anxiety Inventory was found to be .24. The double-serial correlation means of the items in the scale was determined as .65.

Self-Efficacy Scale for the Children (SESFC). The self-efficacy perceptions of the students, in the scope of the study was determined by the Self-Efficacy Scale for Children, which was developed by Bandura in 1990 and adapted to Turkish by Çetin (2007). The scale is developed in a five-point Likert type. The scale includes a total of 49 questions. The highest score that can be obtained from this scale is 245, and the lowest score is 49. The scale is evaluated over the total scores. Getting high scores from this scale means having high self-efficacy. The validity and reliability studies of the SESFC were conducted on a sample of 562 third and fourth primary school students. The correlation of each item with the total item (r=.66) and (r=.44); the item-remainder correlation varies between (r=.65) and (r=.40). The reliability coefficients were calculated as Cronbach Alpha (.95) and Spearman-Brown (.90).

Data Collection and Analysis

The data relating to the study were collected by the researcher voluntarily basis in the spring semester of the 2018-2019 academic year, after obtaining the necessary permissions and ethics committee approval. Within the scope of the study, all necessary permissions were obtained from the ethics committee and the Ministry of National Education for the use of measurement tools before the data collection process started. The analysis of the data in this study was made with SPSS 16.0 package program. In the study, the significance level was taken as .05 bilaterally, and under appropriate conditions, the significance level was evaluated as .01. Kurtosis and Skewness values were examined to test whether the data were normally distributed. As a result of the analysis, it was observed that the values varied between -0.78 and 0.40, and the data were distributed normally according to these results. Pairwise group comparisons were made by independent sample t-test. The relationship of variables with each other is found by the Pearson Product Moment Coefficient. Moreover, the predictive power of parental attitudes and fear of negative evaluation" on self-efficacy was calculated by Multiple Linear Regression Analysis.

RESULTS

Descriptive statistics regarding the data obtained from the Fear of Negative Evaluation Scale, Parental Attitudes Scale, and Self-Efficacy Scale for Children which are used in the study are presented in Table 1.

Table 1. Descriptive statistics of the data obtained from the sample

Variables	N	Min.	Max.	X̄	SD
PAS					
A/I	403	12	32	24,82	3,35
PA	403	7	28	19,14	3,98
S/S	403	18	26	23,91	1,90
FNES	403	0	17	10,21	3,30
SESFC	403	16	50	38,97	6,66

(Note: PAS: Parental Attitudes Scale, A/I: Acceptance/Involvement, PA: Psychological Autonomy, S/S: Strictness/Supervision, FNES: Fear of Negative Evaluation Scale, SESFC: Self-efficacy Scale for Children.)

Investigation The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

As observed in Table 1; The average of the scores obtained from the PAS A/I dimension is (X=24,82), the standard deviation is (sd=3,35); an average of scores obtained from P/A dimension is (X=19,14), the standard deviation is (sd=3,98); an average of the scores obtained from the S/S dimension is (X=23,91), the standard deviation is (sd=1,90). The minimum score obtained from the FNES is six and the maximum score is 26; the average of scores obtained from this scale is (X=16,45), Standard deviation is (sd=3,37). The minimum score obtained from the SESC is 16, and the maximum score is 50. The average of scores obtained from this scale is (X= 38,97), the standard deviation is (sd=6,66).

Table 2. t-test results of parental attitude scale for acceptance / interest, psychological autonomy, supervision dimension, fear of negative evaluation scale and self-efficacy scale for children for independent groups according to gender

D/S	Grup	n	X̄	SD	t-test t	P
A/I	Female	210	25,04	3,41	1,35	0,17
	Male	193	24,58	3,28		
PA	Female	210	19,27	3,91	0,67	0,50
	Male	193	19,00	4,06		
S	Female	210	24,10	1,91	2,15	0,03
	Male	193	23,70	1,86		
FNES	Female	210	10,80	3,27	3,73	0,00
	Male	193	9,58	3.23		
SESFC	Female	210	39,32	6,97	1,08	0,27
	Male	193	38,60	6,30		

According to Table 2, female students' "AI" sub-dimension average score is

X=25.04; P/A sub-dimension means X = 19.27 and "S" subscale mean score is

X = 24.10; while male students' "A/I" sub-dimension mean is X = 24.58; "PA" sub-dimension means is X = 19.00 and "S" sub-dimension means is X = 23.70. Accordingly, while male and female students' A/I and P/A dimension mean scores do not differ by gender; [t (401) = 1.351, p> 0.05; t (401) = 0.670, p> 0.05]; S/S subscale scores differ in favor of girls [t (401) = 2.255, p <0.05]. In other words, while female and male students perceive their parents' acceptance and involvement and -psychological autonomy similarly, girls perceive their parents as more controlling and authoritative when compared to boys. According to the table, the average of the points that the girls got from the FNES is X = 10.80, the average score of the boys is X = 9.58. Accordingly, the scores obtained differ significantly in favor of girls [t (401) = 3.737, p <0.05] and female students are more afraid of being evaluated negatively than boys. Looking at SESFC the average score of girls is X = 39.32, and the average score of boys is X = 38.60. It is observed that the difference in SESFC scores and gender variable mean scores" is not significant [t (401) = 1.088, p> 0.05] and the self-efficacy perceptions of girls and boys are at a similar level.

Before conducting the regression analysis that will determine the predictive power of parental attitudes and fear of negative evaluation, self-efficacy perception which are the independent variables of the study,

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

the relationship between variables which is the prerequisite of regression, was determined by Pearson Correlation Analysis and presented in Table 3.

Table 3. Pearson correlation analysis results of the parental attitude scale, fear of negative evaluation scale and children's self-efficacy scale

			1	2	3	4	5
PAS	A/I (1)	r	---				
		p	.00				
	PA (2)	r	.06	---			
		p	.93	.00			
	S/S (3)	r	.18**	.00	---		
		p	.00	.47	.00		
	FNES (4)	r	.07	-.10*	.28*	---	
		p	.06	.01	.020	.00	
	SES (5)	r	.19**	.07	-.18**	-.06	---
		p	.00	.07	.00	.11	.00

* p<.05;**p<.01

According to Table 3, there is a negative (r = -0.104, p <0.01) relationship between the scores obtained from FNES and the P/A sub-dimension scores of PAS. In contrast, there was a positive (r = -0.284, p <0.01) significant relationship between the S/S subscale scores; The relationship between the A/I sub-dimension is not significant.

As shown in Table 3, there is a positive relationship (r = 0.197, p <0.01) between the scores obtained from the SESFC and the scores of the PAS A/I sub-dimension. However, there is a significant negative relationship (r = -0.183, p <0.01) between the S/S subscale scores. In addition, there was no statistically significant relationship between the P/A sub-dimension. Based on these analyzes, the results of multiple linear regression analysis made to determine the relationship between perceived parental attitudes and fear of negative evaluation and perceptions of children's self-efficacy are given in Table 4.

Table 4. Multiple linear regression analysis results of acceptance/involvement, psychological autonomy and strictness/supervision" sub-dimensions and fear of negative evaluation scale of the parental attitude scale

	B	S.H.	β	t	Pearson r	sr²
FNE	-0,161	0,100	-0,080	-1,610	-0,061	-0,081
A/I	0,335	0,098	0,169	3,414	0,197	0,169
PA	0,085	0,082	0,051	1,041	0,072	0,052
S	0,526	0,173	0,150	3,038	0,183	0,151

* p<0,05,**p<0,01

As shown in Table 4, the combination of independent variables explains 7% of the variance of SESFC scores as a result of the multiple regression analysis performed to determine the predictive power of the PAS A/I, PA, and S/S sub-dimensions and FNES scores on SESFC scores ($R2 = 0.071$; p <0.05). When each independent variable is evaluated alone, A/I (t = 3.414, p <0.01) and S subscale (t = 3.038, p <0.05) are significant predictors of self-efficacy. FNES (t = -1.610, p> 0.05) and PA sub-dimension of PAS (t = 1.041, p> 0.05) are not significant predictors of self-efficacy. That is, as the acceptance and involvement and strictness and supervision towards the child increases, the child's self-efficacy perception increases.

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

DISCUSSION, CONCLUSION & SUGGESTIONS

This study aims to examine the relationship between perceived parental attitudes and fear of negative evaluation and self-efficacy perceptions of primary school students in the 3rd and 4th-grade together with the gender variable. According to the findings obtained from the research, parental attitudes and fear of negative evaluation are significant predictors of self-efficacy. According to the results of the study, the S/S sub-dimension of PAS and FNES scores differ in favor of girls by gender. Accordingly, female students perceive their parents as more controlling and are afraid of being evaluated negatively more than male students. Similar to these results, Koydemir (2006) also found a significant relationship between the S/S dimension of PAS and gender in his study. In different studies on the subject, it was concluded that female students perceive their families more as supervisory and authoritarian (Belli, 2018; Yalnız, 2014; Yılmaz, 2009). Contrary to these findings, Erdoğan and Uçukoğlu (2011) found in their study that male students perceive their families as more rejecting and overprotective, Tunca (2020) found that girls perceived their families as more protective and democratic while boys perceived their families as more rejecting. Sağat (2016) could not find any relationship between gender and protective, authoritarian, and democratic attitudes. In addition, the majority of studies conclude that fear of negative evaluation is higher in female students than male students, similar to the findings of this study (Avcı, 2015; Aydın, 2008; Carleton et al., 2007; Hartmann et al., 2010; Kumar et al., 2015). Contrary to these findings, Aslan (2017) and Gök (2019) found that fear of being negatively evaluated did not differ in terms of gender.

According to the results of the study, a high level of negative significant relationship was found between the PA sub-dimension of PAS and FNE. In addition, a positive and low-level significant relationship was found with the S/S subscale. A high level of positive significant relationship was found between the A/I sub-dimension of PAS and SEFC, and a high level of negative significant relationship with the S/S sub-dimension. According to the findings obtained in this study, while the accepting attitudes of the parents reduce the fear of being evaluated negatively, their tolerant attitudes increase the self-efficacy perceptions; authoritarian and supervisory attitudes, on the other hand, increase children's fear of negative evaluation and cause self-efficacy perceptions to decrease. Cankardaş (2009), Erkan (2002) and Koydemir (2006) found that families' attitudes affect the fear of being negatively evaluated, while Seifi (2016), Yalnız (2014), Yıldırım (2018), Yıldırım (2019 and Yörük (2012), determined that democratic family attitude is important in increasing the self-efficacy perception. Considering that the fear of negative evaluation includes social anxiety, in various studies, authoritarian and controlling family attitudes increase social anxiety (Altan & Atalay, 2011; Eken, 2019; Eroğlu, 2018; Eroğlu & Odacı, 2019; Festa & Ginzburg; 2011; Gökkaya, 2016; ; Tunca, 2020); it causes a decrease in self-efficacy perception (Seifi, 2016; Yıldırım, 2018; Yıldırım, 2019; Yörük, 2012;); On the other hand, it has been determined that the democratic attitude reduces social anxiety (Gökkaya, 2016). Contrary to these findings, there are studies in the literature that do not find any relationship between parental attitudes and fear of negative evaluation, albeit few - (Belli, 2018; Erdoğan & Uçukoğlu, 2011; Sağat, 2016;). Based on this, it can be said that the results of this study are mostly compatible with the literature.

In this study, as a result of the multiple regression analysis performed to determine the predictive power of the A/I, PA, S/S sub-dimensions" of PAS and the SESFC scores of FNES, the combination of independent variables explain 7% of the variance of SESFC scores. Accordingly, it was determined that parental attitudes S/S, A/I and PA sub-dimensions and fear of negative evaluation had a significant effect on self-efficacy perception. When each independent variable is evaluated alone, it is seen that the A/I

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

and S/S sub-dimensions are significant predictors of self-efficacy perception. It was concluded that psychological autonomy and fear of negative evaluation was not a significant predictor of self-efficacy. Similar to the predictive effect in this study, Yalnız (2014) found that self-efficacy was significantly influenced by parental attitudes in his study, which dealt with the relationship between perceived parental attitudes and self-efficacy. Different studies in the literature have also found that parental attitudes have effective results on self-efficacy perception (Aktürk & Aylaz, 2013; Ceylan, 2013; Cho et al., 2013; Gülşen, 2013; Seifi, 2016; Yıldırım, 2018; Yıldırım, 2019).

Considering human life, the importance of parents in the cognitive, emotional, physical, and psychological development of the individual cannot be denied. Since positive and negative judgments towards the child first begin in the family, it is thought that the positive or negative situations that may occur in the child and the child's self-confidence are related to the parents' attitudes. In addition, when the concept of self-efficacy, which is the belief that the individual can achieve something and the assessment situations are placed in this equation, parent attitudes have a share in the development of self-efficacy and the formation of fear of evaluation. In summary, positive behaviors of parents decrease the fear of being evaluated negatively and increase the perception of self-efficacy, while negative harsh attitudes and behaviors increase the fear of being negatively evaluated and decrease the perception of self-efficacy.

This study has some limitations. Firstly; findings obtained are limited to "İstanbul province Üsküdar District Yavuztürk Primary School students". In future studies, it will be useful to conduct similar studies with different sample groups. Secondly, it was observed that the measurement tools used in the study were insufficient in measuring the desired properties at some points. In this context, measurement tools that are more suitable for younger age groups can be developed and similar studies can be done again. Thirdly, it is thought that the sociocultural characteristics of the environment where the research data are collected, such as family dynamics, patriarchal family characteristics, large and crowded family structure, culture, educational status of the families affect the research results. In this respect, making similar studies in schools with different sociocultural characteristics will contribute to the expansion of the subject. Finally, fear of negative evaluation is a new concept in the literatüre, and studies on the subject are limited. In this study, it was found that fear of negative evaluation does not affect on self-efficacy perception and the obtained results could not be compared with the results of other studies, since no research was found on the subject. Conducting different studies on this subject in the future and comparing the findings have been deemed important in terms of clarifying the relationship between these two variables.

When the literature is examined, it is seen that there is no study examining the relationship between parental attitudes, fear of negative evaluation, self-efficacy perception, and gender. Therefore, it can be said that the research conducted will fill the gap in the field and will contribute to the literature. Considering that the effects of parental attitudes on the individual have a critical place, the importance of raising awareness of families comes to the fore. In this context, it may be suggested that psychological counselors working in the field should carry out family training activities. In addition, individual and group studies for students with low self-efficacy and high social anxiety may be beneficial for these students, especially in kindergarten and primary education. Again, by the academicians working on this subject, creating programs that increase the perception of self-efficacy and reduce social anxiety will help the practitioner counselors in the field.

Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

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Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

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Investigatıon The Relationship Between The Perceived Parental Attitude, The
Fear of Negative Evaluation and The Self-Efficacy Perception of The
Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Investigatıon The Relationship Between The Perceived Parental Attitude, The Fear of Negative Evaluation and The Self-Efficacy Perception of The Elementary School Students

Acar Bulut & Kali Soyer (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Author Contributions

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

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

Conflict of Interest

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

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Ethical Statement

This research was completed in accordance with the Helsinki Declaration. In accordance with this, the study was examined and allowed by Yeditepe University Social and Human Sciences Ethics Committee (REF: 75078252-050.01-510-31). Furthermore, instruments in the study were just appropriated to volunteer participants. All participants provided informed consent. Additionally, participants were informed that they could drop out from the study at any time during data collection.

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RESEARCH   Open Access

ARAŞTIRMA   Açık Erişim

The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

Öznel İyi Oluşu Arttırma Programının Zararlı Alışkanlıkları Olan Ergenlerin Öznel ve Psikolojik İyi Oluşları Üzerindeki Etkisi

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ABSTRACT

This study aims to investigate the effectiveness of the subjective well-being increasing program on the subjective and psychological well-being of adolescents having harmful habits. This study which is used an experimental design including pre-test and post-test measurements with experimental and control groups, Personal Information Form, Adolescent Subjective Well-Being Scale, and EPOCH Scale were used to collect data. The experimental group received a subjective well-being program while the control group received no intervention. The results of Wilcoxon Signed Ranks showed that the post-test scores of the experimental group were significantly higher than the pre-test scores. In addition, the results of Mann Whitney U showed that the post-test scores of the experimental group were significantly higher than the post-test scores of the control group. Finally, the results obtained were discussed and interpreted according to the background of the research. Besides, suggestions were offered to further studies.

ÖZET

Bu çalışmanın amacı, öznel iyi oluşu artırma programının zararlı alışkanlıklara sahip ergenlerin öznel ve psikolojik iyi oluşları üzerindeki etkililiğini incelemektir. Deney ve kontrol gruplu ön test ve son test ölçümlerini içeren deneysel desenin kullanıldığı bu çalışmada, veri toplamak için Kişisel Bilgi Formu, Ergen Öznel İyi Oluş Ölçeği ve EPOCH Ölçeği kullanılmıştır. Deney grubuna öznel iyi oluş programı uygulanırken, kontrol grubuna müdahale edilmemiştir. Wilcoxon İşaretli Sıralar testinin sonuçları, deney grubunun son test puanlarının ön test puanlarından anlamlı düzeyde yüksek olduğunu göstermiştir. Ek olarak, Mann Whitney U testinin sonuçları, deney grubunun son test puanlarının, kontrol grubunun son test puanlarından anlamlı derecede yüksek olduğunu ortaya koymuştur. Son olarak, elde edilen sonuçlar tartışılmış ve ilgili alanyazına göre yorumlanmış, gelecek araştırmalar için öneriler sunulmuştur.

Ethical Statement: The study was examined and allowed by Uludag University's social and humanities research and publication ethics committee (REF 11 2018-10).

The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

INTRODUCTION

Subjective well-being, which can be expressed as happiness among people, consists of three important components; life satisfaction, positive emotions and negative emotions. As the name suggests, the most important feature is that it is subjective and it is determined entirely according to the subjective point of view of the individual (Diener, 1984). Accordingly, when a person evaluates his life according to his criteria, it is stated that if he can say that he is satisfied with his life, that he often has positive emotions, and that he has little negative emotions, it can be concluded that his happiness level is high (Diener, 1984; Diener et al. 1999; Diener et al., 1997).

