Tabriz University of Medical Sciences
Faculty of Health

A thesis submitted for MSC degree in
Epidemiology

Title:
Development of an irrational cognition assessment tool in burned patients and evaluation of its validity and reliability

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March 2017
Thesis No: 263
This thesis dedicated to:

God

My Parents

For their endless love, support and encouragement
Acknowledgement

First and foremost, I would like to sincerely thank my supervisor, Dr. Homayoun Sadeghi-Bazargani, for his guidance and support throughout this study, and especially for his confidence in me.

I would also like to thank Prof. Fatemeh Ranjbar as my advisor for her guide and support that I believed I learned from the best. I’m thankful of prof. Hemmat Maghsodi as other my advisor.

There are a number of other people whom I am indebted to for their support and participation to make this study a success, that I may not list by their names but should know that they were acknowledged

Finally, I’m thankful of department of Statistics & Epidemiology.
Articles extracted from this research:

- Factor Structure of the Persian Version of General, Social and Negative Self-Consciousness of Appearance Domains of Derriford Appearance Scale 59: an application in the field of burn injuries
  (Published at ‘Journal of Neuropsychiatric Disease and Treatment’)

- Psychometric properties of a new instrument for assessing irrational thoughts in burn victims (SITB)
  (Accepted at ‘Journal of Burn Care and Research’)

- Irrational Thinking and Its Predictors among Burn Patients
  (Submitted)
Abbreviations

**SITB:** Scale for Irrational Thoughts after burning

**DAS59:** Derriford Appearance Scale

**ICC:** Intraclass Correlation Coefficient

**CVI:** Content Validity Index

**CI:** Confidence Interval

**TBSA:** Total Body Surface Area

**KMO:** Kaiser-Meyer-Olkin

**LMICs:** low and middle income countries
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Abstract

Background
Victims of burn events are susceptible to psychological disorders more than other patients. Irrational beliefs is one the complications of disfigurement due to burning which cause psychological problems, unusual behaviors, emerging and continuing depression; and disorder in communication. Therefore, present study was performed to develop and evaluate a scale for assessing irrational thoughts among burned patients. The secondary objective of this study was to determinate predictors of irrational beliefs among burn patients in Iran.

Methods
The present study was a psychometric study which was performed in several stages such as investigating similar or related scales, interviewing with patients and psychologists. Three hundred twenty nine burned patients were recruited from Tehran, Tabriz and Kermanshah provinces of Iran during the period between June 2014 and June 2015. Content validity was calculated by modified Kappa based on relevance and clarity. The reliability of the scale was measured using Cronbach’s Alpha and Intraclass Correlation Coefficient (ICC). To determine the construct validity, exploratory factor analysis approach using maximum likelihood extraction with varimax rotation was conducted. Items were selected or deleted based on uniqueness and experts suggestions. Also, Derriford Appearance Scale59 (DAS59) was used to assess convergent validity. To identify predictors of irrational thoughts, both bivariate and multivariate analysis method were conducted. In multivariate linear regression, forward strategy was used for building the model. Preliminary variable selection for model design was based on a P<0.2 and final decision for keeping the variables in the model was based on a P< 0.05.

Results
Modified Kappa was calculated 0.80 and 0.91 for relevance and clarity. The Cronbach’s Alpha for overall scale, subscale 1 and 2 were 0.89, 0.88 and 0.8 respectively. Test–retest reliability was also acceptable (ICC = 0.80). The best solution from the maximum likelihood analysis of the 39 items of the scale revealed two factors corresponding to the two subscales with 14 items that subscale1
(Self-Acceptance) consisted of 10 statements accounting for 60% of the variance (eigenvalue= 5.04) and subscale2 (Distastefulness and Pity) consisted of 4 statements accounting for 40% of the variance (eigenvalue= 1.53). Also, significant positive correlation was found between the two questionnaires (developed scale and DAS59) (r = 0.65 and p <0.001).

The results of bivariate analysis showed that body location burned (body parts generally exposed in social environment or parts culturally perceived as sensitive areas of body), marital status, urbanities, age group, geographical areas, etiology of burning and intent of injury had significant relationships with irrational thoughts. (P< 0.05)

Using forward linear regression, being female (P= 0.017), being single (P< 0.05), geographical areas (being Fars((P= 0.013); being Kurd ((P= 0.049); other culture (P= 0.004)), burning with flame (P= 0.017), body location burned (body parts generally exposed in social environment or parts culturally perceived as sensitive areas of body) (P= 0.009), and intentional injury (P= 0.014) were significant predictors of the SITB. The models predicted 15.5 percent (p < 0.05) of irrational thoughts.

**Conclusion**

The results indicate that SITB reflects acceptable levels of validity and reliability which may be used to assess irrational thoughts among Iranian patients. Moreover, the testing populations of both patients with burned faces and patients with other burned body parts indicates that the scale is applicable for patients’ burn disfigurements on any part of their bodies. On the other hand, considering to irrational thoughts and development of facilities for screening is necessary. Also, consultation with mental health experts after burn injuries is highly recommended.

**Keywords**

Irrational Thoughts/ Beliefs, Burns, Disfigurement, Cognition, Validity, Psychological scale, Predictors, psychological disorders
Chapter 1:
Introduction
1-1- Introduction and issue statement

Burn injuries are among the most devastating of all injuries and comprise a major global public health crisis. These injuries are the fourth most common type of trauma worldwide, after traffic accidents, falls, and injuries related to interpersonal violence.\(^1\)\(^-\)\(^3\) Approximately 90 percent of burn injuries, and more than 95 percent of burn-related mortality, occur in low to middle income countries.\(^4\)

Surveys in community-based injury prevention research in Iran have shown that burns are the leading cause of unintentional injuries in home environments, and comprise 40 percent of those injuries for people in all age groups.\(^5\)

In recent years, due to improvement medical services in Iran, survival rates for burn patients have increased significantly. These growing numbers of survivors have led to multiple problems related to treatment, rehabilitation, and re-engagement in society, as patients endure long and painful treatment courses, long hospital stays, multiple surgeries, and sequelae such as functional disabilities.\(^6\)

The most visible effects of burn injuries are seen in accompanying physical changes. Burn injuries result in long-term consequences for survivors such as disabilities, permanent scarring, discoloration and disfigurement, loss of fingers, toes, ears or hair, which serves as permanent evidence of these injuries.\(^4\),\(^7\)

Chien et al., performed a study with 4741 burn victims in Taiwan and found that the body parts mostly likely to be burnt- faces, heads, and neck- were those most likely to be seen by others.\(^8\)

Burns often result in permanent disfigurement, which, in this study, is defined as the aesthetic effects left by burn injuries or treatment, including mark, rashes, scars or visible changes in skin tone or coloration due to skin grafts, and-or asymmetry or paralysis to faces or body area. These injuries can also result in functional impairments like the effects of arthritis on a person’s hand, the loss of an eye or a squint.\(^9\)
The concept of disfigurement included a reaction by the viewer, either the burn victim or others, that considers these after-effects of burn injuries as distasteful, shocking, or otherwise negatively impacting the burn victim (9).

