Physically disabled individuals' coping styles and resilience by disability type and onset

Sare Aydın[1], Esma Akpınar Aslan[2], Sedat Batmaz[3]
[1]Assis. Prof., [2]Assoc. Prof., Department of Psychiatry, School of Medicine, Tokat Gaziosmanpasa University, Tokat, Turkey
https://orcid.org/0000-0002-5081-5983-https://orcid.org/0000-0003-4714-6894
[3]Prof., Department of Psychology, School of Humanities and Social Sciences, Social Sciences University, Ankara, Turkey
https://orcid.org/0000-0003-0585-2184

SUMMARY

Objective: This research explores variations in resilience, and coping strategies among physically disabled individuals based on nature of disability, and whether it is congenital or acquired. Additionally, the key factors influencing psychological resilience were thoroughly evaluated.

Method: The study involved 193 participants with diverse physical disabilities. They completed the Sociodemographic Data Form (SDVF), The Brief COPE, and Brief Resilience Scale (BRS). The analyses were conducted using the SPSS software package.

Results: Individuals with congenital disabilities had significantly higher resilience scores (p=0.03), while no significant differences were found based on disability type. Hierarchical regression analysis revealed that gender and disability duration significantly predicted psychological resilience, with females and individuals with congenital disabilities demonstrating higher resilience levels (p<0,05).

Discussion: This study highlights the importance of tailored support services and rehabilitation programs to enhance the mental well-being of physically disabled individuals by addressing their unique psychological and social challenges.

Key Words: Disability, Psychological resilience, Coping strategies, Mental Health, Disability Psychology.

INTRODUCTION

The World Health Organization (WHO) has defined the concept of disability as "the inability of a person to comply with the requirements of normal life as a result of organ absence or impairment that causes permanent and certain loss of function and appearance from physical, mental and spiritual characteristics"(1). Disability is a condition that has both physical, psychological and social dimensions(2).

Whether the physical disability is in the upper or lower extremities can determine many factors that affect the individual's daily life. Individuals with upper limb disabilities can often be more independent in performing many daily activities using their hands, can interact socially and can be successful in certain occupations. On the other hand, those with lower limb disabilities may often experience limitations in their mobility, but can maintain their independence by using a wheelchair or similar assistive devices. Studies show that both upper and lower extremity disabilities cause difficulties, but the difficulties experienced may be different depending on the affected area(3–5).The time of onset of disability has a significant impact on the experiences and outcomes of people with physical disabilities. Verbrugge suggested that individuals with childhood disabilities generally tend to be more disabled, but have a similar or higher level of social participation(6,7). Disability onset after age 21 is significantly associated with a moderate or lower prevalence of health status than early disability onset(8).

Physical and social limitations experienced by people with disabilities can sometimes cause difficulties in social interaction. Limitations on daily life

DOI: 10.5505/kpd.2025.66564

Cite this article as: Aydin S, Akpinar Aslan E, Batmaz S. Physically disabled individuals' coping styles and resilience by disability type and onset Turkish J Clin Psych 2025; 28:105-112

The arrival date of article: 26.11.2024, **Acceptance date publication:** 10.03.2025

Turkish J Clinical Psychiatry 2025;28: 105-112

skills such as social interaction and finding a job, and factors such as a sense of dependence on other people, uncertainties about the future, and negative perspectives of others may predispose to the development of depression and anxiety disorders. Research findings show that individuals with physical disabilities have low self-esteem and high levels of depression, stress and anxiety(9).

The concept of psychological resilience is defined as adapting to stressful situations, not being sick despite negativities, being functional despite stress and difficulties, and recovering and recovering after stressful experiences (10–12). It is reported that individuals with high psychological resilience use task-oriented coping strategies to cope with stress(13).