On the other hand, psychological well-being reflects the characteristics of the fully-functioning individual. According to the model of Carol D. Ryff (1989), who made important studies in this field, to speak of a person having a high level of psychological well-being, that person must function positively in six different existential tasks. These tasks are self-acceptance, positive relationships with others, environmental dominance, autonomy, meaningful life, and personal development (Ryff, 1989; 1995; Ryff & Singer, 1996). Today, such functionality and subjective well-being are necessary protective elements, although they are not sufficient on their own to explain mental health (Diener, 1984). Unlike these protective factors, smoking, and alcohol use; considering the age of onset of use, its prevalence, and its effects, it is seen that it appears to be a risk factor, especially for the mental health of adolescents(Baska et al., 2009; Doğan & Ulukol, 2010; Engels et al., 2005; Şaşmaz et al., 2006; Veselska et al., 2011; Windle & Windle, 2001).

In adolescence, subjective well-being, psychological well-being, and having harmful habits may be interrelated. It is known that smoking and alcohol use can be observed in adolescence depending on the biological, social, and psychological changes experienced by individuals (Dorner & Biron, 2011; Steinberg, 2004). At the same time, this may negatively affect the subjective and psychological well-being of adolescents (Murphy et al., 2005), or vice versa, their low well-being can trigger them to adopt harmful habits (Zullig et al., 2001).

As an example of the changes mentioned above, during adolescence, individuals may become more distant from family members and closer to friends. As a matter of fact, according to Goldbeck et al. (2007), adolescents' satisfaction with friendships is higher than family satisfaction. The importance given to peers in this period ensures that peer relationships have a determining effect on subjective and psychological well-being, and positive peer relationships increase subjective and psychological well-being (Eryılmaz, 2009). On the other hand, peer influence can pave the way for harmful habits because adolescents tend to conform to the good or bad standards of their peers (Brechvald & Prinstein, 2011; Brend, 1979; Steinberg & Monahan, 2007).

Many other dynamicspush adolescents into harmful habits or negatively affect their well-being. While acknowledging this fact, this research aims to focus on factors that protect adolescents from these habits and improve their well-being. Factors affecting the subjective and psychological well-being of adolescents can be given as examples of factors such as self-esteem, autonomy, self-acceptance, personality, relationships with peers and family, skills such as problem-solving and coping with stress, optimism, and purposefulness (Demirci & Ekşi, 2015; Eryılmaz, 2012, 2014; Eryılmaz & Öğülmüş, 2010; İşleroğlu, 2012; Malkoç, 2011; Morsünbül, 2011; Duran & Tan, 2013). These features are also associated with smoking and alcohol use in adolescence. For example, adolescents with harmful habits are more neurotic than

The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

others. This indicates a low level of subjective and psychological well-being (Huebner, 1991; Kaya et al., 2014). Considering the personality traits of adolescents with high subjective and psychological well-being, it is seen that they are responsible, extroverted, mild-minded, and open to innovations (Eryılmaz, 2010; Huebner, 1991; McKnight et al., 2002). Adolescents with these strong characteristics also adopt harmful habits such as smoking and alcohol more difficult (Kaya et al., 2014; Veselska et al., 2011; Windle & Windle, 2011).

Other personality traits that have a positive impact on adolescents' well-being are autonomy, self-esteem, and self-acceptance (Gilman & Huebner, 2006; Huebner, 1991; Morsünbül, 2011; Owen & Teacher, 2013). On the other hand, it was found that self-esteem started to decrease during adolescence and this decline continued until the young adult years (Robins et al., 2002). Studies conducted with adolescents smoking or using alcohol (Atak, 2011; Engels et al., 2005) revealed that adolescents using these substances have lower self-esteem than others and have difficulty in accepting themselves.

Adolescents' optimistic, hopeful or purposeful lives are also effective on both their subjective and psychological well-being and harmful habits (Çankaya & Meydan, 2018; Gilman & Huebner, 2006). For example, it has been observed that being optimistic has a positive effect on subjective well-being (Ben-Zur, 2003). In a study of adolescents in Turkey, writing letters of gratitude and writing life goals have been shown to have a positive impact on adolescents. (Duran & Tan, 2013). It has been observed in national and international studies that optimistic, responsible, and hopeful adolescents adopt less harmful habits than others (Engels et al., 2005; Eryılmaz, 2010; Kaya et al., 2014; Veselska et al., 2011).

In summary, in adolescence; Personality traits such as self-esteem, autonomy, responsibility, optimism, and purposefulness are positively associated with subjective and psychological well-being. It can be thought that these features that increase subjective and psychological well-being also protect adolescents from harmful habits such as smoking and alcohol. In light of this, problem-solving to develop a program to increase the subjective and psychological well-being of adolescents with harmful habits and to test the effectiveness of this program. In this way, it is possible to talk about a few contributions to both the literature and the field.

Firstly, even today, researches and practices on smoking and alcohol-using adolescent populations are largely far from the point of view of positive psychology. For example, anti-smoking seminars are held in schools that aim to disincline students from smoking. In any case, practices aiming to strengthen protective factors against smoking addiction are rarely encountered. If smoking and alcohol use in adolescence is a phenomenon closely related to the lack of some components of subjective well-being; The way to recover this is not only being anti-substance but also being in favor of subjective and psychological well-being. This article is important for the field and literature as it serves to meet a need in this direction.

Secondly, the program whose effectiveness is examined is activity-oriented, applicable in schools, and open to access and development of practitioners. Although its primary purpose is to provide a curative intervention for subjective and psychological well-being to groups that may be considered riskier than other students by adopting the habit of smoking and alcohol use at an early age, it can be applied to groups where these risks have not yet arisen for preventive purposes.

The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

METHOD

Research Model

This study is an experimental study to examine the effectiveness of the subjective well-being increasing program developed for adolescents having harmful habits. In this direction, an experimental design with pretest-posttest and control groups was used in the study. The independent variable of the research is the subjective well-being increasing program, and the dependent variables are harmful habits, subjective well-being, and psychological well-being.

Participants

Students studying in the 10th and 11th grades of an Anatolian High School in Adana in the first semester of the 2018-2019 academic year were included in the study. This study group consists of students who smoke or use alcohol, or both at least 1-3 times a month. . Before the survey study be carried out to determine the students who met the participation criteria in the study, all students were given a parent consent form and asked to bring them to their parents by signing. A personal information form was applied to 201 students for whom parental consent was obtained, and it was determined that 44 students met the conditions for participation in the study.

Adolescent Subjective Well Being Scale and EPOCH Scale were applied to 44 students who were determined to have harmful habits. Although 44 students were accessible, it was deemed appropriate to select a total of 24 students for the experimental and control groups, considering that this study includes the group process and the number of students that can affect group dynamics (Demir & Koydemir, 2016). With the help of a computer program, 24 students among 44 students were placed equally in the experimental and control groups. While the students were placed in the groups, their pre-test scores were equalized, and the computer drawing was repeated until the pre-test scores of both groups were similar. The analysis table of the pre-test scores of the groups is given below.

Table 1. Pre-test results

Scores	Group	N	$\overline{X}$	Sd	Average Rank	Rank Sum	u	z	p
ASWBS Pre-Test	Experiment	12	44,25	6,51	13,50	162,00	60	-.69	.48
	Control	12	41,83	7,94	11,50	138,00			
EPOCH Pre-Test	Experiment	12	62,58	11,21	13,79	165,50	56,50	-.89	.37
	Control	12	57,50	13,90	11,21	134,50			

p> .05

Ethical Statement

This research was completed by the Helsinki Declaration. Following this, the study was examined and allowed by Uludag University's social and humanities research and publication ethics committee (REF 11 2018-10). Furthermore, instruments in the study were just appropriated to volunteer participants. All participants provided informed consent. Additionally, participants were informed that they could drop out of the study at any time during data collection.

The Effect of The Subjective Well-Being Increasing Program on Subjective and
Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

Materials

In addition to the personal information form, the Adolescent Subjective Well-Being Scale (ASWBS) and the Five-Dimensional Well-Being Scale for Adolescents (EPOCH) were used as pre-tests and post-tests.

Personal Information Form. One of the data collection tools used in the research is the personal information form prepared by the researcher. Through this form, demographic information of the students such as age, gender was collected. The smoking and alcohol use habits of their families and friends were asked. Finally, they were asked to indicate their smoking or alcohol use frequency in the last year.

Adolescent Subjective Well Being Scale. ASWBS is a 15-item scale developed by Eryılmaz (2009) to measure the subjective well-being levels of adolescents, prepared according to the 4-point Likert type and whose answers are scored between 1 and 4 points. The development, validity, and reliability studies of the scale were conducted with adolescents aged between 14 and 18 years. The internal consistency (Cronbach's Alpha) coefficient of the scale was .86, the item-total correlation (Spearman-Brown Value) was .83, and the stability coefficient obtained by the test-retest method was .83. As the scale score increases, the level of subjective well-being increases.

Epoch Scale. The Five-Dimensional Well-Being Scale for Adolescents (EPOCH Scale) was developed by Kern et al. (2015), and adaptation studies to our country were carried out by Demirci and Ekşi (2015). It is prepared according to 5-point Likert type and its answers are scored between 1 and 5. The validity and reliability analyzes of the scale in adaptation studies to our country were carried out on adolescents aged 14-18. The fit indices obtained by confirmatory factor analysis to test the construct validity of the scale are at acceptable levels (NFI = .96, NNFI = .98, CFI = .98, IFI = .98, RFI = .96). While the internal consistency coefficient of the scale is .95, item-total score correlations vary between 41st and .77. As the scale score increases, psychological well-being increases.

Data Analysis

In the study, statistical analyzes were performed using SPSS IBS Statistics software (version 20). Shapiro-Wilks test was used to examine the normal distribution of the data. Mann-Whitney Tests were used to compare the measurements of experimental and control groups. Finally, Wilcoxon Signed-Rank Tests were utilized to compare the pre-test and post-test of the same group.

Experimental Procedure

In this study, the subjective well-being increasing program applied to the experimental group is a psychoeducational program consisting of 10 sessions and many activities, utilizing the concepts, techniques, and philosophies of different theories such as cognitive-behavioral approach, existentialist approach, and individual-centered approach. The themes studied in the program for 10 sessions are self-esteem, self-acceptance, positive relations with the environment, responsibility, purposefulness, optimism, hope, automatic thoughts, irrational beliefs, and problem-solving. While designing the themes and activities in the program, relevant literature and experimental studies (Akthar & Boniwell, 2010; Dursun, 2015; Eryılmaz, 2010, 2014; Malkoç, 2011; Ok, 2016; Seligman et al.,2006; Suldo et al., 2014) and expert opinions were taken into consideration. The program was implemented in the school where the research was conducted, two days a week, over two months.

The Effect of The Subjective Well-Being Increasing Program on Subjective and
Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

RESULTS

The change in the pre-test and post-test scores of the experimental and control groups was analyzed with the Wilcoxon Signed-Ranks Test. As can be seen in the table below, the subjective well-being levels (z: -2.71; p < .05) and psychological well-being levels (z: -2.50; p: < .05) of the participants in the experimental group increased significantly compared to the pre-experiment. On the other hand, it was concluded that there was no significant difference in subjective well-being (z: -.17; p: .85 > .05) and psychological well-being (z: -.94; p: > .05) levels of the control group compared to the pre-experiment.

Table 2. Pre-test and post-test scores of the experimental and control groups

Scores	$\overline{X}$	Sd	Ranks	N	Average Rank	Rank Sum	z	p
Experiment Pre-Test$_{ASWBS}$	62,58	11,21	Negative Rank	1	4,00	4,00	2.74	.006
			Positive Rank	11	6,73	74,00		
Experiment Post-Test$_{ASBWS}$	72,41	13,41	Equal	0				
			Sum	12				
Experiment Pre-Test$_{EPOCH}$	62,58	11,21	Negative Rank	2	1,50	3,00	2.50	.01
			Positive Rank	8	6,50	52,00		
Experiment Post-Test$_{EPOCH}$	72,41	13,41	Equal	2				
			Sum	12				
Control Pre-Test$_{ASWBS}$	41,83	7,94	Negative Rank	4	7,75	31,00	.17	.85
			Positive Rank	7	5,00	35,00		
Control Post-Test$_{ASWBS}$	42,08	8,81	Equal	1				
			Sum	12				
Control Pre-Test$_{EPOCH}$	57,50	13,90	Negative Rank	5	5,40	27,00	.94	.34
			Positive Rank	7	7,29	51,00		
Control Post-Test$_{EPOCH}$	59,41	13,35	Equal	0				
			Sum	12				

p< .05

ASWBS and EPOCH post-test scores of the experimental and control groups were also compared. As can be seen in the table below, subjective well-being (u: 24; z: -2.69; p: <.05) and psychological well-being (u: 35.5; z: -2.10; p: <.05) between the experimental and control groups was found to be a significant difference in terms of levels.

Table 3. Post-test scores of experimental and control groups

Scores	Group	N	$\overline{X}$	Sd	Average Rank	Rank Sum	u	z	p
ASWBS Post-Test	Experiment	12	51,75	5,70	16,50	198,00	24	2.69	.00
	Control	12	42,08	8,81	8,50	102,00			
EPOCH Post-Test	Experiment	12	72,41	13,41	15,54	186,5	35,5	2.10	.03
	Control	12	59,41	13,35	9,46	113,5			

p< .05

The Effect of The Subjective Well-Being Increasing Program on Subjective and
Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

DISCUSSION, CONCLUSION & SUGGESTIONS

In this study, the effect of the Subjective Well-Being Increasing Program on the subjective and psychological well-being of adolescents having harmful habits was examined. As seen in the results of the analysis, the program implemented had a positive effect on the subjective and psychological well-being levels of the participants. In this section, the findings are discussed in line with the literature.

One of the comments that can be made about the effectiveness of the program is that it is rich in activities. It has been supported by scientific research that programs with plenty of activity can be effective when working with adolescents. For example, Eryılmaz (2014) increased students' subjective well-being levels by applying a strictly structured program consisting of 18 activities to 26 students in their late adolescence years. Malkoç (2011) increased the subjective well-being levels of university students with a psychoeducational program that included about 40 activities.

One of the theories explaining subjective well-being is activity theories. Accordingly, happiness is the climbing itself rather than reaching the climax (Diener, 1984; Diener et al., 2002; Omodei & Wearing, 1990). We can often hear phrases like "the important thing was to compete, it was nice to be here" from some competitions on TV. According to this understanding, what is invaluable is the action itself, not the consequence (Diener et al., 2002). The positive effects of this program on subjective and psychological well-being arerelated to the fact that it encourages participants to act, in other words, to climb, not reach.

Another feature of the program is that it was designed based onthe features revealed by the studies that most strongly predicted the subjective and psychological well-being levels of adolescents. Many factors may affect the subjective well-being and psychological well-being of an adolescent, but responsibility (Eryılmaz, 2010), assertiveness and self-efficacy (Griffin et al., 2011), autonomy, and self-esteem (Morsünbül, 2011), gratitude (Duran & Tan, 2013), hope and optimism (Scheier & Carver, 1993), problem-solving, and coping with stress (Owen & Teacher, 2013) create the strongest effect on subjective and psychological well-being. The content of the program is similar to some researches that aim to increase the well-being levels of adolescents. For example, it is similar to programs that developed by Eryılmaz (2014) in terms of including themes such as positive relations and cognitive control; Fava et al. (2005) in terms of including themes such as self-acceptance and meaningful life; Dursun (2015) and Ok (2016) in terms of including themes such as self-esteem, forgiveness, and gratitude; Seligman et al. (2006) along with Akthar and Boniwell (2010) in terms of including themes such as optimism and hope.

How these themes are transformed into activities and how the program is designed with an approach is also an important issue. In the program tested in this study, mainly cognitive-behavioral, partially humanist, and existential theoretical foundations were used. Because, as can be seen in Diener & Diener (1995) and Shin & Johnson (1978), the effect of subjective cognitive assessments on well-being cannot be denied. Additively, themes such as emotional experience, self-acceptance, meaningful life, personal development, and autonomy are at the focus of client-centered and existential approaches (Frankl, 1984; Maslow, 1954; Rogers, 1961). A unifying perspective that organizes the themes identified in the light of the adolescent subjective and psychological well-being literature to address their cognitive, emotional, and existential needs is one of the theoretical strengths of the tested program.

According to Durrant (1995), trying to find solutions is easier than eliminating the problem. This stance, which coincides with the positive psychology perspective, has dominated the study from beginning to

The Effect of The Subjective Well-Being Increasing Program on Subjective and
Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

end. This can be both a strength and a weakness of the intervention. Although a curative effect appears to occur here, this effect applies to participants who are not in the clinical population. It is still unclear what results will be obtained on adolescents who need psychological help. On the other hand, considering that the main goal of positive psychology is prevention, it is understood that the strength of the study is to intervene before problems arise.

Of course, the program applied here cannot be seen as a prescription. No matter how well a program is designed, the most fundamental factor in the success of a group process is the leader, the most important therapeutic force in the group (Demir & Koydemir, 2016; Voltan-Acar, 2003). For example, during the application in this research and at the end of the application, some participants; able to establish a good relationship and bond with the group leader; He mentioned that the talent of the group leader and his communication with them enabled them to participate in the sessions with pleasure. In this respect, the effectiveness of the program may increase in direct proportion to the leader's competence, or the opposite result may be encountered.

An important factor that can affect the results in experimental studies is that individuals in the experimental group may be motivated to concludeappropriate to the purpose of the experimental procedure because they are aware of their involvement in scientific research (Heppner et al., 2008). When it comes to adolescents, it should not be forgotten that just being in a group process can provide positive outcomes. The high importance given to peer interaction in adolescence (Santrock, 2014) provides an advantage for group interventions. As Elkind (1976) mentions, the sense of uniqueness, which has an important effect on the cognition and behavior of adolescents, changes shape when it meets forces such as universality, altruism, and hope installation inherent in the group process (Yalom & Leszcz, 2020). Although not taken in writing in this study, while each member shared their thoughts in the last session, the participants stated that it was a pleasant experience to meet and interact, discuss, play, share a problem, and try to help others.

