

Reliability and Validity of the Turkish Version of Mental Adjustment to Cancer Scale.

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Abstract

Introduction: MAC scale is a widely used scale that determines the cognitive and behavioral responses of patients to a cancer diagnosis. The aim of this study was to conduct a psychometric analysis of MAC scale and explore the effect of cultural differences on factor structure.

Material and Methods: Four hundred fifty-two patients were included in the study. Inclusion criteria were; patients over 18 years of age, understanding Turkish and ability to provide informed consent. Questionnaire that assesses socio-demographic data, Hospital Anxiety and Depression Scale and the MAC scale were applied. Exploratory Factor Analysis was performed to check the factor structure of the MAC scale.

Results: The Kaiser-Meyer-Olkin (KMO) value of scale was found as 0.880. Both the scree plot and the % of variance showed that a two-factor solution is appropriate. The two-factor structure accounts for 31.25% of variance. Reliability analysis was performed to examine the internal consistency of the Turkish version of the MAC scale. The Cronbach alpha internal consistency coefficient of the MAC scale was found to be 0.796. The Cronbach alpha coefficients were: Factor 1 was 0.889; Factor 2 was 0.839.

Conclusions: The Turkish version of MAC scale is an applicable scale that can easily be used in oncology clinics. Summary Positive and Negative Adjustment Subscales psychometric properties appear to be comparable with the original scale. There are some cultural differences in the interpretation of items. The item "I am fatalistic" was found to be related with positive adjustment while it was related with negative adjustment in original scale.

Keywords: cancer, psychology, Mental Adjustment to Cancer Scale Reliability and Validity of the Turkish Version of Mental Adjustment to Cancer Scale.

Introduction

Many studies examined the association of coping styles and psychological outcomes in cancer patients [1]. Coping style can be defined as the cognitive, affective or behavioral responses of a person to problematic or traumatic life events. Hack and Degner (2004) mentioned the importance of association between coping styles and psychological adjustment process in cancer

patients [2]. Watsons *et al* (1988) suggests that the type of coping response is one of the factors that determine the psychological morbidity [3].

Mental adjustment to cancer (MAC) can be defined as the cognitive and behavioral responses of a patient to the cancer diagnosis [4]. Studies showed that cancer patients' mental adjustment is correlated with the quality of life and psychological stress [5, 6, and 7]. Mental adjustment can also affect the disease outcome. Several researchers suggest that the patients' cancer coping styles may be one of the independent prognostic factors for physical outcome [8, 9]. Megglaora *et al* (2016)

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mentioned the relationship between coping styles and treatment satisfaction of patients [10]. They found that the cancer patients who have maladaptive coping styles tended to perceive doctors less supportive. Tojal and Costa (2015) found higher depression scores in patients who have maladaptive coping styles. Due to these effects it is important to determine the coping styles of cancer patients [11].

Mental Adjustment to Cancer (MAC) scale is a scale that is developed by Watson *et al* (1988) and measures the adjustment to cancer [3]. It is a widely used scale and translated too many languages [12, 13, 14, and 15]. This scale determines the cognitive and behavioral responses of patients to a cancer diagnosis. MAC is a 40-item self-rating questionnaire using a 4-point Likert Scale. This scale is composed of five adjustment styles: Fighting Spirit (FS; 16 items), Helpless-Hopeless (HH; 6 items), Anxious Preoccupation (AP; 9 items), Fatalism (FA; 8 items), and Avoidance (1 item). Fighting Spirit and Avoidance are defined as positive mental adjustments and they are found to be associated with absence of depression and anxiety, whereas Helplessness/Hopelessness, Anxious Preoccupation and Fatalism are defined as negative mental adjustments and these items are found to be associated with psychological distress and a lower quality of life [16, 15]. Watson *et al.* suggested two ways of scoring. In the first scoring the scale is evaluated in five separate subscales. This scoring is evaluated in several studies [13, 14, 17, 18, and 19]. Each has resulted in different factor structure. These different factor structures are explained as a result of using different factor analysis methods, heterogeneity of samples and cultural differences [20]. After these evaluations, Watson and Homewood (2008) have evaluated the original factor structure and re-analysis of the MAC scale was conducted [20]. Outcomes of this study resulted in a new two-factor structure. These factors are classified as summary positive adjustment (16 items) and summary negative adjustment (16 items). Braeken *et al.* (2010) examined the psychometric properties of MAC scale and found comparable psychometric

properties as demonstrated by Watson and Homewood in 2008[21].