Lazarus and Folkman (1984) define coping as an individual's response to stressful situations with potentially negative consequences(14). There are three types of coping strategies that people can commonly turn to in order to reduce psychological tension; task-oriented, emotion- oriented and avoidance-oriented coping strategies(15). Task-oriented coping strategy focuses on solving problems, making decisions and taking action. Emotion-oriented coping strategy is based on coping through expressing emotions. Avoidance-oriented coping strategy is a coping style that encourages individuals to cognitively move away from problems through distracting activities(16).

When the literature is reviewed, there are studies examining psychological resilience and coping strategies in different groups of the society (17–23). However, there is no research in the literature that examines the psychological resilience and coping strategies of individuals with disabilities who experience various problems in social and social life and who may encounter prejudiced and exclusionary attitudes in all areas of social life. The aim of this study was to investigate whether psychological resilience and coping strategies of physically disabled individuals differ according to nature of disability and time of onset of disability (congenital or acquired).

The first hypothesis suggests that individuals who acquire physical disabilities later in life will have lower levels of psychological resilience, and more unique coping strategies than the group with congenital physical disabilities. The second hypothesis predicts that individuals with walking/balance disability will have higher levels of mental symptoms, lower levels of psychological resilience and different coping strategies than the group with hand/arm disability. The confirmation of these hypotheses may contribute to the development of more effective intervention and support strategies for the psychosocial needs of individuals with physical disabilities.

METHODS

Participants and Procedure

First, in order to create a pool of potential participants, disabled associations, rehabilitation centers and health institutions were contacted, and an explanatory letter and informative material were presented, including the purpose of the study, the process and the rights of the participant. Physically disabled individuals between the ages of 18-65, who agreed to fill out the questionnaire, who could read and write at a level to answer the questionnaire, who were not mentally retarded, and who did not have a neurological disease that would affect cognitive functions were included in the study. A total of 193 people with physical disabilities participated in the study.

Participants completed the forms independently, with assistance provided when necessary. For individuals who required support, help was offered by the research team or a close acquaintance of the participant. Assistance included reading the questions aloud, transcribing the answers, or marking the responses physically on behalf of the participant. The form completion process typically took between 20 to 30 minutes. Participants were informed about their rights, and flexible scheduling was offered to ensure comfort and accessibility during the data collection process. Contact information for the research team was provided for any additional support or queries.

Assessment Tools

Sociodemographic and Clinical Data Form: It was developed by the researchers. It consists of sociodemographic questions investigating the age, gender, marital status, educational status, occupational status of the participants, as well as questions investigating the disability status and the time of onset of the disability.

The Brief COPE: The first version of the scale was developed by Carver et al. It consists of 53 items and 14 factors (24). In later studies, the humor dimension was added to the scale and a 60-item form with 15 factors, each consisting of four items, was created. These factors are theoretically included in three dimensions. Active coping, planning (PL), suppression of competing activities (SCAct), restraint coping (RestC) and seeking instrumental social support (SISSup) are included in problem-focused coping; seeking emotional social support (SESupport), positive reinterpretation (PosR), acceptance (ACC), humor (H) and turning to religion (R) are included in emotion-focused coping; and focus on and venting of emotions (FOVE), denial (DNL), behavioral disengagement (BDis), mental disengagement (MDis) and alcohol / drug use (ADUse) are included in dysfunctional coping. The low scores obtained from the subscales of the tool, which are graded between 1 and 4, indicate that those dimensions are used less, while the high scores indicate that those dimensions are used more (25).

The short form of the scale was developed by Carver by reducing the number of items based on the long form of the scale. Carver removed two factors (suppression of competing activities and restraint coping) as they were not useful in previous studies and added another factor (self-blame) as it was more functional. As such, the short form of the scale consists of 14 factors with two items each. Low scores indicate that the dimension is underutilized, while high scores indicate that the dimension is overutilized(26). The Turkish validity and reliability study of the short form of the scale was conducted by Bacanlı et al.(27) . In the Turkish validity and reliability study, the dimensions of self-blame and active coping in Carver's scale could not be obtained. On the other hand, the dimensions of suppression of competing activities and restraint coping, which were not included in Carver's scale but were included in the long form of the scale developed by Carver and colleagues were included in the factor structures obtained in this study.