Finally, this research has some limitations. First of all, the research was conducted with participants with a certain age group and certain characteristics. It is thought that having a placebo group, conducting follow-up tests, and conducting interim evaluations while the process continues will put the research results on a more solid basis. Nevertheless, it has been understood that the Subjective Well-being Increasing Program is an effective psychoeducational program that can be used to increase the subjective and psychological well-being levels of adolescents having harmful habits. Based on the results obtained in the research, the following suggestions can be made to future researchers and practitioners:

1. As mentioned before, the lack of a placebo group and a follow-up test limits the results to some extent. The same program can be tested with studies with a placebo group and at least 1 follow-up test.
2. Failure to conduct interim evaluations during the group process prevented understanding which session or activities were effective and to what extent. In future implementations, end-of-session evaluations can be made to analyze which activities have the strongest impact. The program can be revised with the results obtained here.
3. This research has aimed to increase the subjective and psychological well-being of adolescents having harmful habits and has been successful. Similar studies can be conducted with students in different risk groups, which have been determined by studies to have low subjective and psychological well-being. For example, research can be conducted on how to increase the

The Effect of The Subjective Well-Being Increasing Program on Subjective and
Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

subjective and psychological well-being levels of children of divorced parents, children who have lost their parents, adolescents staying in orphanages, and children who have been sexually or physically abused.

4. In the study, ASWBS developed by Eryılmaz (2009) and EPOCH developed by Kern et al. (2015) and adapted by Demirci (2015) were used to measure subjective and psychological well-being levels. In the future, the same program can be tested with subjective and psychological well-being scales designed for individuals of the same age group, with proven effectiveness. These include the Life Satisfaction Scale adapted by Köker (1991), the positive-negative emotion scale adapted by Gençöz (2008), and the Subjective Well-Being Scale, which was developed as a high school form by Özen (2005).

5. The most influential features on subjective and psychological well-being during adolescence are characteristics such as self-esteem, autonomy, positive relationships with family and peers, academic success, optimism, purposefulness, and stress coping skills. When the group working in schools, clinical settings, or scientific research in adolescents and is aimed to increase the positive mental health of this group, trying to improve the above-listed characteristics can yield effective results.

6. The research was conducted with adolescents aged 15, 16, and 17, studying in Adana. Whether the same program will be effective in different age groups can be examined in future research. For example, high school ages may be late to improve the mental health of students and prevent them from adopting harmful habits. The effectiveness of this program should also be tested with secondary school students to intervene earlier.

The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

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Turkish Psychological Counseling and Guidance Journal

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The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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The Effect of The Subjective Well-Being Increasing Program on Subjective and Psychological Well-Being of Adolescents Having Harmful Habits

Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Appendices

Appendix I

Sessions	Themes	Purpose of Session
1	Meeting	Group members getting to know each other and coalescence, structuring the group process, subjective well-being and informing about the purpose of the program.
2	Positive Relationships with "me" (Self-Esteem-Self-acceptance)	To enable group members to get to know themselves better, to discover their most positive and negative features, to ensure that both of these characteristics are owned and accepted by them. To strengthen their respect for themselves.
3	Positive Relationships with "me" (Self-Esteem-Self-acceptance)	To enable group members to get to know themselves better, to discover their most positive and negative features, to ensure that both of these characteristics are owned and accepted by them. To strengthen their respect for themselves.
4	Positive Relationships with the Environment	To ensure that group members experience social skills such as strengthening the relationship of trust between each other, complimenting / accepting and helping each other, in and outside the group.
5	Positive Relationships with the Environment	Making group members express their feelings about a person they have never been able to forgive or have never been able to properly thank.
6	Purposeful Life	To enable group members to set goals and act with a sense of responsibility in achieving these goals.
7	Purposeful Life	Helping group members to have a hopeful attitude about the future and to have them look optimistically at both their present and future lives.
8	Coping with stress	To make group members aware of what kind of automatic thoughts they produce in stressful life events they encounter, to realize how their irrational beliefs affect them and to turn the language they use into positive.
9	Coping with stress	To raise awareness of group members about how they can deal with the problems they encounter in their lives and how they can find solutions to these problems.
10	Termination	To make the general evaluation of the process and to enable the members to share their feelings and thoughts about the group process, to carry out the post-test.

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Özer & Eldeleklioğlu (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Author Contributions

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

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

Conflict of Interest

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

Note

This study was based on İsa Özgür Özer's (2019) master dissertation entitled "The Effect Of The Subjective Well-Being Increasing Program On Subjective And Psychological Well-Being Of Adolescents Having Harmful Habits" under Jale Eldeleklioğlu's supervision at Graduate School of Educational Sciences, Uludağ University, Bursa, Turkey.

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Ethical Statement

This research was completed in accordance with the Helsinki Declaration. In accordance with this, the study was examined and allowed by Uludag University social and humanities research and publication ethics committee (2018-10). Furthermore, instruments in the study were just appropriated to volunteer participants. All participants provided informed consent. Additionally, participants were informed that they could drop out from the study at any time during data collection.

Ethics Committee Name: Uludag University Social And Humanities Research And Publication Ethics Committee

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Quarter Life Crisis among Emerging Adults in Turkey and Its Relationship with Intolerance of Uncertainty

Türkiye'deki Beliren Yetişkinlerde Çeyrek Yaşam Krizi ve Belirsizliğe Tahammülsüzlük ile İlişkisi

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ABSTRACT

Quarter Life Crisis is a relatively new concept that helps understand the developmental difficulties of people in their twenties and early thirties. The present study aims to address the challenges faced by Turkish emerging adults in transition to adulthood and its relationship with the intolerance of uncertainty. The sample of the study consisted of 514 (370 female, 144 male) Turkish emerging adults. Crisis Screening Questionnaire (CSQ), Adult Crisis Episode Retrospective Self-Assessment Tool (ACERSAT), Personal Information Form, and Intolerance of Uncertainty Scale (IUS) were administered. Results showed that the majority of the participants (82%) experienced crises on different levels. Participants mainly experienced difficulties in career-related areas. Age, perceived level of happiness, perceived level of difficulty, and intolerance of uncertainty were determined as significant predictors of crisis. There were statistically significant differences in the intolerance of uncertainty and crisis levels among age groups.

ÖZET

Çeyrek Yaşam Krizi, yirmili yaşlardaki ve otuzlu yaşların başındaki insanların gelişimsel zorluklarını anlamaya yardımcı olan nispeten yeni bir kavramdır. Bu çalışma, yetişkinliğe geçiş sürecinde olan Türkiye'deki beliren yetişkinlerin karşılaştığı zorlukları ve bunun belirsizliğe tahammülsüzlük ile ilişkisini ele almayı amaçlamaktadır. Çalışmanın örneklemi 514 (370 kadın, 144 erkek) beliren yetişkinden oluşmaktadır. Kriz Tarama Anketi (KTA-9), Yetişkin Kriz Olayları Retrospektif Öz Değerlendirme Aracı (YKORÖDA), Kişisel Bilgi Formu ve Belirsizliğe Tahammülsüzlük Ölçeği (BTÖ) uygulanmıştır. Sonuçlar, katılımcıların büyük kısmının (%82) farklı seviyelerde kriz yaşadığını göstermektedir. Katılımcılar çoğunlukla kariyerle ilgili alanlarda zorluk yaşadıklarını belirtmişlerdir. Yaş, algılanan mutluluk düzeyi, algılanan zorluk düzeyi ve belirsizliğe tahammülsüzlük krizin anlamlı yordayıcıları olarak belirlenmiştir. Yaş grupları arasında belirsizliğe tahammülsüzlük ve kriz düzeylerinde anlamlı farklılıklar gözlenmiştir.

INTRODUCTION

Transition to adulthood has been taking attention more than before for the last few decades. The term "emerging adulthood" had been proposed scientifically by Arnett (2000), referring people between adolescence and young adulthood, which gained popularity in a short period among researchers, and the term "emerging adulthood" had begun to be used even in public in addition to the scientific community. Various research results, including in Turkey, showed that emerging adulthood typically represents people between ages 18-26 who live in cities still in education and do not feel to identify themselves as adults yet (Atak & Çok, 2010; Doğan & Cebioğlu, 2011). However, difficulties experienced by this age group and whether they face a developmental crisis have not been focused on in detail.

Previous research has found that there were some challenges during this age range. Cote (2006) points out that it takes a long time for the emerging adults to assume adult roles and resolve the identity stage due to the delay in education to work transition in industrialized countries. Therefore, it may intensify the identity crisis, and identity confusion may occur. Contrary to what is often reflected by the mainstream media and many scholars, emerging adults endure many struggles and troubles during this age range. The new life in this transition may be overwhelming for some regarding its demands and their coping resources to meet them. Therefore, this period may trigger psychopathology, such as substance use and abuse, antisocial behavior, and depression while assuming the new social roles as emerging adults (Schulenberg, & Zarrett, 2006). A longitudinal study was conducted to frame a more realistic portrait of emerging adults' lives, 230 interviews were done, and many of them described this period as confusing, troubled, depressing, and sometimes dangerous (Smith et al., 2011). Participants construed themselves as if they lose their ways and are wounded in those ages. Thus, Smith et al. (2011) concluded that people had experienced many troubles in the emerging adulthood period. It would not be wrong to say that it has a "dark side" despite its inherently positive aspects.

In the year 2001, Robbins and Wilner (2001) identified the *quarter-life crisis* (QLC) as the first time, which refers to ups and downs in the lives of emerging adults. In this period, emerging adults may be confused about their identity; feel insecure in their short and long-term goals, and drift into a state of chaos in their romantic relationships, family life, and work-life due to the inherent uncertainty. After Robbins and Wilner's (2001) definition, this concept has mainly attracted the attention of popular culture. Then, in the scientific literature, the life difficulties of the young adults/emerging adults have been studied extensively by a British researcher, namely Oliver Robinson (Robinson, 2008; Robinson & Smith, 2010a, 2010b; Robinson, 2016, 2019; Robinson et al., 2020).

Robinson proposed that the age period of the twenties and early thirties are usually difficult periods for emerging adults since they are expected to make important decisions about their adult lives, such as whom to marry and where to work. The difficult task and primary stressor for this age group is to decide on these adultish things while they are not yet adults; they are still financially dependent on their parents, and their roles are expected to switch from children and adolescent mode to adulthood (Robinson, 2013). Like Robbins and Wilner (2001) stated, contrary to their previous life, the post-graduation period is full of uncertainty. Furthermore, young adults are not familiar with experiencing instability, indecision, and intense helplessness since their lives' steps had been quite clear until their university graduation. In a longitudinal study that was conducted with the participation of 200 graduate young adults during the first 18 months after graduation, 25% of them indicated increased anxiety and depression (Robinson, 2016). Another longitudinal study was on post-university transition and quarter-life crisis, which investigates the

life after graduation, time-dependent changes in graduates' well-being and depressive symptoms, and their relations with personal crisis appraisal (Robinson et al., 2020). According to its results, the participants who stated that they were in a crisis reported lower well-being and higher depression.

When effects on mental health are considered, understanding this new concept, the quarter-life crisis (QLC), becomes more critical. The research investigated the types and prevalence of quarter-life crises found out that crises peak roughly in the mid-twenties and have a typical pattern over different people's lives (Robinson & Wright, 2013; Robinson et al., 2013). Robinson (2016) introduces a dual typology while explaining the quarter-life crisis. He classifies the crisis under two types: *locked-out* and *locked-in* type (Robinson, n.d., 2019). In the locked-out type, emerging adults feel as if they fail to achieve adulthood; the 21-25 year-olds generally experience it after university graduation. They may think that they cannot have a job, be financially independent, and have a stable romantic relationship. The other type of crisis is the locked-in type; it occurs during the age of 25-35. Emerging adults could take up some adult roles in this type, but they feel trapped in those roles that could be a relationship or work that they do not want to continue and hide their dissatisfaction with those commitments (Robinson, 2019). Both types of crisis are crucial to understanding the challenges of emerging adulthood while they strive to settle down.

During emerging adulthood, young people are hovering between "excitement and uncertainty, wide-open possibility and confusion, new freedoms and new fears" (Arnett, 2004, p. 3). Accordingly, QLC is proposed for a period full of stress, instability, and experiencing life-changing events while assuming adult roles under these ups and downs. QLC is usually experienced when emerging adults get a job, have a romantic relationship, get married, or start living like adults. They then realize that these life-changing steps lead to stress or restrains them from developing themselves. This crisis period is developmentally vital for people because it includes ending old bonds, beginning new commitments, and experiencing strong emotions (Robinson, 2013).

Although this period inherently has many possibilities to explore, this might create anxiety and uncertainty for some emerging adults (Arnett, 2004). The uncertainty coming with this abundance of options might be one of the main reasons for QLC. Some people cannot bear uncertainty, which would cause them to have a crisis. They may have a strong tendency to regard an uncertain situation as an adverse event and dangerous even there is no clue about it (Dugas et al., 2001) and regardless of possibilities. This situation is called intolerance of uncertainty (Buhr & Dugas, 2002; Dugas et al., 2001). As the uncertainty increases, their worry soars (Ladouceur et al., 2000). During emerging adulthood, young people are supposed to undergo many changes and to take essential decisions influencing their adult lives (Padilla-Walker & Nelson, 2017). They might experience uncertainty and instability that leads to stress while changing; they might feel their lives are going to an "invisible destination" (p. 568). Because of these characteristics of emerging adulthood, it has some darkness in it, and young people might have difficulty and pain (Smith et al., 2011). To Nelson (2020), the qualities of emerging adulthood have changed. Now, young people postpone marriage longer than two decades ago, they have felt less responsible to others. Also, they are exposed to plenty of instability and feel free while deciding their own choices. Their brains still have limitations; they believe that they should be carefree and have lots of adventures before being a complete adult, and their lives are more unstructured than the past. Thus, this lack of structure might make the emerging adulthood period threatening, as well, for the people who cannot bear ambiguous situations since this period is uncertain and full of novelty by its very nature. Therefore, managing this uncertainty and instability is crucial for them to deal with this stressful period.

Studies on emerging adults and this age's difficulties have mainly been conducted in West Europe and North America (Arnett, 2000; Jensen & Arnett, 2019). Therefore, future research on the challenges of these ages in different cultures was suggested to be very important. For example, a study conducted in India (Mitra & Arnett, 2019) indicates that it is very harsh for emerging adults to negotiate between traditional roles and independence in a collectivist context. Also, parental expectations are another factor that makes their adulthood transition more challenging than in individualistic countries. Likewise, Turkey represents a different cultural context (Atak et al., 2016) characterized by a more collectivist rather than the dominant individualistic structures of Western societies. Moreover, the differences among people in the same age- twenties until mid-thirties- are salient and seem to be ready to be studied.

The Present Study

Turkey has been a changing country in terms of population structure and life conditions. There are now approximately 24 million people between the ages of 20-35, a substantial segment of the total population (TUIK, 2020). So determining the life difficulties and crises that this age group has faced is very important.

In Turkey, in parallel with changes in the demographic structure, the age of marriage, being a parent, work-life, and education life have been changing dramatically. These changing trends make studies on emerging adults necessary (Atak et al., 2016). Research conducted with 5829 undergraduate students, aged between 17 and 24, suggests that their main problem areas are emotional, academic, and economic (Erkan et al., 2012). Another research (Eryılmaz & Ercan, 2011) examining the well-being of different age groups (14-17, 18-25, and 26-45) found that the well-being of the participants whose age is 18-25, which can be called as emerging adults, was lower than both the participants aged between 14-17 and 26-45. Thus, the problems related to the areas mentioned above may threaten their well-being during this transition (Korkut-Owen & Demirbaş-Çelik, 2018).

The data given by the Turkish Statistical Institute (TUIK, 2019) has confirmed the changing nature of the demographic structure. When the data is examined, for the people aged 20-29, the marriage age became 25-29 in 2019, which was around 20-24 in 2001. Regarding employment, 35.3% of people aged 20-34 in Turkey fell into the category named Not in Education, Employment and Training (NEET) (Eurostat, 2020). According to the TUIK data, the unemployment rate of young people increased by 5.1 points from 2018 to 2019 (Youth in Statistics, 2019). When recent demographic changes are taken into account, it may be said that young adults in Turkey assume adult roles later than before, which shows a parallel pattern with Arnett's claims (2000, 2004). The above-indicated challenges and those changes make it more important for the researchers to focus on this age group and post-university transition.

Based on the studies on different populations mentioned above, this research aims to determine the difficulties faced by emerging adults or young people between ages 20-35 and to size up the quarter-life crisis experiences of this group. Within this context, the present study examines five research questions. First, how the participants evaluate themselves in terms of happiness, difficulties in their lives, and health situations? Second, in which areas do the participants have a crisis? Third, how many participants experience a quarter-life crisis? Forth, are age, perceived happiness, perceived difficulty, and intolerance of uncertainty significant predictors of a quarter-life crisis? Fifth, as the last question, do the level of crisis and intolerance of uncertainty statistically differ with age groups and gender? In light of the related literature, we expect that participants have had troubles, and their happiness levels have been negatively

affected. Also, they will indicate specific areas in which they have a crisis. Another anticipation of this study is that many Turkish emerging adults have suffered from QLC like their peers in some other countries. We also expect participants indicating high intolerance of uncertainty may report high crisis levels, as well. Lastly, we suppose that there may be a statistically significant difference between the levels of intolerance of uncertainty and crisis regarding age groups and gender.

METHOD

Participants and Procedure

Participants were 514 emerging adults, 370 (72%) female and 144 (28%) male. The convenience sampling method was used. Two methods were used to collect the data; online forms and paper-based questionnaires. The sample's age range was 20-35, with a mean age of 26.36 (SD = 3.32). Descriptive information about the participants is presented in Table 1. Previous studies reported having a crisis, and prevalent crisis features differed between age groups (Robinson & Wright, 2013; Robinson, 2016). Therefore, the age variable was analyzed as three groups: 20-25, 26-30, and 31-35.