MAC scale is considered as an important tool to determine the coping styles of cancer patients. This scale has been translated to many languages. In psychometric analysis different factor structures are found in each culture and language. The aim of this study is the validation and psychometric analysis of MAC scale and exploration of cultural differences in the factor structure in Turkey.

Methods

Sample size and procedure

Four hundred fifty-two patients admitted to Samsun Education and Research Hospital and Samsun OndokuzMayıs University School of Medicine Oncology Clinic between December 2016-December 2017 were included in the study. Inclusion criteria were; patients over 18 years of age, understanding Turkish and ability to provide informed consent. Exclusion criteria were: patients who have cognitive disorder such as dementia and mental retardation, the patients who cannot read or write. The institutional review board of the, OndokuzMayıs University School of Medicine Turkey, approved the study (B.30.2.ODM.0.20.08/415-477). Participants were assured anonymity and confidentiality and all gave their written consent to participate in the study.

The study utilized self-reported questionnaires to assess socio-demographic details, the Turkish version of the Hospital Anxiety and Depression Scale (HADS) to test construct validity and the Turkish version of the MAC scale were administered to patients by the medical oncologist. The type and stage of the cancer and the time since diagnosis were asked during the interview.

Tools used:

1. The Turkish Version of Mental Adjustment to Cancer Scale (MAC). Before the translation the

Table 1: Factor Structure of the Turkish Version of the MAC Scale

Item		Original Subscales		Present Study	
		Watson 1988	Watson 2008	Component and Factors Loading	
				1	2
31	Try positive attitude	FS	PADJ	0.68	-0.21
40	Fight illness	FS	PADJ	0.67	-0.10
34	Challenge	FS	PADJ	0.67	0.04
39	Count blessings	FS	PADJ	0.66	-0.00
20	Determined	FS	PADJ	0.64	-0.07
33	Avoid information	FA	Drop	0.62	-0.06
32	Keep busy	FS	PADJ	0.61	0.01
35	Fatalistic	FA	NADJ	0.58	0.12
28	Others worse off	FS	PADJ	0.58	-0.10
6	Get better	FS	PADJ	0.55	-0.39
4	Believe positive attitude	FS	PADJ	0.55	-0.14
18	Carry on	FS	PADJ	0.54	-0.32
11	Life precious	FS	PADJ	0.53	-0.16
10	Exercise	AP	Drop	0.52	-0.18
15	Bonus	FA	PADJ	0.51	-0.08
26	Humor	FS	PADJ	0.50	-0.14
1	Change diet	AP	Drop	0.45	-0.26
12	Hands of God	FA	PADJ	0.45	0.18
16	Mind makes difference	FS	PADJ	0.42	0.03
19	Contact with others	AP	Drop	0.41	0.04
13	Future plans	FS	PADJ	0.40	-0.13
27	Others worry	FS	PADJ	0.34	0.04
29	Get information	AP	Drop	0.28	0.18
8	Left all to doctors	FA	Drop	0.27	0.22
5	Don't dwell	FS	Drop	0.19	-0.10
36	At a loss	HH	NADJ	-0.09	0.69
23	Not hopeful	HH	NADJ	-0.20	0.68
25	Giving up	HH	NADJ	-0.29	0.65
17	Nothing to help	HH	NADJ	-0.14	0.62
22	Anxiety	AP	NADJ	-0.06	0.61
14	Worry worse	AP	NADJ	-0.12	0.56
9	Life hopeless	HH	NADJ	-0.19	0.53
21	Difficult believing	AP	NADJ	0.06	0.52
30	Can't control	FA	NADJ	0.06	0.52
2	Can't cheer	HH	NADJ	-0.13	0.51
7	Nothing makes a difference	FA	NADJ	-0.16	0.51
37	Angry	AP	NADJ	0.01	0.48
24	One day at time	FA	NADJ	0.19	0.42
38	Don't have cancer	AVO	NADJ	0.16	0.42
3	Prevent plans	AP	NADJ	-0.06	0.38
eigenvalues				8.152	4.350
% of variance				20.379	10.876
Cronbach's alpha				0.796	

permission and original psychometric evaluation manual was obtained from the owner of the scale by e-mail. The translation is based on the five step (forward and backward methodology) translation

procedure (first translation, evaluation of first translation, reverse translation, evaluation of reverse translation and expert opinion steps) [22]. To control the understandability of the scale in