While physical aftereffects of serious burn injuries are often obvious, the psychosocial effects of these injuries, including anxiety and depression, can be equally serious, particularly for those victims who are considered disfigured. (6)

The prevalence of psychological disorders in connection to burns has been 18 to 36 percent. Unfortunately, victims of burn events appear to be at high risk for psychological disorders (10).

Burned patients who have experienced disfigurement, particularly on faces, encounter three inter-related psycho-social issues:
First of all, these patients very frequently experience anxieties related medical care. They are worried about treatment courses which are very often painful, their growing realization of the very real possibility of that their disfigurements are permanent. Intrapersonal issues are frequently encountered in which self-esteem, sense of identity; perceptions of self-concept and emotional well-being are all affected by changing appearances.

Interpersonal issues are often found, which are related to the impact of the experiences the disfigured person encounters from others. People who have survived disfiguring burns constantly encounter negative social interactions due to their appearance, such as being stared at, avoided, being asked curious questions, being denied access to public environments (from restaurants, etc.), being rejected by acquaintances and potential partners, and experiencing feelings of being isolated, unworthy and humiliated (7, 9, 11).

Physical changes in body image in burn victims lead to difficulties in forming relationships, especially with strangers and potential partners (11).

Research shows that burn injuries have a significant negative impact on sexuality and body image satisfaction in burn survivors. For example, Connell et al. found in their
study with 362 participants strong association between poor body image and lower sexual satisfaction for disfigured burn victims (12).

Although severity and size of burn injuries do not appear to directly relate to depression and anxiety, the individual’s perceptions of burns play a strong role in post-injury mental health (13).

Moss’ study (2005) showed that if a person with severe burns considered his or her disfigurement personally frightening or ‘ugly’ to the victim him- or herself, that person was more likely to say he or she encountered greater personal distress (14).

One of the complications of injuries such as burns is the onset of irrational beliefs which act as superior predictors of psychological problems (emotional problems) such as anxiety, depression, shame, guilt, posttraumatic stress, etc (15).

Irrational beliefs, defined as unrealistic “reasoning processes by which external events are interpreted and through which emotional distress is mediated”(16), which may include catastrophizing a situation, judging oneself as unworthy for human interaction (17).

Albert Ellis and Aaron Beck, who both developed measurements related to irrational beliefs, described different theories about the nature of these irrational beliefs as risk factors for psychological disorders, problematic behaviors and emotions (18).

According to Ellis, one’s belief about the events is the major cause of self-defeating and inappropriate behaviors. If a burn victim believes her life is over due to disfigurement, for example, she is likely to avoid social interactions, based on this belief (18).

Ellis proposed that individuals could further worsen the outcome of catastrophic, life-changing events, based on irrational beliefs about how they, others and life ‘must’ or ‘should’ be (18).

Beck believed that negative beliefs and thinking styles which people have about themselves, their circumstances, and their future result in producing and maintaining many disorders. In this regard, distorted cognitions, for example, the framing of
disfigurement in a burn victim as a hideous outcome that means one’s life is over, are activated as negative beliefs about oneself, the world, and the ‘likely’ event of future negative life circumstances (19).

However they are described, irrational beliefs cause psychological problems, including emerging and continuing depression and social problems related to communications and interactions with others, which results in a pressing need to develop and test a valid and reliable tool better identify the presence of irrational thinking in the population of burn victims with disfigurement (20).

While scales for measuring various aspects of irrational beliefs certainly exist, hereto, no scale has been available to determine irrational beliefs in patients who have experienced disfigurement due to burn injuries. Thus far, several psychometric scales have been developed in order to measure the effects of disfigurement or body image dissatisfaction caused by diseases or trauma, but only four patient-reported outcome measurements have been developed specifically for burned patients: Burn Specific Health Scale, Satisfaction with Appearance, Social Comfort Questionnaire, and Perceived Stigmatization Questionnaire (21).

But, none of these measures were designed specifically to assess the spectrum of symptomatology that is relevant to the wide range of difficulties experienced by patients living with appearance issues such as irrational beliefs (21).

The aim of this study was describing the development and evaluation of an instrument, for assessing irrational beliefs in a group of disfigured burn survivors in Iran.
1-2- Significance of research

Burn injuries are most certainly stressful events, particularly when permanent disfigurement is a result. To understand the impact of disfiguring burn injuries on mental health and wellbeing, it is important to identify the role of irrational beliefs, post-injury. Irrational beliefs play a central role in cognitive theory and therapy, and have been shown to be related to a variety of disorders such as mental disorder, dysfunctional emotion and behaviors (19, 22). Cognitive theory find that individuals’ behavioral and emotional reactions are related to beliefs and thinking styles. The mechanisms by which information is processed, affect one’s emotional reactions to events (19).

Lazarus (1977) and Ellis (1991) have postulated that inconsistent reactions to similar stressors in individuals are caused by “cognitive appraisal” or beliefs about activating experiences and events (19).

Irrational beliefs cause a person to interpret their events or experience in a distorted, negative or self-defeating way which, if continued, can lead to depression, anxiety and PTSD (19, 23).

A meta-analysis of the impact of various type of mental health issues such as general distress, anxiety, depression, anger, and guilt found that all of these conditions are associated with irrational beliefs (24). Therefore, there is a need to further elaborate on this issue.
1-3- Objectives

1-3-1- Broad objective

Development of an irrational cognition assessment tool in burned patients and evaluation of its validity and reliability

1-3-2- Specific Objectives

1- To develop of scale

2- To determine the content validity

3- To determine the reliability

4- To determine the construct validity

1-3-3- Secondary Objective

1- To determine predictors of irrational beliefs among burned patients in Iran
1-4- Definition of Terms

**Burn**- Burn is the partial or complete destruction of the skin by thermal energy from flames, steam and hot liquids, contact with hot objects, explosion or electrical current. Injuries to the airways or other organs caused by the same mechanisms are also defined as burns (25).

**TBSA** – Total burn surface area, is the affected percentage of the total body surface area; and is the most common method to evaluate and report burn severity (25).

- < 5% - Mild
- 5-20% - Moderate
- >20% - Severe and life threatening

**Irrational Beliefs**- reasoning processes by which external events are interpreted and through which emotional distress is mediated (16).

**Depression** – Mental state characterized by feelings of sadness, loneliness, despair, low self-esteem and self-reproach. Accompanying signs include psychomotor retardation or, at times agitation, withdrawal from interpersonal contact and vegetative symptoms such as insomnia and anorexia (25).

**Personality Disorders** - Enduring subjective experiences and behaviors that deviate from cultural standards; are highly pervasive, have an onset in adolescence or early adulthood, are stable through time and lead to unhappiness and impairment (25).