Table 1. Demographic characteristics of the participants

Variables	Category	n	%
Gender	Female	370	72
	Male	144	28
Educational status	High School Degree	46	8.9
	Associate Degree	39	7.6
	Bachelor Degree	339	66
	Master Degree	84	16.3
	Doctorate Degree	6	1
Having a job	Yes	353	68.7
	No	161	31.3
Being in a romantic relationship	Yes	288	56
	No	226	44
Living (with)	Alone	76	14,8
	Family	268	52,2
	Girlfriend/boyfriend	13	2,5
	Friend	45	8,8
	In dorm	10	1,9
	Sibling/cousin/others	11	2,1
	Married	86	16,8
	Other	4	0,8
Total		514	100

Ethical Statement

This research was completed in line with the Helsinki Declaration. The study was investigated and permitted by Baskent University Scientific Research and Ethical Review Board (Signature Date: 28.11.2019 and REF: 17162298.600-300). While data collection, participants were informed about the purpose of the study and their opportunity to withdraw.

Measures

Four different measures were used in this study.

Personal Information Form. The personal information form was developed by the researchers for demographic and basic information. It contains questions about the participants' education levels,

relationship status, employment status, perceived level of happiness, and perceived level of difficulty in life.

Crisis Screening Questionnaire-9 (CSQ-9). Crisis Screening Questionnaire-9 developed by Petrov et al. (2019), which consists of 9 items, aims to measure whether a crisis happens in people's lives. Participants rate items on a dichotomous scale (0= "no", 1= "yes"). The total score of 1 to 3 indicates no crisis, 4 to 6 indicates a partial crisis, 7 to 9 indicates the crisis. According to the measure, as the crisis increases as the total score increases, as well. The questionnaire was adapted into Turkish by the researchers after permission was obtained from the original researchers. The questionnaire was translated to Turkish in the adaptation process and then translated back to English by two independent experts to ensure language validity. After the final Turkish version of the questionnaire was formed, it was examined by three experts in the research topic, and it was found appropriate to measure the intended feature. Confirmatory factor analysis was conducted to determine to construct validity. According to the results, the questionnaire has acceptable fit indexes (χ^2/df = 3.46, RMSEA = .06, NFI= .92, NNFI= .92 CFI = .94, GFI = .98, AGFI = .97, IFI = .94). Kuder-Richardson-20 internal consistency coefficient of the Crisis Screening Questionnaire-9 was determined as .74. According to the results, CSQ-9 was found valid and reliable, and suitable for use.

Adult Crisis Episode Retrospective Self-Assessment Tool (ACERSAT). The adult crisis episode retrospective self-assessment tool is a self-report tool developed by Robinson and Wright (2013). It aims to provide data on the events that might be experienced in crisis episodes. The tool contains 23 items, and each item represents an adverse or stressful life event. ACERSAT was initially used to assess the past crisis. In the current study, researchers adapted it to collect data on the events that happened recently. The list of events translated to Turkish for the adaptation, and then the Turkish text was translated back to English by two independent experts. A pilot study was conducted on undergraduate students to test understandability and fluency.

Intolerance of Uncertainty Scale (IUS). The Intolerance of Uncertainty Scale (Sarı & Dağ, 2009, adapted from the English version by Buhr & Dugas, 2002) includes 27 items relating to the idea that uncertainty is unacceptable, frustrating, and stressful, reflects the negative personality and leads to inaction. The Turkish version of the scale contains four factors: 1) Uncertainty is upsetting and stressful, 2) Negative self-assessments related to the uncertainty, 3) It is frustrating not to know about the future, 4) Uncertainty leads to the inability to act. The items rated on a 5-point Likert scale (1=Does not describe me at all, 5=Describe me very well) and higher scores indicate a higher level of intolerance of uncertainty. The Cronbach-alpha internal consistency coefficient of the Turkish version is quite high (α = .93), and the test-retest reliability coefficient is acceptable (r = .66) (Sarı & Dağ, 2009). In the current study, confirmatory factor analysis conducted and results show that the scale has acceptable fit indexes: (χ^2/df = 4.29, RMSEA = .06, NFI= .97, NNFI= .97, CFI = .98, GFI = .99, AGFI = .99, IFI = .98, SRMR = .04). In the present study, the Cronbach Alpha reliability coefficient of the scale was determined as .94.

Data Analysis

We first examined descriptive values and correlations between the variables and used the two-way multivariate analysis of variance to examine differences in the variables. Then, multiple linear regression was used to determine whether age, perceived level of happiness, perceived level of difficulty, and intolerance of uncertainty predict the quarter-life crisis.

RESULTS

How did the participants evaluate themselves in terms of happiness, difficulties in their lives, and health situations?

Table 2. Frequencies of participants' perceived level of happiness, perceived level of difficulty, and physical condition, shown as %

		%
Perceived level of happiness	Quite unhappy	4,1
	Unhappy	11,1
	Partially happy	**50,3**
	Quite happy	28,7
	Very happy	5,8
Perceived level of difficulty	Quite easy	1
	Easy	6,6
	Partially difficult	**43,3**
	Quite difficult	**35,9**
	Very difficult	13,3
Physical condition	Important/major health problems	2,1
	Minor health problems	18,2
	Partially healthy	18,2
	Quite healthy	**51,8**
	Very healthy	9,8

As seen in Table 2, approximately half of the participants (50.3%) considered themselves to be "partially happy." On the other hand, the difficulty of life was evaluated as "partially difficult" (43,3%) and "quite difficult" (35,9%). As for the physical health condition, more than half of the participants (51.8%) considered themselves to be "quite healthy."

In which areas do the participants have a crisis?

As seen in Table 3, female participants answered as "Experiencing a very high level of stress and pressure at your job" the most. This challenging life experience has seemed prominent among women of all age groups. This item was followed by "Feeling trapped in a job you did not want to be in anymore. "Likewise, although it was significantly answered by women between the ages of 26-30, it has been expressed as a hard life experienced by women from all age groups.

On the other hand, male participants predominantly answered the item "Experiencing a very high level of stress and pressure at your job." This challenging life experience became evident among men of all age groups. Again, this item was followed by "Feeling trapped in a job you did not want to be in anymore. "Male participants of all age groups stated that they had a challenging life experience. Between the ages of 20-25 and 31-35 also often reported having family conflicts or disputes.

Similarly, it is observed that "An unwanted unemployment period" was excessively answered by women and men aged between 20-25 and 31-35. Cases such as "debt or financial difficulties" were evident among males aged 26-30. While women between the ages of 26-30 stated that they experienced "a career change," 31-35 stated they had "debt and financial difficulties." Challenging experiences concerning the birth of a child and the difficulties for the child's behavior are common in women between the ages of 31-35. Furthermore, family conflict or dispute was among the challenging life experiences of women aged 20-25.

Table 3. Frequencies of response to each item, by gender and age, shown as %

	Female			Male		
	Age Groups			Age Groups		
	20-25	26-30	31-35	20-25	26-30	31-35
1. Feeling trapped in a job you didn't want to be in anymore	**33,5**	**49,3**	**34,8**	**35**	**35**	**20**
2. Experiencing a high level of stress and pressure in your job	**45,8**	**52,1**	**41,3**	**43,3**	**41,7**	**52**
3. Resigning from a job	**24,6**	18,1	10,9	21,7	11,7	4
4. Being fired from a job	3,4	2,1	8,7	5	3,3	4
5. An unwanted period of unemployment	**45,8**	**26,4**	17,4	**36,7**	**31,7**	16
6. A change of career	22,9	**20,8**	37	**23,3**	**31,7**	**24**
7. Debt or financial difficulties	16,8	16	**26,1**	20	**31,7**	16
8. Being locked into in a relationship that you no longer wanted to be in	10,6	10,4	8,7	15	13,3	4
9. Being in an abusive relationship	7,3	5,6	6,5	3,3	0	0
10. Divorce or relationship breakup	9,5	10,4	6,5	18,3	16,7	0
11. Death of a person close to you	14	11,1	8,7	11,7	18,3	4
12. The birth of a child	2,8	11,1	**34,8**	1,7	5	16
13. Difficulties with your child's behavior	1,7	9,7	**32,6**	0	3,3	16
14. Family conflict or dispute	**34,1**	**27,8**	15,2	**23,3**	15	**20**
15. Confusion over sexual preference	1,7	1,4	4,3	1,7	3,3	4
16. 'Coming out': Making sexual preference known to friends and family	1,7	0,7	6,5	1,7	0	0
17. Uncertainty or confusion in your own beliefs or worldview	22,9	18,8	19,6	20	21,7	16
18. Alcohol/substance abuse or addiction	11,7	4,9	6,5	20	18,3	4
19. Physical illness or injury to yourself	15,6	16,7	10,9	10	18,3	12
20. Physical illness or injury to someone close to you	20,7	20,1	17,4	23,3	16,7	**20**
21. Caring for an ill or disabled loved one	7,8	8,3	4,3	0	5	4
22. Being diagnosed with a mental illness	6,7	4,9	4,3	6,7	0	4
23. A person close to you being diagnosed with mental illness	9,5	7,6	13	6,7	1,7	4

Note. Bold: Score in the top quartile of frequencies.

Accordingly, it can be interpreted that both women and men have challenging life experiences in business-related/financial issues. While for men, experiences in business-related/career/financial issues stand out significantly, for women, in addition to the challenging life experiences in the career field, family conflicts between the ages of 20-25 and the challenging life experiences with the child at the ages of 31-35 became evident.

How many participants experience a quarter-life crisis?

As seen in Table 4, approximately 82% of the participants experience a crisis between ages 20-35 on different levels. The percentage of those experiencing a crisis in the 20-35 age group was 84.4%, in the 25-30 age group 85%, and in the 30-35 age group was 73.2%.

Table 4. The findings on the prevalence of the crisis

Age Group	Gender	No Crisis		Partial Crisis		Crisis	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
	Female	26	14.5	59	33.0	94	52.5
20-25	Male	11	19.0	23	39.7	24	41.4
	Total	37	15.6	82	34.6	118	49.8
	Female	23	16.1	57	39.9	63	44.1
25-30	Male	7	12.3	29	50.9	21	36.8
	Total	30	15.0	86	43.0	84	42.0
	Female	12	27.3	21	47.7	11	25.0
30-35	Male	6	26.1	10	43.5	7	30.4
	Total	18	26.9	31	46.3	28	26.9
	Total	95	18.5	199	38.7	220	42.8

Are age, perceived happiness, perceived difficulty, and intolerance of uncertainty significant predictors of a quarter-life crisis?

Before performing the regression analysis, the assumptions of multiple linear regression were checked. Significant correlations between independent and dependent variables ranged from -.18 to .49 (Table 5). Variance Inflation Factor (VIF) is 1.63 and below 10, and the tolerance value is .61, which is above. These results indicated no multicollinearity problem. According to the Durbin-Watson test statistic, no autocorrelation was detected, and the data met the assumption of independent errors (Durbin-Watson value =1.85).

Table 5. The findings of Pearson correlation between crisis, age, perceived level of happiness, perceived level of difficulty, and intolerance of uncertainty

	Crisis	Perceived Level of Happiness	Perceived Level of Difficulty	Intolerance of Uncertainty	Age
Crisis	1.00	-	-	-	-
Perceived Level of Happiness	-.46**	1.00	-	-	-
Perceived Level of Difficulty	.33**	-.30**	1.00	-	-
Intolerance of Uncertainty	.49**	-.30**	.14**	1.00	-
Age	-.18**	.15**	-.06**	-.14**	1.00

**p <.01

As seen in the results of the multiple regression analysis (Table 6); the model is valid, and when all variables are considered together, it explains 38% of the total variance in crisis (R^2 = .39, adjusted R^2 = .38, F = 80.29 and p < .001). Perceived level of happiness (β = -.28, p < .001), perceived level of difficulty (β = .18, p < .001), intolerance of uncertainty (β = .38, p < .001), and age (β = -.07, p < .05) were determined as significant predictors of crisis. The model predicts that an increase in the intolerance to uncertainty and perceived difficulty level of life will cause an increase in total crisis scores. On the contrary, a decrease in age and perceived level of happiness scores predicts an increase in total crisis scores.

Table 6. The findings of multiple regression analysis to determine the prediction of the crisis by age, perceived level of happiness, perceived level of difficulty, and intolerance of uncertainty

Variable	B	Standard Error	β	t	P	R^2	ΔR^2	F	p
Constant	4.49	.95		4.74	.000***	.39	.38	80.29	.000***
Perceived Level of Happiness	-.77	.10	-.28	-7.42	.000***				
Perceived Level of Difficulty	.52	.10	.18	5.13	.000***				
Intolerance of Uncertainty	.04	.00	.37	10.12	.000***				
Age	-.05	.02	-.07	-2.10	.036*				

*$p < .05$, **$p < .01$, ***$p < .001$

Do the level of crisis and intolerance of uncertainty statistically differ with age groups and gender?

Table 7. Descriptive statistics on intolerance of uncertainty and crisis

	Age Group	Intolerance of Uncertainty		Crisis	
		M	SD	M	SD
Female	20-25	81.53	19.82	6.25	2.20
	26-30	78.67	20.01	5.77	2.20
	31-35	75.23	20.80	4.76	2.53
	Total	79.63	20.07	5.87	2.29
Male	20-25	77.81	24.25	5.50	2.57
	26-30	71.89	18.35	5.56	2.29
	31-35	65.36	25.59	4.68	2.86
	Total	73.21	22.54	5.38	2.51
Total	20-25	80.60	21.03	6.06	2.32
	26-30	76.68	19.73	5.71	2.22
	31-35	71.76	22.91	4.73	2.63
	Total	77.82	20.98	5.73	2.36

Descriptive statistics (Table 7) indicated that the 20-25 age group participants had the highest intolerance of uncertainty and crisis scores, followed by 26-30 and 31-35 age group. Females have higher scores of intolerance of uncertainty and crisis. The Box's M test statistic was found to be not significant (Box's M= 17.32, F = 1.14, p (.32) > .001). Therefore there are no significant differences between the covariance matrices. Levene's Test of Equality of Error Variances results indicated that the variances of crisis are equal across the groups. Still, the variances of intolerance of uncertainty are not equal (Intolerance of Uncertainty F = 2.27, p (.046) < .05), Crisis F = 1.15, p (.331) > .05). Pillai's Trace was used as a test statistic since the required assumptions are not met for intolerance of uncertainty.

Table 8.
The findings of two-way multivariate analysis of variance for crisis and intolerance of uncertainty by age and gender

Effect		Value	F	df	df_{error}	P-value	Partial Eta Squared
Intercept	Pillai's Trace	.900	2279.598	2.000	507.000	.000***	.900
Age	Pillai's Trace	.032	4.075	4.000	1016.000	.003**	.016
Gender	Pillai's Trace	.017	4.512	2.000	507.000	.011*	.017

*$p < .05$, **$p < .01$, ***$p < .001$

Results of the two-way MANOVA (Table 8) indicated that there are statistically significant differences among the age groups and gender on a linear combination of the intolerance of uncertainty and crisis (Pillai's Trace = .900, F = 2279.598, p <.001). The follow-up ANOVAs and the results Tukey HSD test (Table 9) indicated that the mean score for intolerance of uncertainty of individuals in the 20-25 age group is significantly higher than those in the 31-35 age group (F = 5.32, p < .01). However, no significant difference was observed between the 20-25 and 26-30 age groups; and between the 26-30 and 31-35 age groups (p > .05). The univariate tests also indicated a statistically significant difference in the crisis among the three age groups (F = 5.96, p < .01). Post hoc (Tukey HSD) analysis indicated that the crisis scores of individuals in the 20-25 and 26-30 age groups were significantly higher than those in the 31-35 age group (p < .01). However, no significant difference was observed between the 20-25 and 26-30 age groups (p >.05).

Table 9. Significant univariate effects and post-hoc test for age groups

Independent Variable	Dependent Variable	df	Mean Square	F	P-value	Partial Eta Squared	Tukey HSD[a]
Age	IUS	2	2275.538	5.327	.005**	.021	1 >3
	Crisis	2	32.272	5.964	.003**	.023	1, 2 >3
Gender	IUS	1	3858.814	9.033	.003**	.017	
	Crisis	1	9.983	1.845	.175	.004	

*p < .05, **p < .01, ***p < .001
[a] 1 = 20-25 age group, 2= 25-30 age group, 3= 30-35 age group

According to the results of univariate tests, there is a significant difference between males' and females' intolerance of uncertainty scores (F = 9.03, p < .01), females have higher scores of intolerance of uncertainty. The difference between males' and females' crisis scores is not significant (F = 1.84, p > .05).

DISCUSSION, CONCLUSION & SUGGESTIONS

By investigating the difficulties emerging adults face, this study intended to shed light on their challenges and whether Turkish emerging adults have quarter-life crises like their peers indicated in the relevant literature and its possible predictors. First of all, our first question was related to participants' self-evaluations about their happiness, perceived difficulty of life, and health situation. Over half of the participants indicated that they were partially happy and physically healthy. The majority of them stated that their lives were complicated at some levels, except a few. The second question of this study sought an answer to in which areas they have been faced difficulties that can be called a crisis. The most remarkable areas in which participants indicated crisis might have grouped as job-related negative experiences and financial issues. The third question was about QLC prevalence, how many of them have experienced a QLC, and results showed that more than four in five participants had a crisis at some levels. When it comes to predictors of QLC, as intolerance of uncertainty and perceived difficulty of life increase, QLC scores are increasing. Also, decreases in age and perceived happiness scores contrarily predict an increase in total crisis scores. Finally, the last hypothesis was confirmed since the analysis revealed significant differences among three age groups regarding the intolerance of uncertainty levels and crisis scores.