Table 2: Corrected Total Item Correlation of the Turkish MAC Scale and Cronbach's Alpha Values

Item	Mean	SD	Corrected Item-Total Correlation	Cronbach's Alpha If Item Deleted	
Factor 1 – PADJ (Cronbach alfa 0.889)					
1	Change diet	3.20	0.83	0.45	0.886
4	Believe positive attitude	3.38	0.74	0.51	0.884
6	Get better	3.33	0.78	0.54	0.883
10	Exercise	2.89	0.93	0.50	0.885
11	Life precious	3.04	0.88	0.49	0.885
12	Hands of God	3.19	0.91	0.35	0.889
13	Future plans	3.01	0.91	0.38	0.888
15	Bonus	2.88	0.91	0.46	0.886
16	Mind makes difference	2.85	0.93	0.37	0.888
18	Carry on	3.30	0.75	0.53	0.884
19	Contact with others	2.82	0.93	0.36	0.889
20	Determined	3.23	0.81	0.60	0.882
26	Humor	2.91	0.82	0.46	0.886
28	Others worse off	3.30	0.79	0.52	0.884
31	Try positive attitude	3.24	0.73	0.65	0.881
32	Keep busy	3.02	0.89	0.52	0.884
33	Avoid information	3.03	0.83	0.55	0.883
34	Challenge	3.27	0.84	0.58	0.882
35	Fatalistic	3.17	0.87	0.48	0.885
39	Count blessings	3.47	0.71	0.58	0.883
40	Fight illness	3.53	0.65	0.59	0.883
Factor 2 – NADJ (Cronbach alpha 0.839)					
2	Can't cheer	1.89	0.90	0.42	0.831
7	Nothing makes a difference	2.03	0.85	0.44	0.830
9	Life hopeless	1.78	0.90	0.46	0.829
14	Worry worse	2.17	0.94	0.47	0.828
17	Nothing to help	1.87	0.85	0.56	0.823
21	Difficult believing	2.26	0.98	0.45	0.830
22	Anxiety	2.18	0.95	0.52	0.825
23	Not hopeful	1.90	0.92	0.61	0.819
24	One day at time	2.58	0.98	0.31	0.839
25	Giving up	1.75	0.91	0.60	0.820
30	Can't control	2.25	0.88	0.42	0.831
36	At a loss	1.97	0.87	0.60	0.820
37	Angry	1.97	0.93	0.41	0.832
38	Don't have cancer	2.18	0.92	0.34	0.836

Turkish, a preliminary application was applied to 15 patients. Pre-application group were not included in the study.

2. The Turkish Version of the Hospital Anxiety Depression Scale (HADS). The HADS was developed to determine anxiety and depressive

symptoms in medically ill patients [23]. It is composed of 14 items and is a valid and reliable scale widely used in oncology clinics [24,25]. Validity and reliability data have been reported for the Turkish version of HADS [26]. In the previous studies HADS was used to examine the

construct validity of the MAC scale [17, 18, and 19].

Statistical analysis:

Analysis of the data obtained from the participants was evaluated using the SPSS 21.0 (Statistical Package for the Social Sciences, SPSS Inc., Chicago, IL, USA, 2012). An Explanatory Factor Analysis was done to determine the construct validity of the MAC scale, which was adapted to the Turkish version. The factor structure of the Turkish version of the MAC scale was evaluated by principal component analysis. Varimax orthogonal rotation technique was used to analyze the data. Suitability of the data to the factor analysis was determined by Kaiser-Meyer-Olkin Test for Sampling Adequacy (KMO) and the Bartlett test of sphericity. Factor loading is selected as ≥ 0.40 . Eigenvalues, % of variance and scree plot graphics were used to determine the number of factors.

The reliability of the scale was assessed by internal consistency reliability coefficient (Cronbach alpha) and item-total score correlation. The Pearson correlation test was used to evaluate the relationship between scale values and HAD scale. Number, percentage, mean and standard deviation / standard error values were used in defining the data. For statistical significance, $p < 0.05$ was considered.