**PTSD** – Post traumatic stress disorder, a condition marked by development of symptoms after exposure to traumatic life events. The person reacts to this experience with fear and helplessness, persistently relieves the event and tries to avoid being reminded of it (25).

**Validity**- The validity of a measurement tool is considered to be the degree to which the tool measures what it claims to measure; in this case, the validity is an equivalent to accuracy.
In psychometrics, validity has a particular application known as test validity: "the degree to which evidence and theory support the interpretations of test scores" ("as entailed by proposed uses of tests") (26, 27).

**Content validity** is a non-statistical type of validity that involves "the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured"

**Reliability** in statistics and psychometrics is the overall consistency of a measure. A measure is said to have a high reliability if it produces similar results under consistent conditions. "It is the characteristic of a set of test scores that relates to the amount of random error from the measurement process that might be embedded in the scores. Scores that are highly reliable are accurate, reproducible, and consistent from one testing occasion to another (28).

**Construct validity** is "the degree to which a test measures what it claims, or purports, to be measuring." (29, 30).

**Convergent validity** is one of the subtypes of validity that make up construct validity. Convergent validity refers to the degree to which two measures of constructs that theoretically should be related are in fact related (31, 32).
Chapter 2:

Literature Review
2-1- Literature Review

Irrational beliefs play a central role in cognitive theory and therapy; they have been shown to be related to a variety of disorders such as anxiety and depression. Because of these beliefs, anxious and depressed persons systematically distort the meaning of events to interpret their experiences in a sustained, negative, self-defeating way. Given the importance of irrational beliefs in the etiology of these disorders, we submit that clinicians and researchers should use the most psychometrically sound tests when measuring this construct.

The use of measures of irrational beliefs is an important component of the assessment of presenting problems in psychotherapy and may inform clinical decision making. Additionally, these measures are a helpful way to identify change in irrational beliefs and to measure the effectiveness of specific interventions to facilitate such change. There are a number of measures of beliefs which were mentioned in this section.

2-2- Some of the developed scale for measuring irrational beliefs:

- Irrational Beliefs Test (IBT):

The Irrational Belief Test was developed to assess irrational beliefs based on ten irrational beliefs as formulated by Ellis (1962). Jones developed the 100-item IBT with each of the items on a 5-point scale which requires respondents to represent their level of agreement or disagreement. The 10 subscales, all containing 10 items, are: (a) demand for approval, (b) frustration reactive, (c) blame proneness, (d) emotional irresponsibility, (e) high self- expectations, (f) anxious over concern, (g) perfectionism, (h) problem avoidance, (i) dependency, and (j) helplessness for change. A low score represents rationality and high score reflects more irrational thinking (33).

- Rational Behavior Inventory (RBI):

Rational Behavior Inventory developed by Shorkey and Whiteman (1977), the RBI is a 37-item instrument designed for use in the assessment and treatment planning of
rational emotive behavioral therapy (REBT) clients. The answers range from strongly agree to strongly disagree on a 5-point Likert scale which results in 11 rationality factors plus a total rationality score. Items of RBI are subdivided into the following 11 subscales: (a) catastrophizing, (b) guilt, (c) perfection, (d) locus of control, (e) demand for caring, (f) bolam/punishment, (g) interia/avoidance, (h) independence, (i) downing self and others, (j) possible future misfortune, and (k) control of emotions. A high score on the RBI reflects rationality, while a low score indicates that the person endorses more irrational beliefs. The RBI has been shown to correlate highly with self-report measures of depression and anxiety (34).

**Common Beliefs Survey-III (CBS-III):**

The Common Beliefs Survey-III (35) is a 54-item measure with six, 9-item subscales; each item is rated on a 5-point Likert-type scale. Agreement indicates irrationality for 29 items and rationality for 25 items. The CBS-III has demonstrated very good psychometric properties (36) including satisfactory internal consistency, test-retest reliability, and convergent and discriminant validity. For example, irrational beliefs as measured by the CBS-III were found to be related to substantial variance in two negative indices of well-being, depression and anxiety (37).

Additionally, there is the CBS-III SF (short form) with 19 items, which has also demonstrated good psychometric properties (38).

**The Belief Scale (BS):**

The Belief Scale (39) is a 20-item measure of Ellis’ original list of irrational beliefs. It was designed to correct the content validity problems of previous measures such as the IBT and RBI. Each item is rated on a 5-point scale, and item ratings are summed to produce a total score. The BS has shown good internal consistency and stability, and the scale has correlated highly with other measures of irrational beliefs. BS scores were positively correlated with levels of depression and anxiety in psychiatric patients (40).
The Child and Adolescent Scale of Irrationality (CASI):
The Child and Adolescent Scale of Irrationality (41) was designed to assess adolescents’ overall level of irrational thinking; it consists of 44 statements set in a Likert-type format, which yields six sub-scores and a total irrationality score. There are three clusters of general irrational ideas and two irrational belief scales within each of the three clusters. (42) An abridged version with 25 items, the CASI-Revised, was developed by Burnett (43). It has sound reliability and construct validity. (42) There were significant correlations between the CASI and trait anxiety (44).

The General Attitude and Belief Scale (GABS):
The General Attitude and Belief Scale (45) was developed to take account of three content domains which are recurrent themes in irrational beliefs (achievement, approval, and comfort), and four processes of irrational thinking (demandingness, awfulizing, self-downing, and low frustration tolerance). The GABS has good reliability and convergent/discriminant validity (46). Using this scale, investigators found a direct relationship between irrational beliefs and depression(47). Researchers have reported on a 72-item version and a 55-item version of the GABS (46).

The Survey of Personal Beliefs (SPB):
The Survey of Personal Beliefs is occasionally referred to as the Personal Beliefs Test or PBT in the literature. The SPB contains 50 items which are scored on a 6-point Likert scale and is designed for people over 16 years of age. It includes items from the PBT which were reworded to conform more clearly to REBT theory. Initial results with the SPB indicated satisfactory total and scale reliability. Validity research indicated that total rationality was related to negative affect (48, 49).

Irrational Beliefs Survey (IBS):
The Irrational Beliefs Survey is an 11-item scale which, using simplified language grew out of an earlier measure of irrational thinking. The original test was based on
an early formulation of Ellisonian theory. Respondent answers a via 5-point scale ranging from strongly disagree to strongly agree. Addition research found a significant correlation between IBS scores and a depressive attributional style (50).

**Irrational Beliefs Inventory (IBI):**
This 50-item scale, developed in the Netherlands by Koopmans, Sanderman, Timmerman, and Emmelkamp, is based on the item pool of the IBT and the RBI. The IBI is distinguishable from these scales in that it measures cognitions rather than negative affect, a criticism leveled at the IBT and RBI. The IBI is answered via a 5-point scale and consists of five subscales (worrying, rigidity, need for approval, problem avoidance, and emotional irresponsibility) plus a total score. Research has demonstrated consistent psychometric properties across several cultures, including the American version; internal consistency was found to be of an acceptable magnitude, and the five subscales were found to be independent of each other.