The Brief Resilience Scale: It was developed by Smith et al. The BRS is a 5-point Likert-type, 6-item, self-report measurement tool. After the reverse coded items in the scale are translated, high scores indicate high psychological resilience(28). The Turkish validity and reliability study of the scale was conducted by Doğan et al.(29).

Statistical Analysis

The sample size for this study was determined based on a priori power analysis. Using an effect size of 0.5 (medium effect, Cohen's d), a significance level (α) of 0.05, and a statistical power ($1-\beta$) of 0.80, the minimum required sample size was calculated to be approximately 64 participants per group, resulting in a total of 128 participants.

Descriptive statistics (mean and standard deviation for continuous variables or frequency and percentage distributions for categorical variables) were used to analyze the demographic characteristics of the participants. The normality of the continuous data was assessed using the Shapiro-Wilk test. The results indicated that the data were normally distributed ($p > 0.05$). To compare the mean scores of psychological scales between two groups, the independent samples t-test was used.Hierarchical regression analysis was conducted to examine predictors of psychological resilience, with sociodemographic variables entered in the first step and disability-related factors (such as type and duration of disability) in the second step. Changes in R^2 values were assessed to evaluate the model's explanatory power. A value of $p < 0.05$ was used for statistical significance. All analyses were performed with SPSS v.20.

RESULTS

The demographic characteristics of the participants

are summarized in Table 1.The mean age of the participants was 32.62 years (SD = 9.48). In terms of gender distribution, 62 participants (32.1%) were male, while 131 participants (67.9%) were female.

Regarding disability type, the majority of participants, 169 (87.6%), had a disability related to walking or balance, while 24 participants (12.4%) had a disability affecting the arm or hand. For disability duration, 130 participants (67.4%) had a congenital disability, whereas 63 participants (32.6%) acquired their disability later in life.

Table 1. Descriptive statistics of participant demographic and disability characteristics

variable (n = 193)	mean (sd) / n (%)
Age (Years)	32.62 (9.48)
Gender	Female: 131 (67.9%)
	Male: 62 (32.1%)
Disability Type	Walking/Balance: 169 (87.6%)
	Arm/Hand: 24 (12.4%)
Disability Duration	Congenital: 130 (67.4%)
	Acquired: 63 (32.6%)

Values are presented as mean (SD) for continuous variables and n (%) for categorical variables

Comparison of Psychological Resilience and Coping Styles of Physically Disabled Individuals According to the Time of Disability Onset

The Brief COPE ADUse subscale score was higher in individuals with acquired physical disability than in individuals with congenital physical disability (p=0.03). MDis subscale score was significantly higher in individuals with congenital disability than in individuals with acquired disability (p=0.01). The Brief COPE other subscale scores were similar between the groups. BRS score was significantly higher in individuals with congenital physical disability than in individuals with acquired physical disability (p=0.03). Detailed results of group comparison are shown in Table 2.

Comparison of Coping Styles and Psychological Resilience of Physically Disabled Individuals According to Disability Type

There was no significant difference in the BRS scores between individuals with hand/arm disabilities and those with walking/balance disabilities (p>0.05). There was no significant difference between the groups in subscale scores except The COPE FOVE subscale (p>0.05). The COPE FOVE subscale score of physically disabled individuals with hand/arm disability was significantly higher than that of individuals with walking/balance disability (p=0.03). Details of the scale scores and comparison results of the groups are shown in Table 3.