Table 3: Mean, Standard Deviation, and Cronbach Alpha Values for MAC factors in the Turkish and English Populations

	Present Study		Watson 2008	
	MAC PADJ	MAC NADJ	MAC PADJ	MAC NADJ
Item Number	21	14	17	16
Mean	66.16	28.85	54.06	29.37
SD	9.84	7.30	6.74	6.81
Range	63.0	40.0	49.0	37.00
Min	21.0	14.0	19.0	16.00
Max	84.0	54.0	68.0	53.00
Cronbach alpha	0.88	0.83	0.84	0.84

Results

Four hundred fifty-two cancer patients were included in the study, 53.3 % (n= 241) of the participants were female and 83.4 % (n=377) were married or living with a partner. The mean age of participants was 55.37 ± 12.84 and the mean number of the children that the participants had 2.92 ± 1.74 . The percentage of the participants who had education more than 8 years were 74.6 (n= 337) and most of them were not working (86.8 %). Majority of patients had breast (31.9 %), gastrointestinal (25.7 %) and respiratory system (19.0%) cancer. Most of the patients had learned the diagnosis more than one year ago (84.9 %).

Factor Structure of the Scale

Explanatory Factor Analysis was performed to check the validity of the MAC scale and the adequacy of the sample size. The KMO value of scale was found as 0.880. The Bartlett test was done to evaluate whether the data came from the highly variable distribution or not. The result was $\chi^2 = 5338, 46 p < 0.001$. After determining the appropriateness of the data to the factor analysis, we used the principal component analysis and varimax rotation method to evaluate the factor structure forming the scale.

After factor analysis, we found 10 factors with greater than 1 eigenvalue. However, both the scree plot chart and the % of variance evaluation results showed that a two-factor solution is appropriate. The two-factor structure accounts for 31.25% of variance (Table 1).

Reliability

Reliability analysis was performed to examine the internal consistency of the Turkish version of the MAC scale. The Cronbach alpha internal consistency coefficient of the MAC scale was found to be 0.796. Cronbach alpha internal

consistency coefficient for Factor 1 is 0.889; Cronbach alpha internal consistency coefficient for Factor 2 is 0.839. The item-total test score correlation method was used for item analysis of each sub-dimension which was obtained from factor analysis. The item-total test score correlation was found to vary between 0.35-0.65 for Factor 1 and 0.31-0.61 for Factor 2. These values were statistically significant ($p < 0.001$) (Table 2).

The relationship between MAC subscales and HAD scores was evaluated by Pearson correlation analysis. The Summary Positive Adjustment Scale had negative correlations with anxiety ($r = -0.21$, $p < 0.001$) and depression ($r = -0.12$, $p < 0.009$) scores, whereas Summary Negative Adjustment Scale correlated positively with anxiety ($r = 0.40$, $p < 0.001$) and depression ($r = 0.47$, $p < 0.001$) subscales. The Summary Positive Adjustment Scale had negative correlations with age ($r = -0.11$, $p < 0.015$) and the time since diagnosis ($r = -0.13$, $p = 0.007$), whereas Summary Negative Adjustment Scale correlated positively with the time since diagnosis ($r = 0.17$, $p < 0.001$).

Two subscales were found in our study. Positive Adjustment Scale was composed of 21 items, the mean point of these items were 66.16 ± 9.84 (min-max 21-84; range: 63). Negative Adjustment Scale was composed of 14 items and mean point of these items were 28.85 ± 7.30 (min-max: 14-54; range: 40). Comparison with the original scale was given in Table 3.

Significant difference was found between female gender and positive adjustment scale ($t = 3.47$, $p < 0.05$); marital status and positive adjustment scale ($t = 2.78$, $p < 0.05$). Comparison of socio-demographic properties with the MAC Scale were given in Table 4.

Cut-off values for the Positive and Negative Adjustment Scale were calculated by Watson and Homewood (2008)²⁰. We calculated the cut-off scores as in the original scale. For Positive Adjustment a low score indicates worse functioning and cut off score < 56 was found. For Negative Adjustment a high score indicates worse functioning and cut off score ≥ 36 was found.

Discussion

The aim of this study is to evaluate the psychometric properties of Turkish version of the 40-item MAC scale in Turkish cancer patients. Four hundred fifty-two cancer patients were included in the study. The Cronbach alpha coefficients of the subscales of Turkish version of MAC Scale were similar to original version.