The IBI has been used to investigate the role of irrational beliefs in obsessive-compulsive disorder, social phobias, and therapy for depression (16, 51).

**Smith Irrational Beliefs Inventory (SIBI):**
The 24-item Smith Irrational Beliefs Inventory is situation specific in that it asks respondents to rate on a 4-point Likert scale how much they displayed irrational thinking during a recent recalled stressful situation (52). This format is used in order to be consistent with Ellis’ original conceptualization of irrational beliefs as higher-order cognitions inaccessible through simple self-report scales (53). The SIBI displayed a consistent seven-factor structure across situational formats and cultures (54).

**The Dysfunctional Attitudes Scale (DAS):**
The Dysfunctional Attitudes Scale is a 100-item, self-report instrument answered on a 7-point Likert scale, was developed to assess dysfunctional beliefs and thoughts posited by Beck and his colleagues as being associated with vulnerability to depression (55). It has acceptable reliability and validity which support its use as a
measure of depressionistic beliefs (56). It was later transformed into two parallel 40-item forms, the DAS-A and the DAS-B. It has been argued that the most efficient instruments for measuring the cognitive distortions associated with depression is DAS-A (57).

**Automatic Thoughts Questionnaire-30 (ATQ-30):**
In the Automatic Thoughts Questionnaire-30, respondents indicate for each of 30 specific, negative thoughts how frequently the thought has occurred to them during the past week (58). The ATQ-30 has high internal consistency and discriminates depressed from non-depressed samples (59). There are companion pieces to the ATQ-30: the Automatic Thoughts Questionnaire-Positive or ATQ-P and the ATQ-N (Negative) (60). The ATQ correlates inversely with depressive symptoms; it distinguishes patients with depression from non-patients in both frequency of negative thoughts and degree of belief in these thoughts (61).

**Work-Related Irrational Beliefs Questionnaire (WIB-Q):**
A 16-item work-related irrational beliefs questionnaire (WIB-Q) was developed to measure work-related irrational cognitions and workaholism. The Belief Scale was used as starting point for developing the WIB-Q. The results show that four factors could be distinguished, which represent irrational beliefs concerning (1) performance demands, (2) co-workers’ approval (3) failure and (4) control. All scales showed good internal consistency. Furthermore, it was found that, after controlling for negative affect, performance demands were associated with workaholism, whereas the remaining types of irrationality were unrelated to workaholism. The participants responded to a 5-point Likert scale (1 = “completely disagree”, 5 = “completely agree”) (62).

**Parent Irrational Belief Scale (PIBS):**
Parent Irrational Belief Scale was developed to assess irrational beliefs of parents. The research sample was comprised of parents whose children were attending primary schools. The scale was made up of 29 items in two factors. The two factors
of the scale were named: Expectations and Perfectionism. To examine the validity of the scale, the correlations between the scores on the Expectations sub-scale and the Dysfunctional Attitude Scale (DAS), the Irrational Belief Scale-Short Form (IBS-S), and the Beck Depression Inventory (BDI) were assessed. The perfectionism sub-scale was correlated with DAS, IBS-S, and BDI. The test-retest correlations were .84 for Expectations sub-scale and .80 for Perfectionism sub-scale. Cronbach’s Alpha internal consistency coefficient were .89 for Expectations sub-scale and .86 for Perfectionism sub-scale (63).

**The Irrational Parenthood Cognitions scale (IPC):**

The Irrational Parenthood Cognitions (IPC) scale was developed to measure specific irrational cognitions concerning the need to have children in order to live a happy life. The term ‘irrational’ refers to the ideas of Ellis (1962). Ellis states that people at a young age may learn norms and values that are not necessarily realistic or consistent. These irrational ideas can lead to the development of emotional and psychological complaints. This scale contains 14 items. Examples are: ‘A life without children is useless and empty’ or ‘You start hating your body when you cannot have children’. Respondents were asked to score on a five-point scale to what extent they agreed with these statements. The items were subsequently totaled to a scale score of 0-56, with higher scores indicating a stronger need to have children in order to live a happy life. The reliability of this scale, measured by Cronbach's α, was 0.84 for male respondents and 0.87 for female respondents (64).

**Posttraumatic Cognitions Inventory (PTCI):**

The Posttraumatic Cognitions Inventory (PTCI) was developed to measure trauma-related thoughts and beliefs. Its items were derived from clinical observations and current theories of post-trauma psychopathology. The PTCI was administered to 601 volunteers, 392 of whom had experienced a traumatic event and 170 of whom had moderate to severe posttraumatic stress disorder (PTSD). Principal-components analysis yielded 3 factors: Negative Cognitions About Self, Negative Cognitions
About the World, and Self-Blame. The 3 factors showed excellent internal
consistency and good test-retest reliability; correlated moderately to strongly with
measures of PTSD severity, depression, and general anxiety; and discriminated well
between traumatized individuals with and without PTSD. The PTCI compared
favorably with other measures of trauma-related cognitions, especially in its superior
ability to discriminate between traumatized individuals with and without PTSD (65).

**The Posttraumatic Maladaptive Beliefs Scale (PMBS):**
The Posttraumatic Maladaptive Beliefs Scale (PMBS) was developed to measure
maladaptive beliefs about current life circumstances that they may occur following
trauma exposure. This scale assesses maladaptive beliefs within three domains:
(a) Threat of Harm, (b) Self-Worth and Judgment, and (c) Reliability and
Trustworthiness of Others. Items for the PMBS were drawn from a larger preexisting
measure that assesses a wide range of personal beliefs and reactions associated with
trauma exposure. The construct validity of the PMBS was assessed in two
independent samples of interpersonal trauma survivors. This article provides data to
support the reliability and validity of the PMBS as an instrument to assess general,
rather than trauma-specific, maladaptive beliefs that have relevance for functioning in
the aftermath of a traumatic event. Moreover, the measure is sensitive to changes that
occur in treatment, and the length of the measure (15 items) is practical for use in
clinical settings (66).

**Trauma-Related Irrational Belief Scale (TRIBS):**
Trauma-Related Irrational Belief Scale was developed to measure trauma-specific
variants of each of the four irrational belief processes. The TRIBS is an 8-item self-
report measure of irrational beliefs specifically related to the experience of a
traumatic life event. The scale was constructed in accordance with guidelines set
forth by Montgomery, et al. (2007) in the development of their ‘Exam-Related Belief
Scale’ which was used to capture rational and irrational beliefs specifically related to
the context of exam-related distress. The TRIBS includes sub-scales for each of the
four irrational belief processes and each belief process is measured via two items. Items of the TRIBS are scored along a five-point Likert scale from 1 (“Strongly Disagree”) to 5 (“Strongly Agree”). Items 4 and 6 included in the scale were scored in a reverse direction. Scores on each subscale range from 2-10 with higher scores reflecting higher levels of irrationality. Internal consistency for the full scale was satisfactory (α = .95), and each of the subscales also yielded acceptable results with all alpha levels exceeding .80 (15).