Despite the inherent excitement and optimism of emerging adulthood (Arnett, 2004), the results of this study showed that facing challenges is also inevitable for young people. Although it is undeniable that this period is essential for development and adds richness and new dimensions to young people's lives, the other side of the coin, difficulties, should not be ignored. People have gone through many changes

and made important decisions that will affect their future lives (Padilla-Walker & Nelson, 2017). According to TUIK's data (2019), young people's general level of happiness may be regarded as decreasing year by year. Our results showed parallels in the way that half of our participants stated that they are partially happy, and over four in five of the participants evaluated their lives as difficult at some levels. While the rate of participants having difficulties is that much high, it can be inferred that they have some adjustment problems while struggling to keep up with the changes coming with emerging adulthood. If a young person has some adjustment problems while changing, it will permanently disrupt their future adult lives (Cote, 2000). Lane (2014) mentioned some common transitions during emerging adulthood, such as high school graduation, the direct transition to professional life without a college education, the freshman transition, the senior year experience, and the life after college. She stated that those transitions might pose intense pressure and distress for some emerging adults rather than excitement and optimism. Thus, revealing the neglected side of this period takes on a new meaning in structuring the right interventions for this age group.

Today's career path is not a straight way worldwide depending on changes and developments in the economy, values, trends, and many other factors. Therefore, emerging adults may feel insecure, frequently change their jobs, and always need more training to stay up to date. They need to diversify their skills, be more flexible, and be ready to retool when necessary (Smith et al., 2011). Their paths are even more heterogeneous (Nelson, 2020). Thus, it is not unexpected for us to see that participants stated more crises in job-related areas than other life events. Although Arnett (2000) theorizes that young adults' exploration of work-life gets beyond a joke during emerging adulthood and becomes more focused and committed, our results showed a somewhat reverse situation. Changing careers and resigning from a job are strong crisis-related indications of participants. Resigning was relatively more prevalent among 20-25 aged people, whereas changing careers is more frequent among 31-35 aged people. Also, experiencing intense stress and pressure at work was another much-stated item with evidential value while explaining how rough their path is and why they feel so insecure.

Besides, the world of work demands them to improve themselves non-stop to be secure at work; economic and societal changes have also triggered this demand. Since the unemployment rate has skyrocketed in recent decades and creates huge competition for employment opportunities, young people's pressure is understandable. According to OECD, young people who have fewer skills are "more vulnerable to unemployment and inactivity" (Society at a Glance, 2019). In this report, Turkey is listed as one of the countries with the highest NEET population share. Young people without a university degree three times more tend to be NEET than the young with a degree (OECD, 2019). Thus, it can be said that extended education paths become musts for young people to have decent work. As stated before, Turkey's unemployment rate has increased day by day (Eurostat, 2020; TUIK, 2019), and it becomes a crucial problem both for the young and society.

Similarly, the present study results showed that many young people have gone through an unwanted period of unemployment. It may be associated with the locked-out type of crisis; Robinson (2019) stated that 21-25 aged people generally experience this type of crisis; however, it seems prolonged in our sample. For both genders, unemployment is a real issue for both 20-25 and 26-30 aged people. This difference may take its source from countries' unemployment rates and employment opportunities. Besides, the events such as feeling trapped in a job, resigning from it, and changing career may be associated with the

locked-in type of crisis since they resemble the phases of this type. Also, its age range was shifted in our sample. It was observed in all three groups, whereas it was stated 25-35 in Robinson's study (2019).

Both adjustment problems and unemployment issues may be the reasons for the crisis that most participants had. Robinson and Wright (2013) retrospectively examined the events which people experience during a crisis. Relationship problems were worth attention for, especially women; however, according to our results, women's main problem areas were related to work and financial issues like men's. This difference may be because of participants' retrospective evaluations of their lives and the employment status of their sample. The unemployed participants' rate was nearly 10% for their study, whereas it was 31% for our sample. Therefore, job-related issues inevitably came to the forefront.

In the research of Mitra and Arnett (2019), parental issues were slightly remarkable. In their study, parental expectations for emerging adults' career paths were mentioned as an obligation by stating that parents have an essential role in young adults' career decisions. Also, while trying to be a fully independent adult and exploring themselves, Indian emerging adults have felt as if they have to continue their family values and traditions. In light of the results of a collectivistic culture, when our participants' financial dependence is considered, being completely independent of families becomes a fantasy. Since the unemployed participants of this study have a 31% share, it can be said that they are still dependent on their families while deciding for their own lives. Thus, this may pose some problems with family members. For female participants, the frequency of experiencing family conflict and the dispute is more salient for 20-25 and 26-30 aged groups. Whereas for males, it is more remarkable for just 20-25 aged people. It is not surprising for us to see this result. Most participants still lived in their parents' houses, so they cannot be fully independent unless they settled their own houses; conflict and family disputes are inevitable.

When it comes to evaluating crisis scores, one in fifth participants indicated no crisis while the rest have crises at some levels. This rate is obvious evidence of how crucial to understand QLC. Like their peers worldwide, Turkish emerging adults may have also been affected by social and economic changes, and they have issues with work, family, and social life. Since depression and well-being have been strongly correlated with crisis (Robinson et al., 2020), this high rate of remarking crisis is worth figuring out. In this sense, age, level of happiness in general, difficulty level of life, and intolerance of uncertainty were examined as possible predictors of this developmental crisis within the scope of the present study. As expected, increased difficulty of life and intolerance of uncertainty predicted an increase in crisis scores, whereas decreased age and happiness level predicted the increasing crisis. When the three age groups were compared to their crisis scores, 20-25 and 26-30 aged people have higher scores than 31-35. It is crucial that our sample was spanning early emerging adulthood into early adulthood because it allows comparing, seeing from a broader perspective, and evaluating whether this period is extended. Thus, it may be inferred that since the 31-35 aged people are relatively more settled down, have less instability in their lives, and their crisis score was found lower than others. Similarly, a comparison of age groups regarding their intolerance of uncertainty levels showed that 20-25 aged people are more intolerant of uncertainty than 31-35 aged people. Therefore, especially the people aged 20-30 are more vulnerable to experience crisis, and intolerance of uncertainty is a notable predictor as these people have to manage some novelty, developmental changes, and uncertain situation by the very nature of that period.

Overall, the findings of this study bring light to the existing body of relevant literature on emerging adults in Turkey and introduce the quarter-life crisis concept to Turkish literature. Findings are consistent with

the previous studies on QLC (Robinson, 2016), and Turkish emerging adults experience quarter-life crises, too. Therefore, it is believed that this study contributes to the field of guidance and psychological counseling. Admittedly, it is not the end of everything for university students to have chosen a field to study. There is a so much harder life outside the university, waiting for graduates. They should be supported via mental health services at universities to cope with developmental changes and uncertainty coming with both developmental and societal changes and make them ready for their ongoing and future lives.

Although this study has contributions to the field, its limitations should not be ignored. First of all, the sample of this study consisted of only educated young people, and most of them lived in metropolises in Turkey. Thus, the findings of this study may be generalized for only the people who have similar features rather than all the emerging adults. Second of all, in terms of gender distribution, the female is dominant. Therefore, future studies should try to reach a balanced distribution. These limitations should be considered while utilizing the results.

Despite the limitations mentioned above, we believe that the present results have an essential contribution to understanding contemporary emerging adults' life difficulties and their crisis experiences. This finding emphasizes the importance of preventive counseling activities when working with emerging adults and university students. Research in career counseling in Turkey mainly focused on college transition and has been conducted on high-school and university students (Çarkıt, 2019; Yeşilyaprak, 2012). This study is significant since it reveals that emerging adults experience difficulties in career-related areas, such as finding and maintaining a suitable job and dealing with the stress and pressure at work during the post-graduation period. Hence, it is critical for career counselors and researchers working in the career field to be aware of this group's needs and provide career counseling services effectively in higher education institutions and the Turkish Employment Agency.

Further studies would investigate the Quarter-Life Crisis with different demographic groups and their relation with different variables across time. We encourage researchers to conduct longitudinal studies. Related future research would be incredibly informative to understand and help emerging adults through interventions in higher education settings, workplaces, and community centers with an inclusive approach.

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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 Baskent University Scientific Research and Ethical Review Board.
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RESEARCH   Open Access

ARAŞTIRMA   Açık Erişim

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Kekemeliği Olan ve Olmayan Çocukların Mizaç Boyutları, Dikkat Eksikliği Hiperaktivite Bozukluğu Nitelikleri ve Kaygı Tiplerinin Karşılaştırılması

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ABSTRACT

The aim of this study was to compare school-age children who do (CWS) and do not stutter (CWNS) in terms of temperament dimensions, attention-deficit hyperactivity disorder (ADHD) aspects and anxiety types. Participants were 32 CWS (Age range = 8–11) and 32 CWNS (Age range=8-11). The Conners' Parent Rating Scale Long Form-Revised, Spence Children's Anxiety Scale–Parent and The School-Age Temperament Inventory were administered to collect data. Also, the stuttering severity of the CWS was measured using the Stuttering Severity Instrument-4. CWS had significantly higher scores for certain temperament dimensions (eg. negative reactivity), ADHD aspects and anxiety types than CWNS. However, no significant relationship was found between the stuttering severity and other variables. The present study showed that some ADHD aspects and anxiety types can accompany stuttering. Also, it can be suggested that the CWS exhibits a different profile in terms of some temperament dimensions than CWNS.

ÖZET

Bu çalışmanın amacı, kekemeliği olan ve olmayan okul çağı çocukların mizaç boyutları, dikkat eksikliği hiperaktivite bozukluğu (DEHB) nitelikleri ve kaygı tipleri açısından karşılaştırılmasıdır. Çalışmanın katılımcı grubu 32 kekemeliği olan (Yaş aralığı = 8-11) ve 32 kekemeliği olmayan (Yaş aralığı = 8-11) çocuktan oluşmuştur. Çalışmada Conners Ana Baba Dereceleme Ölçeği Yenilenmiş Uzun Formu, Spence Çocuklar için Anksiyete Ölçeği-Ebeveyen Formu ve Okul Çağı Çocuklar için Mizaç Ölçeği veri toplama aracı olarak kullanılmıştır. Ayrıca kekemeliği olan grup için kekemelik şiddeti, Kekemelik Şiddetini Değerlendirme Aracı-4 kullanılarak hesaplanmıştır. Kekemeliği olan çocuklar belirli mizaç boyutları (ör. olumsuz tepkisellik), DEHB nitelikleri ve kaygı tipleri açısından kekemeliği olmayan çocuklara kıyasla anlamlı olarak daha yüksek skorlar elde etmişlerdir. Bunula birlikte kekemelik şiddeti ile diğer değişkenler arasında anlamlı bir ilişki bulunmamıştır. Çalışma, bazı DEHB nitelikleri ve kaygı tiplerinin kekemeliğe eşlik edebileceğini göstermiştir. Ayrıca kekemeliği olan çocukların, mizacın bazı boyutları açısından farklı bir profil sergilediği öne sürülebilir.

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 ethics committee of Üsküdar University was consulted for ethical approval of this study (Approval Number: 61351342/2020-205; Approval Date: 04/05/2020).

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

INTRODUCTION

Developmental stuttering can be defined as a more frequent interruption of speech fluency than normal with particular types of disfluencies, such as sound/syllable repetitions, prolongation of sounds, and/or blocks (Guitar, 2014). In Turkey, this disorder is one of the main reasons for admissions to child and adolescent psychiatry clinics (Aktepe et al., 2010). Although it is agreed that several factors, including language skills, motor performance, cognition, and temperament, play a role in stuttering, how these factors interact is not clear (Smith & Weber, 2017). Generally, current models explain the mechanism underlying stuttering by considering many components (Conture et al., 2006; Smith & Weber, 2017). In fact, it would be incomplete to examine one variable separately, such as motor performance, independent of emotions, language skills, and cognition (Kleinow, 2018).

One component that is central to many explanations of the mechanism underlying stuttering is temperament (Furnham & Davis, 2004). This can be defined as the behavioral characteristics consistently displayed by an individual. However, leading theoreticians consider temperament to be a concept with many dimensions, including cognitive features, regularity of biological functions, and sensorial features rather than comprising only behavior, emotions, or attitudes (Rothbart & Derryberry, 1981; Thomas & Chess, 1977).

In the literature on stuttering, children who stutter have generally been compared with their peers in relation to the dimensions of temperament proposed by the theoreticians. While several studies have revealed no difference between children who stutter and those who do not (Reilly et al., 2013; Smith et al., 2017), other studies have shown particular dimensions of temperament in children who stutter, such as negative mood (Howell et al., 2004) and difficulty in emotion regulation (Johnson et al., 2010; Ntourou et al., 2013). In addition, many researchers have found that these children have high emotional reactivity (Ambrose et al., 2015; Eggers et al., 2010; Karrass et al., 2006; Ntourou et al., 2013; Uysal & Ozdemir, 2019). Furthermore, in several studies, children with stuttering have lower scores for adaptability (Anderson et al., 2003; Howell et al., 2004) and higher scores for introversion (Fowlie & Cooper, 1978; Giorgetti et al., 2015) and rhythmicity (Anderson et al., 2003).

As a multidimensional term, as explained above, temperament has dimensions that are closely related to aspects of attention-deficit hyperactivity disorder (Chauhan et al., 2019; Foley et al., 2008; Nigg, 2006). Negative reactivity, hyperactivity, and attentional focusing or task persistence can be identified as examples of these dimensions (Foley et al., 2008). Children with stuttering have also been reported as exhibiting temperament dimensions related to attention-deficit hyperactivity disorder, including hyperactivity (Eggers et al., 2010; Giorgetti et al., 2015; Howell et al., 2004) and low attention levels (Eggers et al., 2010; Eggers et al., 2013; Felsenfeld et al., 2010; Karrass et al., 2006; Uysal & Ozdemir, 2019).

Attention-deficit hyperactivity disorder (ADHD) and stuttering share many characteristics in addition to temperament (Donaher & Richels, 2012). A complex interplay of neural differences, with genetic and environmental components, has been reported as a possible cause of both disorders. In addition, both may appear more frequently in boys than in girls (Gallo & Posner, 2016). Furthermore, it is emphasized that childhood stuttering can be accompanied by aspects of ADHD (Druker et al., 2019). Likewise, children exhibiting signs of ADHD more frequently display speech disfluencies than their peers (Lee et al., 2017).

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

Another variable relating to temperament and ADHD is anxiety. If stuttering is examined in terms of temperament and ADHD, anxiety cannot be disregarded. Concerning the relation between temperament and anxiety, it has been noted in the literature that some dimensions of temperament, such as negative reactivity and effortful control, play a role both at the onset and during the course of an anxiety disorder (Bijttebier & Roeyers, 2009). There are many potential interactions between ADHD and anxiety, which may involve their concomitance or interplay (Jarrett & Ollendick, 2008).

School-age children who stutter may obtain higher scores than their peers for several types of anxiety, especially social anxiety (Iverach et al., 2016; Mulcahy et al., 2008; McAllister et al., 2015). However, there are other studies that show no difference between these groups in terms of anxiety (Craig & Hancock, 1996; Rocha et al., 2019; Smith et al., 2017). In addition, whether temperament is predictive of anxiety symptoms accompanying stuttering or whether anxiety results from negative social experiences in later years is not yet clear (Kefalianos et al., 2012).

In the light of the literature described, it is suggested that children with stuttering and those without stuttering will display different profiles in terms of temperament, certain aspects of ADHD, and some types of anxiety. In addition, it is to be expected that there will be some correlations between these variables in children who stutter. However, it is not possible to draw definite conclusions about this issue that could be generalized to all children who stutter. Furthermore, there are very few studies that deal with combinations of these variables (Rocha et al., 2019).

The aim of this study is to compare children with stuttering and those without stuttering regarding dimensions of temperament, aspects of ADHD, and types of anxiety and to examine the relations between the components of stuttering and these variables in children who stutter. The results of the study will contribute to the literature on the multidimensional nature of this disorder.

METHOD

Study Group

The participants were 32 children who stuttered (CWS) (age range = 8–11) and 32 children who did not stutter (CWNS). The participants were accessed through schools and private institutions offering speech and language therapies in Istanbul, Turkey. The groups were matched in terms of age and gender. The distribution of girls and boys in both groups was adjusted according to the universal gender ratios for stuttering (the ratio female: male was about 1:4–5) (Table 1).

Table 1. Descriptive statistics of demographic features of the participants

Groups	Gender (n)		Age (months)		
	Girls	Boys	Mean±SD	Min	Max
Stuttering	5	27	110.09±12.4	96	141
Non-stuttering	5	27	110.53±12.2	96	139
Total	10	54			

n: Number of participants, SD: Standard deviation

The inclusion criteria for the children with stuttering were determined according to the literature (Yairi et al., 1996; Yairi & Seery, 2015). According to these, confirmation of a history of developmental stuttering by the participants and their families, a diagnosis of stuttering by the researchers according to the Stuttering Severity Instrument–Fourth Edition (SSI-4), and a stuttered syllable rate of at least 3% in a spontaneous speech sample of at least 400 syllables were determined as inclusion criteria for this study.

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

To form the non-stuttering group, procedures frequently described in the literature were followed (Pellowski & Conture, 2002; Yairi & Ambrose, 1992). A sociodemographic data form was utilized to determine that the participants did not stutter. In addition, the researchers checked the speech samples of at least 400 syllables to confirm that there was no stuttering-like disfluency.

Inclusion criteria for both groups were as follows: a) a lack of any history of a neuropsychiatric disease or additional speech and language disorder, and b) not taking any medication likely to affect cognitive function. These two criteria were fulfilled through the use of a sociodemographic data form given to the families of the participants. Furthermore, the researchers observed the participants during in-person interviews to ensure that the participants did not have additional communication impairments.

Ethical Statement

Ethical approval was obtained from the Ethical Committee for Noninterventional Research at Üsküdar University (Approval Number: 61351342/2020-205; Approval Date:04/05/2020). The study was conducted in accordance with Helsinki Declaration. Informed consent was also obtained from the participants and their families.