MAC Scale is used as a measure of coping and adjustment in many different languages. MAC scale consists of 40 items and the original factor structure classified as "Fighting Spirit", "Hopeless/Helplessness", "Anxious Preoccupation", Fatalism" and "Avoidance" [4]. As a result of study sample characteristics, MAC translation and administration procedures,

Table 4: Comparison between MAC subscales in terms of Gender, Marital Status, Education and Employment

	MAC PADJ		MAC NADJ	
	Mean \pm SE	t	Mean \pm SE	t
Gender				
Male	64.49 \pm 0.62	3.47 *	28.89 \pm 0.48	0.12
Female	67.62 \pm 0.67		28.81 \pm 0.48	
Marital status				
Married – living with partner	66.74 \pm 0.50	2.78 *	28.70 \pm 0.37	0.73
Single - Divorced	63.20 \pm 1.95		29.40 \pm 0.93	
Education				
≤ 8 years	66.64 \pm 0.53	1.44	29.10 \pm 0.39	1.30
> 8 years	65.10 \pm 0.92		28.06 \pm 0.71	
Employment status				
Full time – Part time	63.38 \pm 1.26	2.12	29.55 \pm 1.03	0.70
Retired - Housewife – Unemployed	66.72 \pm 0.49		28.84 \pm 0.36	

statistical analyses, methodological design and cultural factors, a strong variability in the MAC factor structure was found [27]. Scwartz *et al.*, (1992) defined four subscales (Hopeless, Positive, Anxious, Avoidant) [19]. Osborne *et al.* (1999) defined six factors which are Loss of Control, Helpless/Hopeless, Fighting Spirit-Minimizing the Illness, and Fighting Spirit-positive orientation to the Illness, Fatalism, and Angst [18]. Mystakidou *et al.* (2005) defined five factors (Hopeless, Positive Attitude, Acceptance, Mental Engagement, Fatalistic), Cayraou *et al.* (2003) defined seven factors (Fighting Spirit, Helplessness/Hopelessness, Anxious Preoccupation, Positive Behavioural Orientation, Resigned acceptance and fatalism [14,13]. Nordin *et al.* (1999) defined four factors (Fighting Spirit, Helplessness/Hopelessness, Anxious Preoccupation, Avoidance) and Patoo *et al.* (2015) defined five factors (Helplessness/Hopelessness, Cognitive Avoidance, Anxious Preoccupation, Fatalism) Although there are different items in these sub-scales, researchers preferred to give same sub-scale names as in the original scale[17,31]. This has led to confusion in comparing the results of the study. In Watson and Homewood (2008) re-analysed the MAC Scale and found that it broadly falls into two categories, namely Positive Adjustment (17 items) and Negative Adjustment (16 items)[20]. Positive Adjustment is composed of items from "Fighting Spirit" (15 items) and "Fatalistic" (2 items) sub-scale. Negative Adjustment is composed of items from "Helplessness/Hopelessness" (6 items), "Anxious Preoccupation" (5 items), "Fatalistic" (4 items) and "Avoidance" (1 item). Seven items are found out of these categories. These items are omitted from the scale (1 item "Fighting Spirit", 2 items "Fatalistic", 3 items "Anxious Preoccupation") [20].

Braeken, *et al.* (2010) tested the two-factor structure in Dutch cancer patients [21]. Internal consistencies of the Summary Positive Adjustment Scale and Summary Negative Adjustment Scale were acceptable and comparable with the study by Watson and Homewood (2008) They found that Summary

Positive Adjustment Scale is composed of 17 items (15 items "Fighting Spirit" and 2 items "Fatalistic") and Negative Adjustment Scale is composed of 16 items (6 items "Helplessness/Hopelessness", 5 items "Anxious Preoccupation" and 4 items "Fatalistic").

As a result of our analysis we also found that the scale falls into two categories (Summary Positive Adjustment and Summary Negative Adjustment) as Watson and Homewood (2008)[20]. Positive Adjustment is composed of 21 items. This subscale is composed of 14 items "Fighting Spirit", 4 items "Fatalistic", 3 items "Anxious/Preoccupation" subscales. Negative Adjustment is composed of 14 items. This subscale is composed of 6 items "Helplessness/Hopelessness", 3 items "Anxious/Preoccupation", 2 items "Fatalistic" subscales. Four items do not fall into any category and we have to omit these items. Dropped items are 2 items from "Fighting Spirit", 1 item from "Fatalistic" and 1 item from "Anxious Preoccupation". Three of four items that are dropped are the same items that are found in Watson and Homewood study [20].