Table 2: Comparison of BRS and Brief COPE scores of physically disabled individuals according to disability onset

		Congenital Physical Disability (n=130)	Acquired Physical Disability (n=63)	T	P
BRS		19 .29(3 .59)	18 .09(3 .76)	2 .138	0 .03
The Brief COPE	SISSup	5 .49(1 .94)	5 .61(1 .74)	- .438	0 .66
	H	4 .61(2 .12)	4 .57(1 .88)	.140	0 .88
	FOVE	5 .33(1 .97)	4 .80(1 .81)	1 .791	0 .07
	ADUse	2 .44(1 .14)	2 .95(1 .64)	-2 .490	0 .03
	ACC	5 .80(1 .64)	5 .50(1 .74)	1 .133	0 .25
	SCAct	5 .49(1 .94)	5 .61(1 .74)	- .263	0 .79
	R	6 .77(1 .89)	6 .38(2 .09)	1 .316	0 .19
	DNL	3 .68(1 .73)	3 .69(1 .56)	- .053	0 .95
	BDis	3 .79(1 .65)	3 .74(1 .63)	.183	0 .85
	MDis	5 .16(1 .71)	4 .49(1 .66)	2 .567	0 .01
	RestC	5 .38(1 .53)	5 .07(1 .52)	1 .299	0 .19
	PosR	5 .58(1 .70)	5 .53(1 .89)	.166	0 .86
	SESupport	4 .83(1 .61)	4 .82(1 .66)	.052	0 .95
	PL	5 .86(1 .75)	5 .80(1 .85)	.217	0 .82

The results are presented as mean and standard deviation values. The level of statistical significance was accepted as p< 0.05. BRS: The Brief Resilience Scale; SISSup: seeking instrumental social support; H: humor;FOVE:focus on and venting of emotions; ADUse: alcohol/drug use; ACC: acceptance ;SCAct: suppression of competing activities; R: religion ;DNL: denial;BDis: behavioral disengagement; MDis: mental disengagement; RestC: restraint coping; PosR : positive reinterpretation; SESupport: seeking emotional social support; PL: planning

Table 3: Comparison of BRS and Brief COPE scores of physically disabled individuals according to disability type

		Hand/arm disability (n=24)	Walking/balance disability (n=169)	T	P
BRS		18 .84(3 .40)	19 .33(5 .32)	- .613	0 .54
The Brief COPE	SISSup	5 .58(1 .84)	5 .16(2 .11)	1 .021	0 .30
	H	4 .51(2 .02)	5 .20(2 .12)	-1 .563	0 .12
	FOVE	5 .27(1 .89)	4 .37(2 .03)	2 .160	0 .03
	ADUse	2 .59(1 .34)	2 .70(1 .369	- .377	0 .70
	ACC	5 .75(1 .66)	5 .37(1 .79)	1 .027	0 .30
	SCAct	5 .17(1 .59)	4 .70(1 .89)	1 .298	0 .19
	R	6 .66(1 .92)	6 .54(2 .22)	.282	0 .77
	DNL	3 .69(1 .63)	3 .66(1 .99)	.070	0 .94
	BDis	3 .82(1 .65)	3 .45(1 .53)	1 .017	0 .31
	MDis	4 .95(1 .74)	4 .83(1 .60)	.332	0 .74
	RestC	5 .34(1 .53)	4 .87(1 .48)	1 .403	0 .16
	PosR	5 .52(1 .75)	5 .87(1 .82)	- .905	0 .36
	SESupport	4 .79(1 .62)	5 .08(1 .66)	- .802	0 .42
	PL	5 .84(1 .80)	5 .87(1 .67)	- .074	0 .94

The results are presented as mean and standard deviation values. The level of statistical significance was accepted as p< 0.05. BRS: The Brief Resilience Scale; SISSup: seeking instrumental social support; H: humor;FOVE:focus on and venting of emotions; ADUse: alcohol/drug use; ACC: acceptance ;SCAct: suppression of competing activities; R: religion ;DNL: denial;BDis: behavioral disengagement; MDis: mental disengagement; RestC: restraint coping; PosR : positive reinterpretation; SESupport: seeking emotional social support; PL: planning

A hierarchical regression analysis was conducted to assess the effects of age, gender, disability type, and disability duration on psychological resilience. Two models were constructed:

Model 1: In the first model, age and gender were entered as predictors. This model explained 2.2% of the variance in psychological resilience (R2=0.022, adjusted R2=0.011), though this effect was not statistically significant. Among the predictors, gender (B =-1.137, β = -0.145, t = -2.015, p = 0.045) was found to be a significant predictor, indicating that males (0 = male, 1 = female) had lower resilience scores compared to females. Age (B = 0.011, β = 0.027, t = 0.382, p = 0.703) did not significantly predict resilience.

