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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.

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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. Güvenirlilik 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.

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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 $\geq .90$, for the perfect fit $\geq .95$, for acceptable fit in GFI $\geq .85$, for the perfect fit $\geq .90$, and for acceptable fit in RMR, RMSEA, and SRMR, $\leq .08$ and for the perfect fit, $\leq .50$ 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.

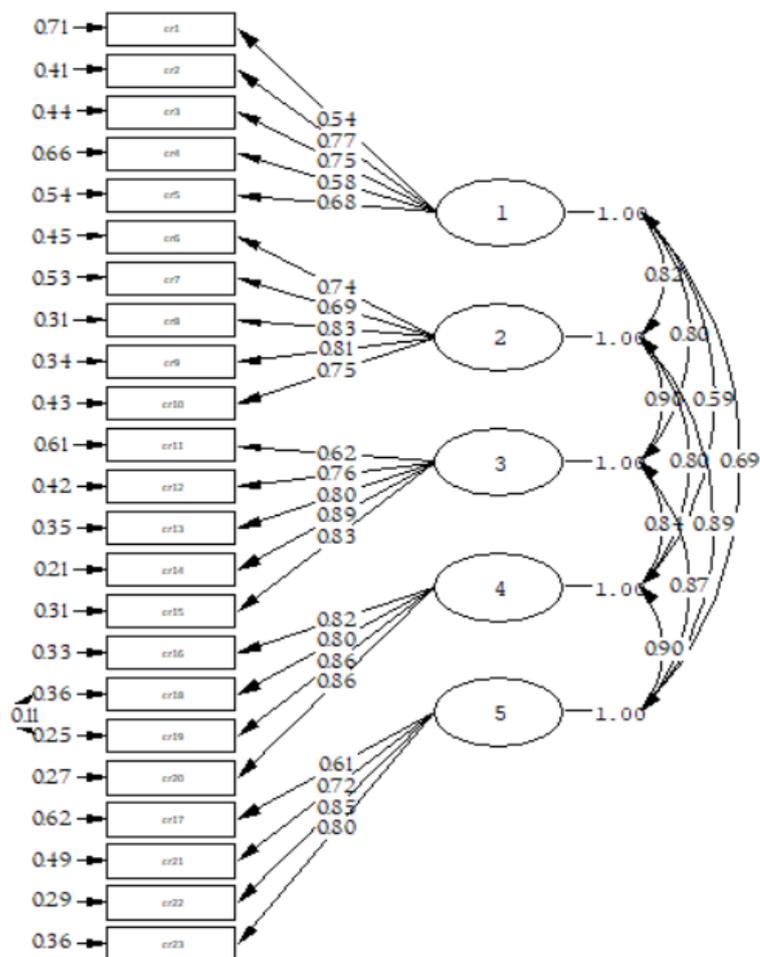


Figure 1. Path Diagram, 1= Connection and Caring, 2= Resources, 3= Transformative Potential, 4= Disaster Management, 5= Information and Communication

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 | χ^2 / 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 < .01 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 dereceleme 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 katılmıyorum 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 adanmış 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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