Anxious Preoccupation does not seem to be a homogenous subscale in our study. Three items are found to be related with positive adjustment. These items are "I have been doing things that I believe will improve my health e.g. changed my diet; I have been doing things that I believe will improve my health, e.g. exercised; I would like to make contact with others in the same boat". We can say that these items are indicating positive and active responses. Three items which include in Anxious Preoccupation subscale are found to be related with negative adjustment. These items are "I worry about the cancer returning or getting worse; I have difficulty in believing that this has happened to me; I suffer great anxiety about it". We can say that these items are related with anxiety and negative feelings about cancer. In the previous studies no items from Anxious Preoccupation Scale were found to be related with Positive Adjustment. Positive active responses of Anxious Preoccupation were not

included in the sub-scales (drop items). Negative Adjustment items related with Anxious Preoccupation are the same items that are found in the previous two studies [20, 21].

In the previous studies the item “I feel fatalistic about it” was found to be related with negative adjustment [20, 21]. We found that this item is related with positive adjustment. Cancer fatalism is the belief that death will inevitably follow a cancer diagnosis [28]. Fatalism has been associated with a decreased likelihood of receipt of breast, cervical and colorectal screenings [29]. The relationship between fatalism and emotional well-being among cancer survivors is not known exactly. Graves *et al.* (2012) found that fatalism was negatively associated with emotional well-being among Latina breast cancer survivors, although this relationship disappeared when controlling for patient satisfaction [30]. Ho *et al.* (2003), Kang *et al.* (2008) and Patoo *et al.* (2015) have proposed that fatalism may have different meaning for the people of Asia and the people of Europe [16, 15,31]. According to Patoo *et al.* (2015) fatalism role is more important in Islamic cultures [31].

Religion have also been shown to play important roles in coping with cancer [32]. People in Turkish society tend to have a fatalistic approach to life events due to their religious beliefs [33]. Acceptance can be described as an inner strength in the face of adversity that drives one’s faith in a higher power, may facilitate positive emotional outcomes of cancer [34]. Among South Asian breast cancer survivors, acceptance was closely tied to faith; they described an inner strength derived from their religious beliefs, which helped them face their diagnosis [35]. The relationship between fatalism and emotional well-being has not been studied in Turkey. Fatalistic approach to life events may facilitate adaptive coping styles in Turkish society due to religious and cultural beliefs. This finding shows a correlation with the findings of studies of other Islamic country, Iranian sample.

Summary Negative Adjustment Subscale is found to be associated with greater symptoms of both depression and anxiety as expected. Previous studies have also found that summary negative adjustment was associated with greater symptoms of both depression and anxiety [3, 36].

The Turkish version of MAC scale appears to have psychometric properties that are comparable with previous studies [3, 20]. There may be some cultural differences in the interpretation of items. Summary Positive and Negative Adjustment Subscales psychometric properties appear to be comparable with the original scale. These positive and negative adjustment subscales can be regarded as useful tests that can be applied in clinical settings. Reliability of Anxious Preoccupation items which are defined as active positive responses should be examined in further studies. Positive active responses can be regarded as adaptive coping styles to cancer in Turkish population.

MAC scale has been translated to many different languages. In psychometric analysis different factor structures were found in each culture and language. The item “I feel fatalistic about it” has found to be related with positive adjustment in our study. This item was found to be related with negative adjustment in previous studies. The religious and cultural differences may have changed this result. This finding should be replicated in further studies in Turkish society.

Conclusion

Turkish version of the MAC scale is a useful and applicable scale that can easily be used in oncology clinics. Understanding the coping styles of patients to cancer will help us to develop more suitable psychosocial care in oncology clinics.

Learning points

Patients’ cancer coping styles may be one of the independent prognostic factors for physical outcome

Understanding the coping styles of patients with cancer will help us to develop more suitable psychosocial care in oncology clinics.

MAC scale is a useful and applicable scale that can easily be used in oncology clinics.

Cultural differences and religious beliefs can affect the interpretation of items.

Conflict of interests

The authors declare that there are no conflicts of interest.

Authors' Contribution

KA: carried out the literature search and prepared the draft manuscript.

KY, YB: carried out the literature search and carried out the study.

AS: performed the analysis, carried out the literature search

BOA: participated in the analyses, carried out the literature search

Ethical Statement and Consent

The study was approved by the ethics committee and written informed consent was obtained from all participants.

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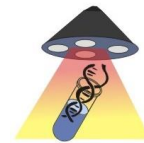
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