Model 2: In the second model, disability type (0 = arm/hand disability, 1 = walking disability) and disability duration (0 = acquired, 1 = congenital) were added. This model explained an additional 3.0% of the variance, bringing the total explained variance to 5.2% (R2=0.052, adjusted R2=0.032, ΔR2=0.03). The model was marginally significant overall. In this model, disability duration (B =-0.526, β =-0.181, t =-2.33, p = 0.021) was found to be a significant negative predictor, suggesting that individuals with congenital disabilities (1 = congenital, 0 = acquired) scored higher in resilience than those with acquired disabilities. However, disability type (B = 0.521, β = 0.047, t = 0.656, p = 0.512) and gender (B =-0.901, β =-0.115, t =-1.57, p = 0.226) were not significant predictors in this model. Details of the hierarchical regression analysis findings are presented in Table 4.

DISCUSSION

In this study, it was investigated whether psychological resilience and coping styles of individuals with physical disabilities differed according to the nature of the disability and whether the disability was congenital or acquired.

The findings indicated that individuals with congenital disabilities exhibited higher levels of psychological resilience compared to those with

Table 4. Hierarchical Regression Analysis for Predictors of Psychological Resilience

Model	Variables	B	Std. Error	Beta	t	p	R	R^2	Adjusted R^2	ΔR^2	Effect Size (Cohen s f^2)
1	Constant	20.057	1.207	nan	16.614	0.0	0.147	0.022	0.011	0.022	0.023
	Age	0.011	0.028	0.027	0.382	0.703					
	Gender	-1.137	0.565	-0.145	-2.015	0.045					
2	Constant	19.309	1.433	nan	13.472	0.0	0.228	0.052	0.032	0.03	0.032
	Age	0.035	0.03	0.091	1.192	0.235					
	Gender	-0.901	0.574	-0.115	-1.57	0.226					
	Disability Type	0.521	0.794	0.047	0.656	0.512					
	Disability Duration	-0.526	0.226	-0.181	-2.33	0.021					

Gender: 0 = Male . 1 = Female
Disability Type: 0 = Arm/Hand Disability . 1 = Walking Disability
Disability Duration: 0 = Acquired . 1 = Congenital

acquired disabilities.. It is stated that two factors are important in determining psychological resilience. These factors constitute psychological risk and protective factors(30). Psychological resilience is influenced by environmental factors as well as individual factors(31). There are many factors related to resilience in people with physical disabilities. Resilience appears to be an important capacity that helps people with disabilities to overcome adversity(32).

The results indicated that individuals with congenital disabilities reported lower alcohol and substance use but higher mental disengagement compared to individuals with acquired disabilities. This finding suggests that congenital disability may be associated with coping mechanisms that involve more passive or avoidant strategies, as reflected in higher mental disengagement. Previous studies have shown that individuals with congenital disabilities might develop different coping styles due to early-life adaptation to their disability (33,34). Further research is needed to explore these differences and their implications for mental health interventions.

Adolescence is generally recognized as a period of increased social activity and rapid expansion of a young person's social circle. In contrast, a young person with a physical disability is likely to lack social independence, be socially isolated and have difficulties in maintaining social relationships. One study found that while both able-bodied and physically disabled youth experience difficulties in social situations, physically disabled youth inherently experience more severe difficulties(35). Individuals with congenital physical disabilities have learned to cope with their disabilities from early in their lives and may have developed adaptation skills and increased their psychological resilience by using strategies such as discovering their own strengths, connecting to social support networks, positive thinking and celebrating their achievements.