Data Collection Tools

The Conners' Parent Rating Scale Long Form-Revised. The Conners' Parent Rating Scale Long Form-Revised (CPRS-R) was developed by Conners (1997), and the validity and reliability of the scale for use in the Turkish population were tested by Kaner et al. (2011). The scale is based on parents' reports and is primarily directed towards measuring aspects of ADHD in individuals aged 3–17 years while also evaluating problematic behaviors under such dimensions as anxiety, oppositional, perfectionism, and social and psychosomatic problems. It is a four-point Likert-type scale and is composed of 80 items. Fit indices from confirmatory factor analysis show that the original structure of the scale is valid for the Turkish culture (RMSEA = 0.04; RMR = 0.04; GFI = 0.90; AGFI = 0.89). Cronbach's alpha coefficients for the scale range from moderate to high (0.85–0.55). The test-retest reliability coefficients for the scale range between 0.74 and 0.42 (Kaner et al., 2011).

Spence Children's Anxiety Scale–Parent. Spence Children's Anxiety Scale–Parent (SCAS-Parent) was created by Spence (1998), and the validity and reliability of the scale for use in the Turkish population were tested by Orbay and Ayvasik (2006). SCAS-Parent is a Likert-type scale composed of 38 items. It evaluates various types of anxiety in children aged 7–12 years, including separation anxiety, panic attacks, social phobia, obsessive-compulsive disorder, and agoraphobia. Cronbach's alpha for the scale is 0.88, and the split-half reliability is 0.79. The reliability coefficients for the subscales are shown to range from 0.54 to 0.71 (Orbay & Ayvasik, 2006).

The School-Age Temperament Inventory. Developed by McClowry (1995), the School-Age Temperament Inventory (SATI) was adapted into Turkish by Eremsoy (2007). The SATI measures temperament dimensions in children aged 8–11 years based on their parents' reports. It has four subscales: approach/withdrawal, task persistence, activity, and negative reactivity. It is a five-point Likert-type scale composed of 38 items. The internal consistency coefficient for the Turkish version ranges from .79 to .86. The test-retest coefficients for the inventory are between .85 and .93 (Eremsoy, 2007).

Stuttering Severity Instrument–Fourth Edition. The Stuttering Severity Instrument–Fourth Edition (SSI-4) was developed by Riley and Bakker (2009). SSI-4, designed for children aged 6–16 years, was

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

tested for its validity and reliability in the Turkish environment by Mutlu (2014). It yields four types of score: frequency of disfluency, average duration of disfluencies, physical concomitants, and total stuttering severity score. Cronbach's alpha is .94. The interrater reliability for the total score and subscale scores of the instrument vary from 94.65% to 98.5%. In the test-retest reliability analysis, the total score and the subscale scores, with the exception of the physical concomitants score (p = .029), do not differ significantly (Mutlu, 2014).

Sociodemographic Data Form. A sociodemographic data form was created by the researchers and was filled in by the children participating in the study and their parents. The form has two sections; the first section contains questions about the demographic characteristics of the participants, and the second section contains questions about the inclusion criteria, such as a history of stuttering and additional impairments.

Process

After informed consent was obtained from the participants, both the children with stuttering and those without stuttering were asked to complete the sociodemographic data form. The parents of all the children were also asked to fill in a form eliciting information about any history of stuttering. Next, a researcher talked to the children and evaluated the general features of their speech. At this stage, any children found to have an additional impairment were excluded from the study. The parents were then given information about the other data collection tools and were asked to complete them. Finally, each child was involved in an interview, and spontaneous speech and reading samples involving a minimum of 400 syllables were obtained. These samples were video recorded.

Data Analysis

Data were analyzed with SPSS 21.0 (NY IMB Corp., 2012), and $p < .05$ was considered significant for the analyses. Depending on the normality of the data obtained, the independent samples t-test and the Mann-Whitney U test were employed to compare the groups. Pearson correlation analysis was performed to determine the relations between variables in the children with stuttering.

RESULTS

Comparison of children who stutter with those who do not stutter by using data from the Conners' Parent Rating Scale Long Form-Revised and using the Mann Whitney U test

The results from the comparison of the scores for the stuttering and non-stuttering groups on the subscales of the CPRS-R, calculated by using the Mann-Whitney U test, are presented in Table 2.

Table 2. The comparison of the scores for the subscales of CPRS-R between the stuttering group (n=32) and the nonstuttering group (n=32) by using Mann Whitney U test

| CPRS-R subscales | Stuttering | | Non-stuttering | | | | |
	Mean rank	Sum of ranks	Mean rank	Sum of ranks	u	z	p
Cognitive problems/Inattention	34.27	1096.5	30.73	983.5	455.5	-0.760	0.447
Hyperactivity	40.84	1307.0	24.16	773.0	245.0	-3.599	0.001*
Anxiety-Shyness	38.23	1223.5	26.77	856.5	328.5	-2.472	0.013
Perfectionism	33.14	1060.5	31.86	1019.5	491.5	-2.277	0.782
Social problems	32.72	1047.0	32.28	1033.0	505.0	-0.097	0.923
Psychosomatic	33.42	1069.5	31.58	1010.5	482.5	-0.403	0.687

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

ADHD index	36.47	1167.0	28.63	913.0	385.0	-1.708	0.088
Global index:restlessness-impulsivity	41.13	1316.0	23.88	764.0	236.0	-3.724	0.001*
Global index: emotional lability	37.17	1189.5	27.83	890.5	362.5	-2.030	0.042*
DSM-IV symptoms: inattention	34.97	1119.0	30.03	961.0	433.0	-1.065	0.287
DSM-IV symptoms: Hyperactivity-impulsivity	37.77	1208.5	27.23	871.5	343.5	-2.267	0.023*
DSM-IV symptoms: total	37.50	1200.0	27.50	880.0	352.0	-2.150	0.032*

CPRS-R: Conners' Parent Rating Scale Long Form-Revised, ADHD: Attention Deficit and Hyperactivity Disorder, DSM-IV: Diagnostic and Statistical Manual of Mental Disorder, n: Number of participants, u: Mann-Whitney U test, p*<0.05

As shown in Table 2, the stuttering group had significantly higher scores for the CPRS-R subscales hyperactivity (Z =-3.599; p = .001), global index: restlessness-impulsivity (Z =-3.724; p = .001), global index: emotional lability (Z =-2.030; p = 0.042), DSM-IV symptoms: hyperactivity-impulsivity (Z =-2.267; p =.023), and DSM-IV symptoms: total (Z =-2.150; p = 0.032) than the non-stuttering group.

Comparison of the stuttering and non-stuttering groups by using data from the Conners' Parent Rating Scale Long Form-Revised and the Spence Children's Anxiety Scale–Parent by using the independent samples t-test

The comparison of the scores for the subscales of the CPRS-R and the SCAS-Parent between the stuttering and non-stuttering groups, calculated by using the independent samples t-test, are shown in Table 3.

Table 3. Results of the comparison of the CPRS-R and SCAS-Parent scores between the stuttering group (n=32) and the nonstuttering group (n=32) by using independent samples t-test

	Stuttering		Non-stuttering			
	Mean	SD	Mean	SD	t	p
CPRS-R subscales:						
Oppositional-defiant disorder	11.13	5.4	7.75	6.7	-2.207	0.031*
Global index:total	11.13	6.1	6.31	5.5	-3.307	0.002*
SCAS-Parent:						
Social phobia	9.13	4.7	6.88	4.1	-2.033	0.046*
SCAS-Parent total	26.63	13.5	17.44	10.4	-3.046	0.003*

CPRS-R: Conners' Parent Rating Scale Long Form-Revised, SCAS-Parent: Spence Children's Anxiety Scale – Parent, SD: Standard deviation, t: Student's t-test, *p<0.05

As presented in Table 3, the stuttering group received significantly higher scores for the CPRS-R subscale oppositional-defiant disorder (t =-2.207; p = 0.031) and the global index: total (t =-3.307; p = 0.002) than the non-stuttering group. Also, as shown in Table 3, the stuttering group had a significantly higher score for SCAS-Parent subscale social phobia (t = -2.033; p = 0.046) and a significantly higher total score for SCAS-Parent (t = -3.046; p = 0.003) than the non-stuttering group.

Comparison of the scores for the Spence Children's Anxiety Scale–Parent and the School-Age Temperament Inventory between the stuttering and non-stuttering groups

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

The comparison of the scores for the subscales of the SCAS-Parent and the SATI between the stuttering and non-stuttering groups, calculated by using the Mann-Whitney U test, is presented in Table 4.

Table 4. The comparison of the scores for the subscales of the SCAS-Parent and the SATI between the stuttering group (n=32) and the nonstuttering group (n=32) by using Mann Whitney U test

| | Stuttering | | Non-stuttering | | | | |
	Mean rank	Sum of ranks	Mean rank	Sum of ranks	u	z	p
SCAS-Parent subscales:							
Separation anxiety	37.31	1194.0	27.69	886.0	358.0	-2.075	0.038*
Panic attacks	35.94	1150.0	29.06	930.0	402.0	-1.506	0.132
OCD	37.47	1199.0	27.53	881.0	353.0	-2.185	0.029*
Agoraphobia	33.58	1074.5	31.42	1005.0	477.5	-0.475	0.635
Subscales of the SATI:							
Negative reactivity	40.03	1281.0	24.97	799.0	271.0	-3.239	0.001*
Task persistence	29.72	951.0	35.28	1129.0	423.0	-1.196	0.232
Approach-withdrawal	37.67	1205.5	27.33	874.5	346.5	-2.227	0.026*
Activity	39.91	1277.0	25.09	803.0	275.0	-3.191	0.001*

SCAS-Parent: Spence Children's Anxiety Scale – Parent, SATI: The School-Age Temperament Inventory, OCD: Obsessive-compulsive disorder, u: Mann-Whitney U test, p*<0.05

According to Table 4, the stuttering group had significantly higher scores for the SCAS-Parent subscales separation anxiety (Z = -2.075; p = 0.038) and obsessive-compulsive disorder (Z =-2.185; p = 0.029) than the non-stuttering group. Also, as demonstrated in Table 4, the stuttering group received significantly higher scores for the SATI subscales negative reactivity (Z = -3.239; p = 0.001), approach-withdrawal (Z = -2.227; p = 0.026), and activity (Z = -3.191; p = 0.001) than the non-stuttering group.

Relations between stuttering severity-related variables and the subscales of CPRS-R, SCAS-Parent, and SATI

The relations between the stuttering severity-related variables, examined by using SSI-4, and the subscales of the CPRS-R, SCAS-Parent, and SATI, were analyzed using the Pearson correlation analysis. There was no significant relationship between the stuttering severity-related variables and the subscales of CPRS-S, SCAS-Parent, and SATI, as presented in Tables 5-7 (p > .05).

Table 5. Pearson's correlation analysis findings on the investigation of the relationships between the severityof stuttering variables and the CPRS/R subscale scores in children with stuttering

CPRS-R subscales		Stuttering Frequency	Stuttering Duration	Pyhsical Concomitants	SSI-4 Severity Degree
Oppositional-defiant disorder	r	.072	.020	-.205	-.039
	p	.694	.912	.260	.833
	n	32	32	32	32
Cognitive problems / Inattention	r	.082	-.148	-.141	-.078
	p	.656	.419	.440	.672
	n	32	32	32	32
Hyperactivity	r	-.076	-.251	.012	-.141
	p	.678	.166	.949	.440
	n	32	32	32	32
Anxiety-Shyness	r	-.023	-.155	-.155	-.155

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

	p	.899	.396	.398	.396
	n	32	32	32	32
Perfectionism	**r**	.146	-.017	.202	-.017
	p	.426	.927	.268	.927
	n	32	32	32	32
Social problems	**r**	.197	.007	-.130	.007
	p	.279	.968	.478	.968
	n	32	32	32	32
Psychosomatic	**r**	.145	.072	.075	.072
	p	.429	.694	.684	.694
	n	32	32	32	32
ADHD index	**r**	-.067	-.179	-.216	-.179
	p	.716	.327	.235	.327
	n	32	32	32	32
Global index: restlessness impulsivity	**r**	-.046	-.140	-.230	-.140
	p	.803	.445	.205	.445
	n	32	32	32	32
Global index: emotional lability	**r**	.051	-.073	-.065	-.073
	p	.783	.693	.722	.693
	n	32	32	32	32
Global index: total	**r**	.010	-.108	-.155	-.108
	p	.957	.555	.396	.555
	n	32	32	32	32
DSM-IV symptoms:inattention	**r**	.035	-.229	-.120	-.229
	p	.849	.207	.512	.207
	n	32	32	32	32
DSM-IV symptoms: Hyperactivity-impulsivity	**r**	-.173	-.301	.027	-.301
	p	.344	.095	.883	.095
	n	32	32	32	32
DSM-IV symptoms: total	**r**	-.094	-.306	-.027	-.306
	p	.610	.089	.882	.089
	n	32	32	32	32

CPRS-R: Conners' Parent Rating Scale Long Form-Revised, ADHD: Attention Deficit and Hyperactivity Disorder, DSM-IV: Diagnostic and Statistical Manual of Mental Disorders, SSI: Stuttering Severity Instrument, n: Number of participants, r: Pearsoncorrelation coefficient, p*<0.05

Table 6. Pearson's correlation analysis findings on the investigation of the relationships between stuttering severity variables and SCAS-Parent subscale scores and total score in children with stuttering

SCAS-Parent subscales		Stuttering Frequency	Stuttering Duration	Physical Concomitants	SSI-4 Severity Degree
Separation anxiety	**r**	-.152	-.215	-.082	-.206
	p	.407	.238	.657	.258
	n	32	32	32	32
Panic attacks	**r**	.044	.117	-.050	.234

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

	p	.813	.525	.785	.197
	n	32	32	32	32
Social phobia	r	.209	.016	-.334	-.022
	p	.251	.932	.062	.906
	n	32	32	32	32
Obsessive-compulsive disorder	r	.044	.006	-.050	.005
	p	.813	.974	.785	.979
	n	32	32	32	32
Agoraphobia	r	.193	.-146	-.018	.035
	p	.289	.425	.921	.851
	n	32	32	32	32
SCAS-Parent total score	r	.137	-.062	-.266	-.065
	p	.456	.734	.141	.725
	n	32	32	32	32

SCAS-Parent: Spence Children's Anxiety Scale – Parent, SSI: Stuttering Severity Instrument, n: Number of participants, r: Pearson correlation coefficient, p*<0.05

Table 7. Pearson's correlation analysis findings on the investigation of the relationships between the severity of stuttering variables and the subscales of the SATI scores in children with stuttering

Subscales of the SATI		Stuttering Frequency	Stuttering Duration	Physical Concomitants	SSI-4 Severity Degree
Negative reactivity	r	-.135	-.059	-.036	-.112
	p	.461	.749	.843	.540
	n	32	32	32	32
Task persistence	r	.158	.100	-.254	.173
	p	.389	.587	.161	.344
	n	32	32	32	32
Approach-avoidance	r	.158	.086	-.254	.014
	p	.389	.639	.161	.938
	n	32	32	32	32
Activity	r	-.074	-.175	-.109	-.159
	p	.688	.337	.551	-.159
	n	32	32	32	32

SATI: The School-Age Temperament Inventory, SSI: Stuttering Severity Instrument, n: Number of participants, r: Pearson correlation coefficient, p*<0.05

DISCUSSION

In the present study, children with and without stuttering were compared in terms of dimensions of temperament, aspects of ADHD, and types of anxiety. The children with stuttering were found to have significantly higher scores for most of the comparisons in these three categories. However, no significant relation was found between stuttering severity-related variables and temperament, ADHD, and anxiety. The results obtained are discussed below in light of the literature on psychology and stuttering.

Differences in Temperament and ADHD Between Stuttering and Non-stuttering Children

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

Children with stuttering were found to obtain significantly higher scores for the SATI subscales negative reactivity and approach/withdrawal. Consistent with this finding, the children with stuttering also had a significantly higher score on the CPRS-R subscale emotional lability. According to the findings, "Expressing more frequent negative emotions and "Avoiding new people, strangers and situations" (Eremsoy, 2007) characterized the stuttering group regarding temperament. Previously, many researchers have reported similar findings in children with stuttering regarding emotional reactivity (e.g. Ambrose et al., 2015; Ntourou et al., 2013; Uysal & Özdemir, 2019), approach-avoidance, and introversion (e.g. Giorgetti et al., 2015; Uysal & Ozdemir, 2019).

In the current study, the comparison of the CPRS-R subscale scores between the stuttering and nonstuttering children showed that the stuttering group is characterized by certain aspects of ADHD. This is compatible with evidence about the relation between stuttering and ADHD reported in many studies (Donaher & Richels, 2012; Druker et al., 2019; Healey & Reid, 2003). In fact, the possible temperament characteristics in children with stuttering are associated with several aspects of ADHD (Alm, 2014). In the present study, the presence of a difference in the activity dimension of temperament between the stuttering and non-stuttering groups seemed to support the evidence from the literature. The children with stuttering also had a significantly higher score for the activity dimension of temperament. This finding, suggesting a high level of motor activity (Eremsoy, 2007), seemed to confirm findings concerning the CPRS-R, utilized to measure aspects of ADHD since these subscales involve items relating to motor activity levels (Kaner et al., 2011). This is not a surprising finding when taking into consideration the likelihood of a high prevalence of hyperactivity in stuttering (Druker et al., 2019) and similar findings in the literature on stuttering (Giorgetti et al., 2015; Howell et al., 2004).

In the present study, the children with stuttering were also shown to have a significantly higher score for the CPRS-R subscale oppositional defiant disorder. This subscale is related to conduct problems (Kaner et al., 2011). In fact, the definition of destructive behaviors involves impulsivity, attention problems, and hyperactivity (McMahon, 1994). However, making generalizations about oppositional characteristics in stuttering children is only speculative since they do not have any basis in the relevant literature.

Taken together, the findings of temperament and ADHD seem to support the hypotheses proposed in the literature that stuttering children have more negative reactivity to emotional stimuli and are more unsuccessful in regulating their emotions and adapting to new situations (Ambrose et al., 2015; Ntourou et al., 2020; Zengin-Bolatkale et al., 2018).