2-3- Overall conclusion of literature review

Irrational beliefs are found to be important for human functioning and wellbeing. Although a growing number of scales to measure irrational beliefs exist, the psychometric properties of these measures vary considerably. Terjesen et al (67) reviewed 14 measures of irrational beliefs regarding reliability, validity and norms. While the majority of these scales showed good reliabilities, the validity and their utility for assessment needs improvement. For instance, some of the existing measures of irrational beliefs were found not to assess only beliefs, but also emotional or behavioral responses. Such content overlap may inflate correlations between irrational beliefs and outcomes (68). Finally, although there are measures developed for specific populations and situations (e.g., children, gamblers), to our knowledge, no irrational beliefs measure is specifically designed to assess irrational beliefs in a group of disfigured burn survivors.
Chapter 3:
Methodology
3- Methodology

3-1- Introduction

This chapter consisted of 3 sections:

- Methodology for development and evaluation of an irrational beliefs assessment tool among burned patients
- Methodology for factor structure of Derriford Appearance Scale59 (DAS59)
- Methodology for determining predictors of irrational beliefs among burn patients in Iran

3-2- Development and validation of a new tool for measuring irrational thoughts among burned patients

3-2-1- Study design

The present study was a psychometrics study.

3-2-2- Setting

The present study was conducted at the Shahid Motahhary, Sina and Emam Khomeini university hospital at Tehran, Tabriz and Kermanshah provinces respectively during the period between June 2014 and June 2015.

3-2-3- Study population

Patients who had burned were recruited from medical and surgical wards or clinic in the Shahid Motahhary, Sina and Emam Khomeini university hospital at Tehran, Tabriz and Kermanshah provinces respectively.

3-2-4 Inclusion criteria

- Burn patients with and without facial burns who referred to the study locations for cosmetic surgeries
- Burn patients with and without facial burns have burned recently who were referred to the study locations for ongoing care.
- Burn patients with 14 years old and upper.

3-2-5- Exclusion criteria
- Patients who weren’t agree to participate in the study.

3-2-6- Sample size and sampling method
Sample size estimated for all steps of the study was based on the availability of patients and number of items of scale.
The sampling method for all steps was based on convenience sampling.

- Sample size for content validity
Although sample size for content validity always consists of 10 experts, we assigned 24 experts for this purpose. Moreover, experts were selected from Tehran, Tabriz and Kermanshah provinces of Iran to consider various cultures.

- Sample size for internal reliability
Sample size for internal reliability was estimated 36 samples by SAS software with 20 items as default, point estimation of 0.8 and confidence interval of 0.2. So, 50 samples were used to improve the quality of study.

- Sample size for test- retest
Sample size for test- retest was estimated 30 samples with r = 0.70 and confidence level= 0.95. Finally, 49 samples were used to improve quality of study.

- Sample size for construct validity
The number of samples was estimated at least 200 observations for exploratory factor analysis based on 20 items as default. The authors assigned 329 samples to improve the quality of statistical methods.
3-2-7- Instrument development

The methods for development of a new instrument, which was named the ‘Scale for Irrational Thoughts after Burning (SITB)’, required multiple steps. Figure1 illustrated steps of developing and evaluation SITB.

Step 1 was the development of initial measurements, based on current knowledge. In order to identify relevant scales and studies, (i.e., those addressing irrational beliefs, or sequelae of disfiguring burn injuries) a comprehensive literature review was conducted. The authors synthesized the findings from applicable studies, combining themes, frames and ideas to develop initial items to include in the scale.

Step 2 of the scale development consisted of interviews with six experts with training in epidemiology, psychology, surgery and sociology to describe typical irrational thoughts that are expressed by disfigured people following burns in order to make recommendations for additional items for the scale. The expert’s panel held meetings to revise the initial items and to identify other potential items to include on the scale.

Step 3 in this process included intensive individual interviews with 10 patients who had experienced disfigurement to faces and other body areas after burn. Trained interviewers first elicited information about personal circumstances and the factors associated with the burn injuries. The patients were then questioned about their emotional and mental reactions to their disfigurements. For example, did they feel that close relatives and friends reacted differently to them after disfigurements? Other questions probed for more general concerns: what did they think other people thought about disfigurements due to burns, what concerns the victims had about the ability to support themselves and, if applicable, family members in the future.
Figure 3-1: Steps of developing & evaluation SITB

1. Searching literatures
2. Interviewing with experts
3. Interviewing with patients
4. Developing initial version
5. Evaluating content validity
6. Pilot study to evaluate feasibility & reliability
7. Reevaluation of the scale
8. Evaluating construct validity
In step 4, the expert panel met again to modify previous questions or add some questions based on the responses from the patients’ group. An initial version the SITB scale with 83 items was developed by the end of this step.

Step 5 comprised evaluation of content validity. In this regard, the initial version was sent to 24 experts selected from Tehran, Tabriz and Kermanshah provinces of Iran. The fields of the experts were psychology, surgery, nursing, epidemiology, physiotherapy, occupational therapy and nonclinical patient care providers (patient aides). The experts were asked to suggest their ideas to improve the quality of the scale, and to also judge about the existing items for clarity and relevance(69). Then, statistics for Content Validity Index (CVI) and modified Kappa coefficient based on most recent alternative to CVIs were computed for each item (70).

The expert panel refined or omitted items based on experts’ opinions and modified Kappa coefficients, so that some of the items with low modified Kappa measurements were kept because of the importance of their concepts according to the experts’ ideas. Conversely, in spite of high modified Kappa coefficients, some of the items on the revised scale were removed based on experts’ feedback. To allow for measurements for burned victims with different gender or marital status and also reduce the number of the items, the expert panel merged items that were judged to be similar to each other. After this step an initial scale with 33 items was ready for testing.

Stage 6 resulted in two pilot studies. The first, with ten participants, was to evaluate applicability of the scale, and the second pilot study, with 49 patients, evaluated the scale’s reliability.

With both pilot tests, respondent feedback was used to revise the scale.

An expert panel reevaluated the scale at Stage7. Because some of the questions focused on negative concept which may have influenced the patients adversely, 6 items asking about positive concepts were added. Content validity for new items were calculated as noted earlier.
At the end of this process a 39-item scale was ready for use to compute construct validity. Sample size assigned for assessing was 329 burned patients, based on the availability of patients. The sampling method for all steps was based on convenience sampling.

An estimation of the time required to complete the revised was calculated, based on the response time of 57 patients who piloted the most recent version of the scaled. Mean and median of the time interval for filling the shorter revised scale were computed at 8.8 minutes (SD= 3.5) and 8 minutes (range 7 to 10).

3-2-8- Content validity
This phase of the study employed both qualitative and quantitative approached. To validate the instrument, Content Validity Index (CVI) and modified KAPPA (modified CVI) were assessed based on expert perspectives, using 4-point evaluation scales ranged from completely disagree to completely agree as noted earlier. Modified Kappa coefficient and CVI were computed for scale and items (69, 70).