The results of the study showed that the psychological resilience of individuals with walking/balance disability were similar to those of individuals with hand/arm disability. The fact that individuals with walking/balance disabilities exhibit similar levels of psychological resilience with individuals with hand/arm disabilities may be due to the fact that many factors such as coping styles, social support, life experiences and personal characteristics of individuals are different.

Coping styles are a dynamic process involving specific cognitive, emotional and behavioral responses used to reduce resources and combat the negative effects of events or factors that cause stress or psychological distress. The coping strategy to be used varies from situation to situation. When coping styles were compared according to disability status, it was found that individuals with hand/arm disability scored higher in the sub-dimension of focusing on and venting of emotions than individuals with walking/balance disability. Focusing on and venting of emotions is focusing on the stressful situation and allowing the emotions related to it to be revealed (24,27)Individuals with hand/arm disabilities may experience limitations in using communication tools such as gestures, hand gestures and physical touches. This may suggest that the person is not understood by the other person. Individuals with hand/arm disabilities may use the sub-dimension of focusing on and venting of emotions more to compensate for this limitation in communication.

The hierarchical regression analysis results indicate that gender and disability duration are significant predictors of psychological resilience, with females and individuals with congenital disabilities demonstrating higher resilience levels. Women with disabilities may face additional challenges due to gender roles and cultural expectations, which could contribute to their elevated resilience. However, some studies, such as that by Cardoso and Sacomori (2014), have reported similar resilience levels between men and women with disabilities(36), suggesting that the relationship between gender and resilience is complex. Social norms, cultural influences, and other demographic factors may play a role in these unexpected findings, requiring further investigation.

The observed higher resilience among women may reflect both biological and social influences; women are often more involved in social support

networks, which can foster resilience. Similarly, individuals with congenital disabilities may have developed stronger resilience through long-term adaptation and coping strategies. These findings underscore the importance of targeted support interventions, particularly for individuals with acquired disabilities, who may benefit from structured resilience-building programs.

This study underscores the significant role of disability onset and type in shaping the psychological resilience and coping strategies of physically disabled individuals. While congenital disabilities are associated with higher resilience levels, the type of disability does not seem to influence resilience significantly. These findings suggest that intervention programs should prioritize personalized support for individuals with acquired disabilities to enhance their adaptive capabilities.

One of the key strengths of this study lies in its exploration of resilience and coping strategies among physically disabled individuals, considering the nature of disability (congenital vs. acquired). The research design, with a large sample size (n = 193), enhances the generalizability of the findings. Furthermore, the study provides a comprehensive examination of the impact of disability type and duration on psychological resilience, thereby making a significant contribution to the existing literature.

The cross-sectional design of this study limits the ability to establish causal relationships. Key variables influencing psychological resilience, such as environmental factors, support systems, social environment, and personality traits, were not controlled. In individuals with acquired disabilities, the factors leading to the disability may significantly impact psychological resilience and coping strategies. Additionally, the substantially larger size of the 'walking/balance' group compared to the 'hand/arm' group could be considered a limitation, potentially affecting the comparability of findings between these groups .Another limitation is the reliance on self-reported data, which may introduce response bias and affect the accuracy of the findings. Additionally, the sample's representativeness may limit the generalizability of the results to broader populations of individuals with physical disabilities.

Although studies examining mental health in physically disabled individuals are limited, they have been increasing in recent years. Future research should focus on longitudinal designs to examine the causal relationships between these variables and explore additional factors such as cultural, environmental, and socioeconomic influences. Such efforts will provide a more comprehensive understanding of resilience in this population and inform the development of targeted psychosocial interventions.

Human Ethics and Consent to Participate Declarations: This research was conducted in accordance with the Declaration of Helsinki, and approval was obtained from [the Clinical Research Ethics Committee of Tokat Gaziosmanpasa University under the decision number 83116987-035, dated 22.12.2022, and labeled as 21-KAEK-290.]. Written informed consent was obtained from all participants prior to their participation in the study.