Anxiety in Stuttering

In the current study, the children with stuttering obtained significantly higher scores for SCAS-Parent and for certain types of anxiety compared to their peers with normal fluency. Some of these findings seem to be complementary to the ones about temperament and ADHD. The most salient finding was that stuttering children have a significantly higher score for the subscale social phobia, which is congruent with the literature (Blood et al., 2001; Blood et al., 2007; Cherif et al., 2018; Iverach et al., 2016; Mulcahy et al., 2008). When the connection between temperament and anxiety is taken into account (Liotta, 2013; Ollendick & Hirshfeld-Becker, 2002), the finding of social phobia is consistent with the scores for the subscale approach/withdrawal, suggesting that stuttering children experience more social withdrawal.

It has been reported in the literature that children with high negative reactivity are more easily affected by stress and are more likely to exhibit anxiety symptoms (Bates et al., 1991). When the evidence from

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

the literature that children with stuttering feel daily stressors more (Blood et al., 1997) and those anxiety symptoms are related to stuttering (Smith et al., 2014) is taken into consideration, the negative reactivity dimension of temperament might have modulated the results of this study. In fact, one of the results of this study, namely that children with stuttering differ significantly from their non-stuttering peers in terms of both negative reactivity and anxiety symptoms, supports this notion.

The stuttering group also had a significantly higher score for the SATI subscale approach/withdrawal. This finding is supported by the significantly higher score of children with stuttering on the SCAS-Parent subscales social phobia and separation anxiety. These subscales relate to the presence of profound fear in social environments or situations requiring effort, with anxiety about being separated from home or from people important to the children (Orbay & Ayvasik, 2006).

Attributing the high anxiety scores of children with stuttering only to the connection between temperament and anxiety can be quite misleading. It could suggest that the possible relation between social anxiety and emotional/negative reactivity in normally fluent children (Goldin et al., 2009) is quite different from that in children who stutter. The commonly held view is that the high levels of social anxiety in children who stutter originate from their stuttering-related experiences and therefore rise increasingly, regardless of temperament (Blood & Blood, 2007; Cook & Howell, 2014; Kefalianos et al., 2012).

The children with stuttering also obtained a significantly higher score on the Separation Anxiety subscale compared to the non-stuttering peers, which is consistent with their total anxiety score. When the potentially negative effect of stuttering on children's communication with people other than members of their family is considered (Kikuchi et al., 2019), it is to be expected that these children will exhibit separation anxiety. Previous studies with stuttering children and adolescents have yielded similar findings (Iverach et al., 2016; McAllister, et al., 2015).

Another anxiety-related finding of the present study is that the stuttering children got a significantly higher score for the SCAS-Parent subscale obsessive-compulsive disorder. However, considering other studies that do not show a difference in obsessive-compulsive disorder in school-aged children with stuttering (Iverach et al., 2016) hinders the drawing of a strong conclusion about this interaction between stuttering and obsessive-compulsive disorder.

It should be kept in mind that the SCAS-Parent is a parent-report scale. It has been reported that parents of children with stuttering can also have high levels of anxiety about the effects of the child's stuttering (Costelloe et al., 2018). In other words, parents of children with stuttering can have increased sensitivity to anxiety in their children, and this might have affected the results of the present study.

Relation Between Stuttering Severity, Temperament, ADHD, and Types of Anxiety

In this study, stuttering severity showed no relation with temperament, ADHD, or types of anxiety. These findings are consistent with those of Eggers et al. (2010) and Uysal and Ozdemir (2019), who reported no relation between stuttering severity and temperament. However, Johnson et al. (2010) and Ntourou et al. (2020) did show a relationship between them. There is also conflicting evidence about the relation between stuttering severity and ADHD. While one study shows a significant correlation between these variables (Druker et al., 2019), Donaher and Richels (2012) do not report a significant correlation between them. In addition, some studies demonstrate a correlation between stuttering severity and types of anxiety (Blood et al., 2007; Craig & Hancock, 1996; Mulcahy et al., 2008) while other studies do not reveal any

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

relation between them (Blood et al., 2001), which is compatible with the results of the present study. The conflicting evidence about the relationship between stuttering severity and temperament, ADHD, and types of anxiety can be ascribed to potential problems with the validity and reliability of the tools utilized to measure stuttering severity in the presence of many mediating psychological variables and the wide variety of tools utilized to collect the data about these psychological variables (scales and experimental tasks, etc.).

Despite the valuable findings described, this study is not without its limitations. Data were collected only with parent-report scales, while child-report scales and task-based measurements were not used. If further studies are to provide more reliable results, it is recommended that these additional data collection methods be used. Furthermore, whether or not participants were receiving therapy was not considered as an inclusion criterion. Adopting this criterion, especially for the variable anxiety, could provide more accurate results. So that the interactions between stuttering, anxiety, and ADHD can be more clearly interpreted, stuttering individuals exhibiting ADHD and those not exhibiting ADHD could be compared in terms of the features of anxiety. In addition, longitudinal studies are needed to investigate the interactions between temperament and anxiety.

Conclusion and Suggestions

Stuttering is generally more than a phenomenon involving difficulty in the physical production of sounds or words. As shown in the present study, cognitive and emotional factors may also play a role in stuttering. Therefore, professionals working with stuttering individuals should be aware of differences in the dimensions of temperament, aspects of ADHD, and types of anxiety that are associated with stuttering. In fact, as shown in the present study, professionals should be aware that these features may affect stuttering subclinically irrespective of the fact that an individual is diagnosed with ADHD or anxiety disorder, and should plan appropriate assessments and treatment programs.

Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

Cangi & Erim (2021), 11(61)
Turkish Psychological Counseling and Guidance Journal

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Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

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Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

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Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

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Comparison of Children Who Do and Do Not Stutter Regarding Dimensions of Temperament, Aspects of Attention-Deficit Hyperactivity Disorder and Anxiety Types

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Author Contributions

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

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Adaptation of Workplace Dignity Scale to Turkish: Validity and Reliability Studies

İş Yeri İtibar Ölçeği'nin Türkçe'ye Uyarlanması: Geçerlik ve Güvenirlik Çalışmaları

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ABSTRACT

This study; it was aimed to adapt the Workplace Dignity Scale developed by Thomas and Lucas (2018) to Turkish and to conduct validity and reliability studies. The study group of the research consists of 362 employees. After the linguistic equivalence studies, item analysis, validity, and reliability studies were performed. Confirmatory factor analysis was applied to test the structure of the scale and the desired goodness of fit values were achieved. Studies on the validity show that the scale is a valid measurement tool. Within the scope of the reliability studies of the scale, Cronbach Alpha reliability, item-total correlation values, and test half methods were used. All these findings confirm that the scale is a reliable measurement tool. In summary; the findings that can be used in studies to be conducted in the Workplace Dignity Scale in Turkey have revealed that there is a valid and reliable scale.

ÖZET

Bu araştırmada; Thomas ve Lucas (2018) tarafından geliştirilen İş Yeri İtibar Ölçeği'nin Türkçe'ye uyarlanması, geçerlik ve güvenirlik çalışmalarının yapılması amaçlanmıştır. Araştırmanın çalışma grubunu 362 çalışan oluşturmaktadır. Ölçeğin dilsel eşdeğerlik çalışmaları sonrası madde analizi, geçerlik ve güvenirlik çalışmaları yapılmıştır. Doğrulayıcı faktör analizi sonuçlarına göre ölçekte istenen uyum indeks değerlerine ulaşıldığı görülmüştür. Ölçeğin iç ölçüte dayalı ve ölçüt-bağımlı geçerliliğine yönelik çalışmalar ölçeğin ayırt edici, geçerli bir ölçme aracı olduğunu göstermektedir. Ölçeğin güvenirlik çalışmaları kapsamında Cronbach Alpha güvenirliği, madde toplam korelasyon değerleri ve test yarılama yöntemleri kullanılmıştır. Elde edilen tüm bulgular ölçeğin güvenilir bir ölçme aracı olduğunu doğrular niteliktedir. Özetle; araştırmadan elde edilen bulgular İş Yeri İtibar Ölçeği'nin Türkiye'de çalışanların iş yerinde itibar düzeylerinin doğrudan ölçülebilmesi amacıyla yapılacak olan çalışmalarda kullanılabilecek, geçerli ve güvenilir bir ölçek olduğunu ortaya koymuştur.

INTRODUCTION

Workplaces are areas full of real-life experiences playing a significant role in people's respectabilities, which lead to both attaining respectability and loss of respectability for individuals (Hudson, 2001). Workplaces are considered as places that allow people to develop their competencies, make people feel the part of the whole, at the same time where this feeling can be damaged, and behaviors that are not appropriate for human nature can also take place (Thomas & Lucas, 2019).

Workplace dignity is defined as a sense of self-respect and self-esteem, which is formed as a result of being treated with respect (Hudson, 2001; Lee, 2008). In other words, this concept entails people's feeling inherently themselves valuable, respectable, and deserve to be regarded (Lucas, 2011).

Before the present time, in their works, philosophers and sociological and political theorists such as Immanuel Kant, Karl Marx, Emile Durheim stated that people should be valued in their work environments in modern societies (Hudson, 2001; Thomas & Lucas, 2019). However, despite all these references, this issue is not given many places in today's management studies (Zawadzki, 2018).

Over the past forty years, great changes have occurred in business life due to the growth in the use of information technologies, the globalization of many industries, the reorganization of organizations, changes in employment contracts, working hours, and the increase in the number of female employees (Sparks et al., 2001). Recently, the issue of dignity that people have at work has begun to be handled within the scope of humanitarian management. At the center of humanitarian management is protecting people's dignity and promoting employee well-being (Thomas & Lucas, 2019). Management style is an important issue affecting the efficiency of employees and the workplace, the relationship between employees and managers, and the commitment to the organization (Ogunola et al., 2013; Sparks et al., 2001). The beliefs, feelings, opinions, and values that managers have are among the factors affecting their management styles (Başaran, 2000). Since protecting the dignity of employees is a right that people have inherently, great importance should be attached to protecting employees and their dignity in management styles (Seçer & Yazıcı, 2018).

Inhuman working conditions, abuse, psychological harassment (mobbing), lack of basic needs of employees, unequal treatment based on gender or age, internship, limitations on employees' freedoms, not respecting their views, and putting pressure on employees with very high performance to perform more are shown among the factors that damage the dignity of people in working conditions (Mele, 2014). Maltreatment for employees in the workplace (Günçavdı & Soner, 2015), bullying (Tınaz et al., 2010; Aydın & Öcel, 2009), rude and unkind behaviors (Gök et al., 2019; Işıkay, 2019; Polat & Özçalık, 2013, Üstün & Ersolak, 2020) and psychological violence (Dündar & Acar, 2008; Murat & Elçi, 2020; Özyer & Orhan, 2012; Yılmaz, 2020) are important factors affecting the workplace dignity of employees. In research conducted by Lucas et al. (2013) on the reasons for the suicide of 40 young employees in 2010 at FoxConn technology company in China, it has been revealed that managers pressure employees to work in a way that is beneath their dignity. In addition, gender (Gupta, 2016), race, education level, and the position of the employee in the organization (Lamont, 2000; Meares et al., 2004), working in low-wage daily jobs (Stacey, 2005), stigma due to immigration (Yu, 2016) are also among the factors affecting workplace dignity.

It is expected that there will be an increase in the productivity of both the employees and the organization in organizations having working conditions in which employees are treated with dignity. Participation of

employees, the establishment of work-life balance, development of employees, recognition of employees, and health and safety issues are shown by the American Psychological Association (2015) as the basic standards for psychological health at work. While a psychologically healthy workplace increases the performance and productivity of the employees, it also positively affects the health and well-being levels of the employees (Eryılmaz & Ercan, 2016; Grawitch & Ballard, 2016, Pirson, 2014). Employees' sense of trust and belonging to the organization (Spark et al., 2011; Yılmazer, 2000), quality of communication between managers and employees (Günçavdı & Polat, 2015), workplace satisfaction (Batıgün & Şahin, 2006) are among the factors that will both increase the well-being of employees and contribute to organizational success. Özen-Kutanis and Oruç (2014) indicated that positive organizational behavior, which shows appreciation for and enhances the positive and strong aspects of employees such as self-efficacy, resilience, optimism, hope, subjective well-being, and emotional intelligence, makes a significant contribution to the productivity of employees. To create this balance between employees and organization, it is required to have a positive organizational environment where human dignity is recognized, provides employees with opportunities to enhance their dignity, and employees are not exposed to any negative behavior, psychological pressure, or discrimination (Aytaç & Başol, 2018; Doğan, 2015; Lucas et al., 2013; Seçer & Yazıcı, 2018).

These findings reveal that working conditions should be more decent for employees and that employees should be respected due to being human. Considering the Turkish literature there are various scales used in Turkey such as Workplace Bullying Scale (Tınaz et al., 2010), Decent Work Scale (Işık et al., 2018), Negative Acts Questionnaire-Revised (Aydın & Öcel, 2009), Workplace Mistreatment Scale (Günçavdı & Polat, 2015), Job Satisfaction Scale (Baycan, 1985) and Workplace Incivility Scale (Gök et al., 2018). However, according to the Turkish literature, it is seen that no scale can be used to measure the dignity levels of employees at the workplace. This study is expected to contribute to the researchers in the studies to be carried out in the fields of work and organizational psychology and career counseling to determine the workplace dignity of the employees. Accordingly, it was aimed to adapt the Workplace Dignity Scale developed by Thomas and Lucas (2019) to Turkish.

METHOD

This section contains information about the study group, data collection tools, data collection process, and data analysis.

Study Group

To adapt the Workplace Dignity Scale to Turkish, the Convenience sampling method was used to determine the study group. In this method, the sample is taken from a group of units more accessible and easier to reach due to the limitations arising from time, money, and labor (Büyüköztürk et al., 2018).

For this purpose, 362 employees were reached through online data collection. 58.6% of the participants are female (n = 212) and 41.4% are male (n = 150). The ages of the participants are between 21-58 years old and the average age is 37.1 years. 87.3% of the participants work in the public sector (n = 316) and 12.7% in the private sector (n = 46). 82.6% of the participants are married (n = 299), 13.3% are single (n = 48) and 4.1% are widowed/divorced (n = 15). 0.8% of the participants are primary school graduates (n = 3), 0.8% are secondary school graduates (n = 3), 5.2% are high school graduates (n = 19), 77.1% are university graduates (n = 279) and %16.1 are graduates of graduate education (n = 58). I

In the research, Workplace Dignity Scale was applied to 259 employees to collect data for confirmatory factor analysis, and Minnesota Satisfaction Questionnaire along with Workplace Dignity Scale was applied to 103 employees to collect data for criterion validity analysis.

Ethical Statement

In this study, all the rules stated in the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. Accordingly, the research was reviewed by the Social and Humanities Ethics Committee of Ondokuz Mayıs University and was given permission (Date: 23/06/2020, Ref: 2020/365).

Data Collection Tools

Workplace Dignity Scale. In the research, "Workplace Dignity Scale", which was developed by Thomas and Lucas (2019), considering the lack of a valid scale in measuring the level of dignity at the workplace, to examine the dignity levels of the employees in the workplace more directly and systematically, was used. The development of the scale was carried out in a three-step process. To identify the items to be included in the scale by determining the thoughts of the individuals regarding workplace dignity, a focus group study was carried out firstly with the participation of 62 employees who were reached with the help of newspaper ads and leaflets hung on the boards located in places available to various communities. At this stage, the participants were asked to explain what the concept of workplace dignity means to them and to share what they felt in response to the situations they approve and did not in the workplace. In the second step, the opinions of 11 experts on the proposed set of items were consulted. In the third and last step, the validity and reliability studies of the scale were conducted using the data collected from different groups with 401 and 542 subjects. İtems of the scale are rated on a 7-point Likert scale ranging from "I strongly disagree" and "I strongly agree". The scale consisting of 18 items has a six-factor structure. These factors are Respectful Interaction, Competence/Contribution, Equality, Inherent Value, General Dignity, and Indignity. The items included in the Indignity subscale are accepted as reverse items. When the fit index values of the scale are analyzed, it is seen that $\chi 2 / df = 2.756$ (p <.001), CFI = .920, TLI = .914, RMSEA = .57. In addition, the internal consistency coefficient of the scale was determined as .96.

Minnesota Satisfaction Questionnaire. "Minnesota Satisfaction Questionnaire Short Form" developed by Weiss et al. (1967) was used in the research. The scale was adapted to Turkish by Baycan (1985). The scale consisting of 20 items rated on a 5-point Likert scale where 1 equals I'm not satisfied at all, 5 equals I'm very satisfied) is used to determine the internal and external factors related to the job. The lowest score that can be obtained from the scale is 20, and the highest score is 100. the reliability coefficient of the scale developed by Weiss et al. (1967) is .83, and .77 in the Turkish form developed by Baycan (1985).

Process

In the research, SPSS 22.0 program was preferred in the analysis made within the scope of linguistic equivalence, item analysis, and reliability, and the SPSS AMOS program was preferred in the confirmatory factor analysis conducted whether the Workplace Dignity Scale was verified in the Turkish sample.

In the study, normality assumptions were examined before CFA. It is considered the sufficient number of samples for the CFA to be 10 times greater than the number of variables (Klein, 1994). Therefore, the

sample size of the study is 259 and fulfills this condition. After examining the data, 12 data that were found to be missing were removed from the data set. For the assumption of normality, extreme values were determined by examining box plots. 28 data were determined as extreme values and excluded from the study and it was aimed to fulfill the normality assumptions. Normality analysis was conducted on 259 data. After data analysis, it was found that the data showed a normal distribution in the range of -1.5 to +1.5 skewness and kurtosis (kurtosis = -.347; skewness = -.399) (Tabachnick & Fidell, 2013).

RESULTS

This section includes the findings obtained during the adaptation of the Workplace Dignity Scale to Turkish.