In this regard, the initial version was sent to 24 experts selected from Tehran, Tabriz and Kermanshah provinces of Iran. The fields of the experts were psychology, surgery, nursing, epidemiology, physiotherapy, occupational therapy and nonclinical patient care providers (patient aides).

3-2-9- Reliability
The reliability of the scale was measured using internal consistency and the test-retest method. Cronbach alpha was used to measure the internal consistency for the total scale, and each subscale. For test-retest reliability of the scale, the Intraclass Correlation Coefficients (ICC) over a 15-day interval was calculated for total scale and each dimension.
3-2-10- Construct validity
Exploratory factor analysis was used to determine factor structure for the revised instrument because the researchers of this study didn’t have a hypothesis about the number or nature of the factors measured by the tests. Maximum Likelihood extraction with varimax rotation was carried out to extract factors. Selection of the number of factors to be rotated was based on conjunctive criteria requiring: (a) the eigenvalue of the factor to be greater than 1; and (b) the use of the scree test. Uniqueness less than 0.7 were criteria for selecting items (71).

3-2-11- Translation and back-translation process of Derriford Appearance Scale59 (DAS59)
The translation process was performed according to the TCA (translation and cultural adaptation) group (72). The original English version was translated (forward translation) into Persian separately by three self-governing official translators. Then, one researcher who mastered both languages reviewed the translations in terms of their inconsistencies with the original one. Minor revisions were suggested in some areas and, finally one Persian version of the scale was created. Subsequently, it was translated back from Persian to English by Another official translator. The back translated version and the original one were compared and in order to be similar in terms of the structure and meaning. The authors compared the original version with the back-translated version (harmonization). An expert panel consists of epidemiologists and psychologist was asked the questionnaire’s conceptual equivalence. Finally, according to their recommendations, minor changes were made and pilot testing were performed.
The authors translated this scale to elementary reading level in order to be applicable and understandable for patients with each education level.
A trained interviewer read out the questions to illiterate patients, exactly like the translated scale without any interpretation to prevent from influencing the patients’ answers. Stages of translation process are shown in Figure 2.
3-2-12- Convergent Validity

In order to determine convergent validity, “DAS59 was utilized and its relationship with SITB was assessed by Pearson Correlation Coefficients was reported. In this regard, the authors translated and culturally adapted three subscales of Derriford Appearance Scale 59 (DAS59) into Persian language and investigated its factor structure for Iranian burned patients. The Derriford Appearance Scale (DAS59) is a 59-item factorial scale measuring appearance-related distress, social anxiety and avoidance, standardized on both general and hospital populations. In this study, questions related to General Self-Consciousness of Appearance, Social Self-Consciousness of Appearance, and Negative Self Concept domain of DAS59 which include 40 items was given to burn patients, in order to investigate its factor structure and test convergent validity (73).

3-3- factor structure of Derriford Appearance Scale59 (DAS59)

3-3-1- Assessment of internal consistency:

To determine the instrument’s internal consistency, Cronbach’s alpha was determined.

3-3-2- Assessment of construct validity:

To determine the construct validity of Derriford Appearance Scale 59 (DAS59), exploratory factor analysis using principal components and the rotation of varimax methods was conducted. The questionnaire was distributed among 189 burned victims in Tabriz, Tehran and Kermanshah. Selection of the number of factors to be rotated was based on conjunctive criteria requiring: (a) the eigenvalue of the factor to be greater than 1; and (b) the use of the scree test. A uniqueness score below 0.7 was considered as the criterion for selecting items having adequate communality.
Figure 3-2: Stages of translation process of DAS59
3-4- Determining predictors of irrational beliefs among burned patients

3-4-1- Demographic information (background variables)
Data were collected regarding patient history and demographics such as: gender, age, marital status, occupation (jobs that have direct relationship with people/customer, and jobs that don’t have direct relationship with people/customer), education (academic, nonacademic), type of resident (rural or urban), geographical areas (Fars, Turkish, Kurd and other cultures).
It is important to note that the authors selected three study locations: (three referral hospitals which were located in Tehran, Tabriz and Kermanshah cities). Patients came from throughout Iran for treatment or cosmetic surgery. Therefore, patients were categorized to four geographical areas according to individual characteristics, such as primary language spoken or self-identified cultural affiliation, including Fars, Turkish, Kurd and language and cultural affiliations.

3-4-2- Burn-related variables
The study included the following burn-related variables: Etiology of burning (flame burn, non-flame), percentage Total Body Surface Area (TBSA) burned, environment (domestic or occupational burn, school or others), intent of injury (e.g. unintentional/intentional), duration of burn (time interval between burning and answering to the questionnaire), history of consumption depression drags, history of referral to psychiatrist were burn-related variables, body location burned (face only, head and neck, socially exposed, private exposed, socially and sensitive relative exposed).
It’s needed to note that our meanings of ‘socially exposed’ and ‘sensitive relative exposed’ were generally exposed in social environment (such as faces and hands,...) and showing a part of the body that might be considered appropriate in the context of companionship with a close relative or same-sex friend, respectively.
3-4-3- Assessment of irrational thoughts

The second part of the data collection analyzed the results of a scale developed to assess irrational thoughts among burned patients. In this part of the study, the participants were asked to score on a five-point scale to what extent they agreed with statements that reflected irrational thoughts about personal appearances and the social consequences of disfiguring burns.

The Scale for Irrational Thoughts after Burning (SITB) is a 14-items factorial scale measuring irrational thoughts among burned patients. The scale was administered using paper and pencil or face to face interview by trained interviewers, who recorded responses on a paper form for patients who were illiterate or were not be able complete the form by themselves because of burn injuries.

3-4-4- Statistical Analyses

The analyses were performed with Stata version 13. Data were presented by mean (SD) and frequency (%) for quantitative and categorical variables, respectively. The normality of data was assessed and confirmed by one sample K-S test. All analyses were performed with two-sided tests. A value of \( p<0.05 \) was considered significant.

The scores on the SITB were normalized to score range of 0-100 and this score was used as score for irrational thoughts and used as variables for clustering. All the standard error and statistical tests were adjusted for a design effect due to potential clustering of measurements over the three location clusters (Tehran, Tabriz, and Kermanshah).

To identify predictors of irrational thoughts, both bivariate and multivariate analysis methods were conducted.

In bivariate analysis, an independent samples t-test was used to compare the means of normally distributed numeric scales. A One-Way Analysis of Variance was used to
test the equality of three or more means. The Kruksal Wallis test was used when the homogeneity assumption of analysis of variance didn’t hold.

In the multivariate linear regression, forward strategy was used. Preliminary variable selection for model design was based on a P<0.2 and final decision for keeping the variables in the model was based on a P<0.05.