Conflict of interest: In this study, there are no conflicts of interest.

Correspondence address: Assis. Prof., Sare Aydin, Department of Psychiatry, School of Medicine, Tokat Gaziosmanpasa University, Tokat, Turkey sare.aydiin@gmail.com

REFERENCES

1. Organization WH. World report on disability 2011. World Health Organization; 2011.

2. Yusuf G. Engellilerin sosyal sorunlari ve beklentileri. Sosyal Politika Çalışmaları Dergisi. 2016;(35/2).

3. Simonsick EM, Kasper JD, Guralnik JM, Bandeen-Roche K, Ferrucci L, Hirsch R, Leveille S, Rantanen T, Fried LP. Severity of upper and lower extremity functional limitation: scale development and validation with self-report and performance-based measures of physical function. WHAS Research Group. Women's Health and Aging Study. J Gerontol B Psychol Sci Soc Sci. 2001 Jan;56(1):S10-9. doi: 10.1093/geronb/56.1.s10. PMID: 11192340.

4. Lamers I, Cattaneo D, Chen CC, Bertoni R, Van Wijmeersch B, Feys P. Associations of upper limb disability measures on different levels of the International Classification of Functioning, Disability and Health in people with multiple sclerosis. Phys Ther. 2015;95(1):65–75.

5. Iezzoni LI, McCarthy EP, Davis RB, Siebens H. Mobility dif-

ficulties are not only a problem of old age. J Gen Intern Med. 2001;16:235–43.

6. Verbrugge LM, Yang L shou. Duration of disability and timing of onset. In: Using Survey Data to Study Disability: Results from the National Health Survey on Disability. Emerald Group Publishing Limited; 2003. p. 275–98.

7. Verbrugge LM, Yang L shou. Aging with disability and disability with aging. J Disabil Policy Stud. 2002;12(4):253–67.

8. Jamoom EW, Horner-Johnson W, Suzuki R, Andresen EM, Campbell VA, edu REP on HSM wingenfe@ ohsu. Age at disability onset and self-reported health status. BMC Public Health. 2008;8:1–7.

9. Mushtaq S, Akhouri D. Self esteem, anxiety, depression and stress among physically disabled people. The International Journal of Indian Psychology. 2016;3(4):64.

10. Tusaie K, Dyer J. Resilience: A historical review of the construct. Holist Nurs Pract. 2004;18(1):3–10.

11. Smith BW, Dalen J, Wiggins K, Tooley E, Christopher P, Bernard J. The brief resilience scale: assessing the ability to bounce back. Int J Behav Med. 2008;15:194–200.

12. Carver CS. Resilience and thriving: Issues, models, and linkages. Journal of social issues. 1998;54(2):245–66.

13. Freire C, Ferradás MDM, Valle A, Núñez JC, Vallejo G. Profiles of psychological well-being and coping strategies among university students. Front Psychol. 2016;7:1554.

14. Lazarus RS, Folkman S. Stress, appraisal, and coping. New York: Springer Publishing Company; 1984. p. 141–3.

15. Smith MM, Saklofske DH, Keefer K V, Tremblay PF. Coping strategies and psychological outcomes: The moderating effects of personal resiliency. J Psychol. 2016;150(3):318–32.

16. Majumdar B, Ray A. Stress and coping strategies among university students: A phenomenological study. Indian Journal Social Science Researches. 2010;7(2):100–11.

17. Metin ZG, Karadas C, Izgu N, Ozdemir L, Demirci U. Effects of progressive muscle relaxation and mindfulness meditation on fatigue, coping styles, and quality of life in early breast cancer patients: An assessor blinded, three-arm, randomized controlled trial. European Journal of Oncology Nursing. 2019;42:116–25.

18. Majumdar B, Ray A. Stress and coping strategies among university students: a phenomenological study. Indian J Soc Sci Res. 2010;7(2):100–11.

19. Kocabıyık OO, Bacıoğlu SD. Predictive roles of psychological resilience and coping skills on social media dddiction. Curr Approaches Psychiatry. 2022;14(Suppl 1):137–46.