Linguistic Equivalence Studies

Permission was obtained by contacting Kristen Lucas, one of the authors who developed the scale, via e-mail to adapt the Workplace Dignity Scale to Turkish on February 25, 2019. The translation of the scale into the Turkish language was made by six teachers who completed their graduate education at least at the master's level in the Department of English Language Teaching. The English and Turkish forms of the scale were reviewed by three academics in the psychological counseling and guidance Department in Ondokuz Mayıs University. The proofreading and editing in terms of meaning and grammar were made by one Turkish Language and Literature expert. Later, the Turkish version of the scale was translated back into English by an academic who graduated from Boğaziçi University Psychological Counseling and Guidance Program, who is an expert in his field and who has a good command of English. After that, the consistency between the Turkish and English forms was examined. Along with some corrections, this scale was put into final form for validity and reliability analyses.

As part of the studies to adapt the Workplace Dignity Scale to Turkish, the linguistic equivalence of the scale was examined. For this purpose, the English form was first applied to 30 English Teachers (18 females, 12 males) online. Two weeks later the Turkish form was applied to the same group of participants. Normality analysis of the data has been done and it was observed that the data provides normal distribution in the range of -1.5 to +1.5 kurtosis and skewness (English form, kurtosis = -.037, skewness =.-462; Turkish form, kurtosis = -.114; skewness, -.742) (Tabachnick and Fidell, 2013). According to analysis results, the correlation coefficient between the two forms is .953 (p<.001) and t-test result for paired samples ($\bar{x}$English (n= 30)= 6.248; $\bar{x}$Turkish (n=30)=6.331; t=-.3.668; sd=29; p <.05). These findings reveal that the Turkish form of the scale is linguistically equivalent to the English form.

Item Analysis

Item analysis was conducted to determine the predictive power and discrimination of the total score of the items on the scale. Findings showed that the items in the sub-dimension of Indignity were negative. In this regard, the items in the sub-dimension of Indignity were transformed and item analysis was done again. According to the results, The Cronbach Alpha internal consistency reliability coefficient of the Turkish form was .916. The corrected item-total correlations ranged from .337 to .751. Findings related to item analysis of the scale are shown in Table 1.

Table 1. Results of item analysis

Item	Mean	Standard Error	Item Total Correlation
1. People at work communicate with me respectfully.	6.22	.745	.645
2. I feel respected when I interact with people at work.	6.12	.735	.725
3. I am treated with respect at work.	6.15	.720	.728
4. At work I have the chance to build my competence.	5.20	1.308	.558
5. People at work recognize my competence.	5.57	1.113	.601
6. People show they appreciate my work efforts.	6.61	1.026	.670
7. At work, people talk to me like an equal, even if there are status differences between us.	5.59	1.114	.561
8. I feel just as valued as others in the organization.	5.91	.921	.683
9. At work, I am valued as a human being.	6.12	.745	.637
10. People at work treat me like I matter as a person, not just as a worker.	6.03	.775	.751
11. People at work genuinely value me as a person.	6.15	.711	.673
12. My workplace is a source of dignity for me.	5.57	1.257	.399
13. I am treated with dignity at work.	5.83	.974	.726
14. I have dignity at work.	5.97	.804	.709
15. People at work treat me like a second-class citizen.	6.34	.984	.337
16. I am treated as less valuable than objects or pieces of equipment.	6.49	.769	.540
17. My dignity suffers at work.	6.41	.789	.564
18. I am treated in undignifying ways at work.	6.43	.789	.493

N=259

Validity Studies

Confirmatory factor analysis was applied to test the construct validity of the Workplace Dignity Scale. CFA enables to test whether the existing structure is verified or not based on the data gathered from the measurement instrument developed depending on a previously determined theoretical structure (Çokluk et al., 2010, p. 276).

In the CFA applied to test the construct validity of Workplace Dignity Scale, $\chi 2/df$, CFI (Comparative Fit Index), GFI (Goodness Fit Index), TLI (Tucker-Lewis Index), NFI (Normed Fit Index) and RMSEA (Root Mean Square Error of Approximation) were evaluated. Examining fit indicies of the model, the result was following: $\chi2/df = .2.697$ ($\chi2 = 323.659$, sd = 120), CFI = .937, GFI = .877, NFI = .905, TLI = .920 and RMSEA = .081. Since these findings indicate that the desired fit indices values were not reached, the modification indexes were examined and a covariance structure between e5-e13 and e7-e11 was proposed. After re-analyzing the proposed structure, model fit index values were found within the desired limits: $\chi2/df = .2.697$ ($\chi2=265.596$, sd=118), CFI= .955, GFI= .900, NFI= .922, TLI= .941, RMSEA= .070.

According to the literature; $\chi2/df$ less than 3 means the perfect fit (Marcholudis & Schumacher, 2001). If CFI, GFI, TLI, and NFI equals or is greater than .90, and RMSEA equals or is less than .08 it indicates that the model has construct validity (Brown, 2006; Marcholudis & Schumacher, 2001; Marsh et al., 2006; Schermelleh-Engel et al., 2003; Sümer, 2000). These findings obtained after confirmatory factor analysis revealed that the structure of the Workplace Dignity Scale, consisting of 18 items and 6 factors, has been confirmed as a model.

The model analysis is completed and a path diagram for the model is given in Figure 1. Although the model provides the desired fit, it is necessary to examine whether the parameter estimates are statistically significant (Yılmaz & Varol, 2015). Information on the parameter estimates for the model is presented in Table 2.
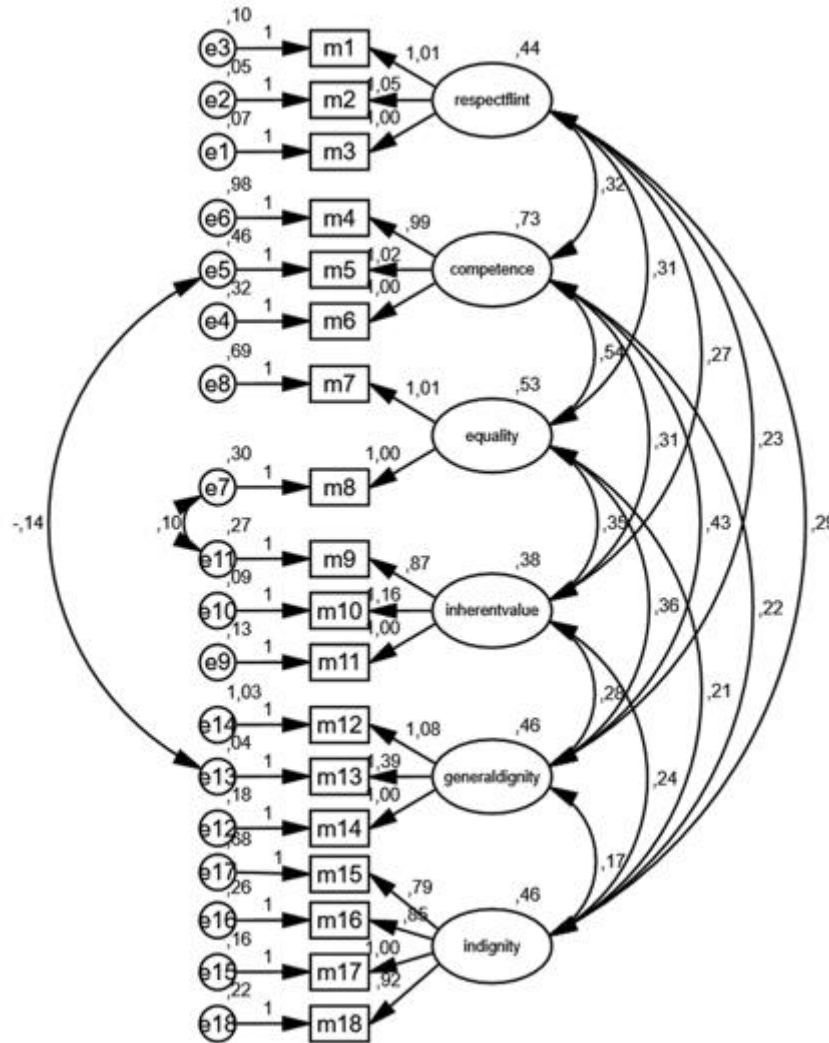

Figure 1. Path diagram of Workplace Dignity Scale

Examining Table 2, it is seen that standardized coefficients, factor loads, in other words, are between .545 and .978. The C.R. (critical ratio) value describes the statistics formed by dividing a parameter estimate by its standard error. With a sufficient sample size, the C.R. resembles a normal distribution. As it shows distribution as a z-statistic, it expresses the statistical significance of the parameter (Byrne, 2001). The resulting C.R. value greater than the absolute value of 1.96 indicates that parameter estimates are significant (Yılmaz & Varol, 2015). As a result, in the confirmatory factor analysis, the path coefficients of all the items in the scale were found significant (p <.001).

Table 2. Parameter estimates of the model

Item	Path	Factor	β1	β2	Standard Error	C.R.	P
i1	<---	Respectful Interaction	0,925	1,007	0,041	24,349	<0,001
i2	<---	Respectful Interaction	0,955	1,053	0,037	28,683	<0,001
i3	<---	Respectful Interaction	0,901	1			
i4	<---	Competence/Contribution	0,836	0,993	0,09	11,02	<0,001
i5	<---	Competence/Contribution	0,789	1,019	0,075	13,522	<0,001
i6	<---	Competence/Contribution	0,651	1			
i7	<---	Equality	0,799	1,01	0,095	10,591	<0,001
i8	<---	Equality	0,664	1			
i9	<---	Inherent Value	0,865	0,867	0,065	13,398	<0,001
i10	<---	Inherent Value	0,924	1,164	0,06	19,31	<0,001
i11	<---	Inherent Value	0,716	1			
i12	<---	General Dignity	0,847	1,082	0,103	10,528	<0,001
i13	<---	General Dignity	0,978	1,391	0,07	19,886	<0,001
i14	<---	General Dignity	0,586	1			
i15	<---	Indignity	0,859	0,791	0,089	8,878	<0,001
i16	<---	Indignity	0,746	0,846	0,065	13,052	<0,001
i17	<---	Indignity	0,545	1			
i18	<---	Indignity	0,8	0,921	0,065	14,192	<0,001

β1: Standardized path coefficients, β2 Non-standardized path coefficients

In order to test the criterion validity, Pearson correlation analysis was applied to examine the data collected from 103 participants who were given both the Workplace Dignity Scale and the Minnesota Satisfaction Questionnaire. According to the results of the analysis, it was revealed that there is a positive relationship between the Workplace Dignity Scale total score and the Minnesota Satisfaction Questionnaire (r = .677, p < .01). Positive significant relationships were determined between Minnesota Satisfaction Questionnaire and each subscales of Workplace Dignity Scale. Respectful interaction subscale (r = .480, p <.01), competence / contribution subscale (r = .652, p <.01), equality subscale (r = .590, p < .01), inherent value subscale (r = .504, p < .01), general dignity subscale (r = .514, p < .01) and the indignity subscale (r = .605, p < .01). In addition, as a result of T-test analysis of the %27 lower group and upper group mean scores, it can be said that the scale is a distinctive measurement instrument. According to the results, the difference between the two groups was found to be significant (x̄lower (n = 70) = 6.68, x̄upper (n = 70) = 5.22; t =32.364; sd = 138; p <.001).

Reliability Studies

In the reliability studies of the Workplace Dignity Scale, Cronbach Alpha coefficient, item-total correlation, and split-half reliability analyzes were conducted. Cronbach Alpha internal consistency coefficient of the scale was found to be .916. The Cronbach Alpha coefficient of .70 and above means that the scale has high reliability (Büyüköztürk, 2017, p.183). The item's total correlation values of the scale ranged from .337 (15th item) to .751 (10th item). This result indicates that the items represent similar behaviors and the items in the scale are compatible with the whole scale. As a result of split-half reliability analysis, the Spearman-Brown correlation coefficient was .858 and the Guttman Split-Half correlation coefficient was .852. These results show that the scale meets split-half reliability criteria (Robinson et al., 1991).

DISCUSSION, CONCLUSION & SUGGESTIONS

After the translation studies of the Workplace Dignity Scale developed by Thomas and Lucas (2019) into Turkish, linguistic equivalence studies which were of great importance in the adaptation studies (Genç et al., 2017) were conducted. As a part of the linguistic equivalence studies, the correlation coefficient between English and Turkish forms of the scale was calculated and a high level of correlation was detected between the two forms (r = .953). In addition, a significant difference was found between the two groups by performing related sample t-test analysis t (29) = -3.668, p <.05).

After the linguistic equivalence studies, the item analysis method was used to determine whether the items in the scale represent the whole scale. The results reveal that the items in the scale represent the entire scale.

Confirmatory factor analysis was applied to test whether the 6-factor structure of the scale was confirmed in the Turkish sample. According to the results of CFA, it was indicated that fit indexes of the scale were χ^2 / df = 2.25 (x^2 = 265.596, df = 118, p <.001), GFI = .900, CFI = .955, NFI = .922, TLI = .941 and RMSEA = .070. Examining fit indices values of the scale developed by Thomas and Lucas (2019), it is seen as x^2 / df = 2.756 (x^2 = 2995.87, df = 1087, p <.001), CFI = .920, TLI = .914, RMSEA = .57. In this respect, there are similarities between the index values of the original scale and the index values of the scale adapted to Turkish. These results show that the six-factor structure of the scale has been confirmed. The scale consists of 6 factors: Respectful Interaction (Items 1, 2 and 3), Competence/ Contribution (Items 4.5 and 6), Equality (Items 7 and 8), Inherent Value (Items 9, 10, and 11), General Dignity (Items 12, 13, and 14) and Indignity (Items 15, 16, 17 and 18). Items included in the Indıgnıty factor of the scale are negative items.

To determine the validity of the scale based on internal criteria, the significance of the difference between the 27% lower group and upper group mean scores were tested. According to Büyüköztürk (2017), individuals who exhibit the features aimed to be measured and individuals who do not should be distinguished from each other to determine whether a scale can make a valid measurement. Findings obtained as a result of independent groups t-test for this purpose show that the Turkish form of the Workplace Dignity Scale is a distinctive measurement tool ($\bar{x}$lower (n = 70) = 6.68, $\bar{x}$upper (n = 70) = 5.22; t = 32.364; sd = 138; p <.001).

In order to determine the criterion validity of the scale, the relationships between Workplace Dignity Scale and Minnesota Satisfaction Questionnaire were examined by Pearson Correlation analysis. Accordingly, a positive correlation was found between Workplace Dignity Scale and Minnesota Satisfaction Questionnaire (r = .677, p <.01). Examining the relationships between the sub-factors of the scale and Minnesota Satisfaction Questionnaire, it is seen that there are a positively significant relationships between Minnesota Satisfaction Questionnaire and Respectful Interaction subscale (r = .480, p <.01), Competence / Contribution subscale (r = .652, p <.01), Equality subscale (r = .590, p <.01), Inherent value subscale (r = .504, p <.01), General Dignity subscale (r = .514, p <.01) and Indignity subscale (r = .605 , p <.01).

As a part of the reliability studies of the scale, Cronbach Alpha coefficient, item-total correlation, and split-half methods were used. Accordingly, it is seen that the Cronbach Alpha reliability coefficient calculated for Workplace Dignity Scale is .916. The internal reliability coefficient .70 and above indicates that the scale is reliable (Büyüköztürk, 2017, p.183; DeVellis, 2012). In the original scale developed by

Thomas and Lucas (2019), the internal consistency reliability coefficient was found to be .96. This result shows that the reliability coefficients are similar in both studies.

Examining item-total correlation values of the scale, it is seen that the item-total correlation scores of the scale vary between .337 and .751 and the internal consistency of the scale is high. The split-half reliability results reveal that the scale meets the split-half reliability criteria (Spearman-Brown correlation coefficient .858, Guttman Split-Half correlation coefficient .852). All these findings confirm that the scale is a reliable measurement tool.

Findings obtained from the study show that the scale is a valid and reliable scale that can be used in the Turkish sample. The workplace Dignity Scale is a scale consisting of six factors and 18 items. Items of the scale are rated on a 7-point Likert scale (1-I strongly disagree, 7- I strongly agree). The lowest score that can be obtained from the scale is 18, and the maximum score is 126. The high score obtained from the scale shows that the workplace dignity levels of the employees are high. Subscales were named respectively Saygılı Etkileşim (Respectful Interaction), Yeterlik/Katkı (Competence/Contribution), Eşitlik (Equality), Doğal Değer (Inherent Value), Genel İtibar (General Dignity), and İtibarsızlık (Indignity) in Turkish. According to the literature, it is expected that the scale will be used in work and organization psychology and career counseling studies in Turkey since there is no scale measuring the dignity levels of the employees at work.

Looking at the demographic characteristics of the group from which data was collected, it is observed that 58.6% of the participants are female (n = 212) and 41.4% male (n = 150). In the collection of data for validity and reliability studies of the original form of the scale, 51% of the first group with 450 participants is male and 49% female and 53% of the second group with 532 participants is female and 47% male. In this respect, it can be shown among the limitations of the study that the gender distribution was not balanced in the studies of adapting the scale to Turkish. In the original form of the scale, the ages of the participants range between 21 and 70 in the first group, and between 21 and 68 in the second group. In this study, the ages of participants vary between 21 and 58. This means that in both studies data were collected from a group of participants in a similar age range. İn addition, in the studies for developing the original scale, 67% of the participants in the first sample group and 64% of the participants in the second sample group were university graduates, whereas 77.1% of the participants in the adaptation studies to Turkish were university graduates. This shows that the educational level of the participants in both studies is similar. Moreover, In the study of adapting the scale to Turkish, it can be shown among the limitations of the study in terms of the sectoral balance that data were collected from participants working in the public sector (n = 316) and 12.7% in the private sector. Accordingly, it is suggested for the researchers to ensure a balanced distribution in terms of gender and sector in the selection of samples for future validity and reliability studies.

In addition, as a part of reliability studies, it is suggested for the researchers to use the test-retest method because it makes a significant contribution to the reliability studies by enabling to determine whether the results of the Workplace Dignity Scale are consistent over time in the Turkish sample.

To sum up, despite all limitations, findings obtained from this adaptation study have revealed that Workplace Dignity Scale is a valid and reliable scale that can be used in studies that will be carried out to measure directly employees' level of dignity at work in Turkey.

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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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