The categorical variables were entered as indicators. The regression assumptions of residual normality, homogeneity of residual variances, residual independence, and collinearity were assessed and confirmed using normal probability plot, residual versus predicted values plot, Durbin-Watson Statistics (values between 1.5 to 2.5 as the acceptable range), and Variance Inflation Factor (VIF<5 as the acceptable values). All the assumptions were fulfilled. Additionally, regression coefficients and their 95% confidence intervals were presented.

3-5- Ethical consideration

- The study protocol was approved by the Committee of Ethics at Tabriz University of Medical Sciences.

- Verbal informed consent was obtained from the participants.

- Derriford Appearance Scale59 was bought and got permission from its author.

- We got permission from ‘Journal of neuropsychiatric Disease and Treatment’ for using part of our article in the thesis.

- We got permission from ‘Journal of Burn Care and Research’ for using part of our article in the thesis.
Chapter 4:

Results
4- Results

The results of the study are presented in three sections as follow:

1- Validity of Scale for Irrational Thoughts in Burn (SITB)
2- Factor structure of Derriford Appearance Scale (DAS59)
3- Predictors of irrational beliefs among burn patients

4-1- Validity of Scale for Irrational Thoughts in Burn (SITB)

The items of ‘Scale for irrational Thoughts in Burn (SITB)’ and frequency of responses were shown in table 4-1.

The testing of the SITB resulted in a number of findings related to the scale, in terms of validity, reliability and factor structure, which are described here:

4-1-1- Socio-demographic characteristics of participants

The participants consisted of 329 burn patients (183 men and 145 women) with a mean age of 32 (SD= 6.7) and an age range of 16 to 63. Most of the participants (n=178) were educated at the high school level (from 7 to 12 years of education); while 14 (4.3%) participants were illiterate and 70 (39.5%) of them had received college education. The majority, n= 271 (82.4 %) of patients lived in urban areas. Most of the patients, n= 206 (62.6 %) were married. The median percent body area burned in this group was 16%, with a range of 7% to 33%.

4-1-2- Content validity

The content validity of the SITB was assessed based on both qualitative (comments from panel members) and quantitative results (the level of agreement among expert board members which CVI and kappa modified calculated 0.80 and 0.80 for relevance and 0.91 and 0.91 for clarity, respectively).

Table 4-2 illustrates CVI and modified Kappa for each item.
Table 4-1: Items of Scale for irrational Thoughts in Burn (SITB) and frequency of responses

<table>
<thead>
<tr>
<th>Items</th>
<th>Completely disagree N(%)</th>
<th>Disagree N(%)</th>
<th>No idea N(%)</th>
<th>Agree N(%)</th>
<th>Completely disagree N(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>My (future) partner/spouse will be never be sexually responsive to me.</td>
<td>64 (20.85)</td>
<td>163 (53.09)</td>
<td>36 (11.73)</td>
<td>34 (11.07)</td>
<td>10 (3.26)</td>
</tr>
<tr>
<td>I will be ashamed of my appearance whenever my (future) partner/spouse looks at my face.</td>
<td>52 (16.61)</td>
<td>151 (48.24)</td>
<td>13 (4.15)</td>
<td>81 (25.88)</td>
<td>16 (5.11)</td>
</tr>
<tr>
<td>When I’m with my friends, I will be always ashamed of my appearance because of my burn injuries.</td>
<td>59 (18.15)</td>
<td>174 (53.54)</td>
<td>5 (1.54)</td>
<td>71 (21.85)</td>
<td>16 (4.92)</td>
</tr>
<tr>
<td>I can no longer be an appropriate partner for my spouse or find my perfect partner (because of my burn injuries).</td>
<td>62 (19.56)</td>
<td>189 (59.62)</td>
<td>16 (5.05)</td>
<td>38 (11.99)</td>
<td>12 (3.79)</td>
</tr>
<tr>
<td>I will undoubtedly succeed in my workplace and home (life).</td>
<td>71 (24.23)</td>
<td>162 (55.29)</td>
<td>13 (4.44)</td>
<td>45 (15.36)</td>
<td>2 (0.68)</td>
</tr>
<tr>
<td>My (future) partner/spouse will always be ashamed to accompany me to parties or public places.</td>
<td>55 (17.63)</td>
<td>159 (50.96)</td>
<td>30 (9.62)</td>
<td>57 (18.27)</td>
<td>11 (3.53)</td>
</tr>
<tr>
<td>With married respondents: My partner/spouse’s family will definitely try to persuade him/her to get divorced due to my appearance.</td>
<td>57 (18.87)</td>
<td>154 (50.99)</td>
<td>32 (10.60)</td>
<td>47 (15.56)</td>
<td>12 (3.97)</td>
</tr>
<tr>
<td>For single respondents: I am sure that the families of potential partners/spouse would never agree to their relative marrying me.</td>
<td>53 (17.73)</td>
<td>175 (58.53)</td>
<td>44 (14.72)</td>
<td>24 (8.03)</td>
<td>3 (1)</td>
</tr>
<tr>
<td>My (future) partner/spouse and I will be able to have satisfying sexual relations irrespective of my burnt face and appearance.</td>
<td>54 (18.37)</td>
<td>153 (52.04)</td>
<td>45 (15.31)</td>
<td>35 (11.90)</td>
<td>7 (2.38)</td>
</tr>
<tr>
<td>My (future) partner/spouse will avoid having sex with me because of my appearance.</td>
<td>42 (13.29)</td>
<td>171 (54.11)</td>
<td>33 (10.44)</td>
<td>57 (18.04)</td>
<td>13 (4.11)</td>
</tr>
<tr>
<td>My marriage will be based on my partner’s pity for me.</td>
<td>28 (8.64)</td>
<td>160 (49.38)</td>
<td>13 (4.01)</td>
<td>101 (31.17)</td>
<td>22 (6.79)</td>
</tr>
<tr>
<td>People will look at me with pity from now on.</td>
<td>53 (16.21)</td>
<td>183 (55.96)</td>
<td>10 (3.06)</td>
<td>69 (21.1)</td>
<td>12 (3.67)</td>
</tr>
<tr>
<td>I have no doubt that my appearance will be disgusting to my family.</td>
<td>40 (12.16)</td>
<td>148 (44.98)</td>
<td>20 (6.08)</td>
<td>109 (33.13)</td>
<td>12 (3.65)</td>
</tr>
<tr>
<td>I have no doubt that my appearance will be disgusting to my friends and relatives.</td>
<td>28 (8.54)</td>
<td>126 (38.41)</td>
<td>36 (10.98)</td>
<td>120 (36.59)</td>
<td>18 (5.49)</td>
</tr>
</tbody>
</table>
Table 4-2: CVI and modified Kappa for each item