20. Kandeğer A, Aydın M, Altınbaş K, Cansız A, Tan Ö, Tomar Bozkurt H, Eğilmez Ü, Tekdemir R, Şen B, Aktuğ Demir N, Sümer Ş, Ural O, Yormaz B, Ergün D, Tülek B, Kanat F. Evaluation of the relationship between perceived social support, coping strategies, anxiety, and depression symptoms among hospitalized COVID-19 patients. Int J Psychiatry Med. 2021 Jul;56(4):240-254. doi: 10.1177/0091217420982085. Epub 2020 Dec 24. PMID: 33356704.

21. Hoşoğlu R, Fırıncı Kodaz A, Yılmaz Bingöl T, Vural Batık M. Öğretmen adaylarında psikolojik sağlamlık. OPUS Int J Soc Res. 2018;8(14):217–39.

22. Freire C, Ferradás MDM, Valle A, Núñez JC, Vallejo G. Profiles of psychological well-being and coping strategies among university students. Front Psychol. 2016;7:1554.

23. Abdul Rahman H, Bani Issa W, Naing L. Psychometric properties of brief-COPE inventory among nurses. BMC Nurs. 2021;20(1):1–7.

24. Carver CS, Scheier MF, Weintraub JK. Assessing coping strategies: a theoretically based approach. J Pers Soc Psychol. 1989;56(2):267.

25. Carver CS, Pozo C, Harris SD, Noriega V, Scheier MF, Robinson DS, Ketcham AS, Moffat FL Jr, Clark KC. How coping mediates the effect of optimism on distress: a study of women with early stage breast cancer. J Pers Soc Psychol. 1993 Aug;65(2):375-90. doi: 10.1037//0022-3514.65.2.375. PMID: 8366426.

26. Carver CS. You want to measure coping but your protocol'-too long: Consider the brief cope. Int J Behav Med. 1997;4(1):92–100.

27. Bacanlı H, Sürücü M, İlhan T. Başa çıkma stilleri ölçeği kısa formunun (BÇSÖ-KF) psikometrik özelliklerinin incelenmesi: geçerlik ve güvenirlik çalışması. Kuram ve Uygulamada Eğitim Bilimleri. 2013;13(1):81–96.

28. Smith BW, Dalen J, Wiggins K, Tooley E, Christopher P, Bernard J. The brief resilience scale: assessing the ability to bounce back. Int J Behav Med. 2008;15:194–200.

29. Doğan T. Kısa psikolojik sağlamlık ölçeği'nin Türkçe uyarlaması: Geçerlik ve güvenirlik çalışması. The Journal of Happiness & Well-Being. 2015;3(1):93–102.

30. Masten AS. Ordinary magic: Resilience processes in development. American psychologist. 2001;56(3):227.

31. Richardson GE. The metatheory of resilience and resiliency. J Clin Psychol. 2002;58(3):307–21.

32. Aranguren P. Resilience, pain and quality of life in people with physical disabilities: A systematic review. European Psychiatry. 2017;41(S1):S733–S733.

33. Franzblau LE, Chung KC, Carlozzi N, Chin AYT, Nellans KW, Waljee JF. Coping with congenital hand differences. Plast Reconstr Surg. 2015;135(4):1067–75.

34. Odintsova MA, Sorokova MG. Coping strategies and coping styles of adolescents with congenital and acquired disabilities (cerebral palsy, oncology or rheumatic diseases diagnosis). Clinical Psychology & Special Education/Kliniceska I Special'naa Psihologia. 2021;10(2).

35. Thomas AP, Bax MCO, Smyth DPL. The social skill difficulties of young adults with physical disabilities. Child Care Health Dev. 1988;14(4):255–64.

36. Cardoso FL, Sacomori C. Resilience of athletes with physical disabilities: A cross-sectional study. Revista de Psicología del Deporte. 2014;23(1):15–22.