<table>
<thead>
<tr>
<th>Item</th>
<th>Relevance</th>
<th>Clarity</th>
<th>Content Validity Index (CVI)</th>
<th>Modified Kappa (modified CVI)</th>
<th>Content Validity Index (CVI)</th>
<th>Modified Kappa (modified CVI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.90</td>
<td>0.91</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.81</td>
<td>0.81</td>
<td>0.92</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.78</td>
<td>0.78</td>
<td>0.92</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.81</td>
<td>0.81</td>
<td>0.87</td>
<td>0.87</td>
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<td></td>
</tr>
<tr>
<td>5</td>
<td>0.76</td>
<td>0.75</td>
<td>0.91</td>
<td>0.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.81</td>
<td>0.81</td>
<td>0.92</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.72</td>
<td>0.71</td>
<td>0.91</td>
<td>0.91</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.70</td>
<td>0.66</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>10</td>
<td>0.76</td>
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<td>0.83</td>
<td>0.83</td>
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<tr>
<td>11</td>
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<td>0.85</td>
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<td>1</td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>0.77</td>
<td>0.77</td>
<td>0.85</td>
<td>0.85</td>
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</tr>
<tr>
<td>13</td>
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<td>0.84</td>
<td>0.95</td>
<td>0.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.88</td>
<td>0.88</td>
<td>0.96</td>
<td>0.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4-1-3- Reliability of the Scale

The Cronbach’s Alpha for overall scale, subscale1 (Self-Acceptance) and subscale2 (Distastefulness and Pity) was 0.89, 0.88 and 0.81 respectively. Test–retest reliability for overall scale, subscale1 and (Self-Acceptance) and subscale2 (Distastefulness and Pity) (assessed by ICC) was 0.80 (CI: 0.65- 0.89), 0.87 (CI: 0.67- 0.95) and 0.49 (CI: 0.1- 0.71) respectively. (P<0.05)
4-1-4- Convergent Validity
Pearson correlations between the SITB and Derriford Appearance Scale59 (DAS59) were calculated 0.65. So, significant positive correlation was found between the two questionnaires (SITB and DAS59).

4-1-5- Factor structure
A factor analysis of the scale was conducted using maximum likelihood extraction with varimax rotation. The Kaiser-Meyer-Olkin index was 0.87. Bartlett's Test of Sphericity was calculated 2996.061 (P< 0.001). The number of factors was determined by considering those with eigenvalues above 1, as well as through examination of the scree plot. The best solution from the maximum likelihood analysis of the 39 items of the SITB revealed two factors corresponding to the two subscales with 14 items that remained. At this point, it is important to note that the scale was based on responses from patients who had experienced disfiguring burns on any part of their bodies, and was not limited to respondents with disfiguring facial burns.

In the factor analysis, Factor 1 consisted of 10 items accounting for 60% of the variance (eigenvalue= 5.04), describing irrational thoughts from the respondents about their social and personal life due to feeling of shame or low self-confidence, which we labeled ‘Self-Acceptance’. Factor 2 consisted of 4 statements accounting for 40% of the variance (eigenvalue= 1.53), describing irrational thoughts about the effects of their appearance on other people, which we labeled ‘Distastefulness and Pity’.

Factor loadings for the 14 items are presented in Table 4-3.

It needs to note that items 2, 3, and 6 overlapped with factor 1 and 2. But, we assigned them to factor1 because of their concepts.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor1</th>
<th>Factor2</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- My (future) partner/spouse will be never be sexually responsive to me.</td>
<td>0.7750</td>
<td></td>
<td>0.3787</td>
</tr>
<tr>
<td>2- I will be ashamed of my appearance whenever my (future) partner/spouse looks at my face.</td>
<td>0.5344</td>
<td>0.3371</td>
<td>0.6008</td>
</tr>
<tr>
<td>3- When I’m with my friends, I will be always ashamed of my appearance because of my burn injuries.</td>
<td>0.4560</td>
<td>0.3414</td>
<td>0.6756</td>
</tr>
<tr>
<td>4- I can no longer be an appropriate partner for my spouse or find my perfect partner (because of my burn injuries).</td>
<td>0.5346</td>
<td></td>
<td>0.6925</td>
</tr>
<tr>
<td>5- I will undoubtedly succeed in my workplace and home (life). *</td>
<td>0.5224</td>
<td></td>
<td>0.6907</td>
</tr>
<tr>
<td>6- My (future) partner/spouse will always be ashamed to accompany me to parties or public places.</td>
<td>0.6565</td>
<td>0.3281</td>
<td>0.4613</td>
</tr>
<tr>
<td>7- With married respondents: My partner/spouse’s family will definitely try to persuade him/her to get divorced due to my appearance. For single respondents: I am sure that the families of potential partners/spouse would never agree to their relative marrying me.</td>
<td>0.6797</td>
<td></td>
<td>0.5050</td>
</tr>
<tr>
<td>8- My (future) partner/spouse and I will be able to have satisfying sexual relations irrespective of my burnt face and appearance. *</td>
<td>0.7091</td>
<td></td>
<td>0.4902</td>
</tr>
<tr>
<td>9- My (future) partner/spouse will avoid having sex with me because of my appearance.</td>
<td>0.7227</td>
<td></td>
<td>0.4585</td>
</tr>
<tr>
<td>10- My marriage will be based on my partner’s pity for me.</td>
<td>0.4723</td>
<td></td>
<td>0.6976</td>
</tr>
<tr>
<td>11- People will look at me with pity from now on.</td>
<td></td>
<td>0.5338</td>
<td>0.6910</td>
</tr>
<tr>
<td>12- I have no doubt that my appearance will be disgusting to my family.</td>
<td></td>
<td>0.6241</td>
<td>0.5341</td>
</tr>
<tr>
<td>13- I have no doubt that my appearance will be disgusting to my friends and relatives.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14- I have no doubt that my appearance will be disgusting to strangers who see me.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Blanks represent absolute loading < 0.3 Uniqueness = 1-communality

The values for the items included in each of the factors are shown in bold underneath the heading for that factor.

Factor 1 = Self-Acceptance Factor 2 = Distastefulness and Pity

* These items should be reversed in the analysis
4-2- Factor structure of Derriford Appearance Scale (DAS59)

4-2-1- Internal consistency

The Cronbach’s Alpha for overall scale, subscale General Self-Consciousness of Appearance, Social Self-Consciousness of Appearance and Negative Self Concept were 0.93, 0.93, 0.89 and 0.80 respectively.

4-2-2- Factor structure

Exploratory factor analysis was used according to different factors frequently. Ultimately, the 3-factor model was the best result of a simple pattern of loadings based on eigenvalues above 1, as well as a total of 71 percent of variance was explained by the 3-factors model. The Kaiser-Meyer-Olkin index was 0.88.

The best solution from the principal components analysis of the 40 items of the DAS59 revealed three factors corresponding to the three subscales with 20 items remained.

Factor 1 (General Self-Consciousness of Appearance) consisted of 9 items accounting for 33.23% of the variance (eigenvalue= 9.23). Factor 2 (Social Self-Consciousness of Appearance) consisted of 7 items accounting for 22.91% of the variance (eigenvalue= 1.53). Factor 3 (Negative Self Concept) consisted of 4 items accounting for 14.98% of the variance (eigenvalue= 1.13).

Sample size for assessing construct validity was 189 burned patients.

The structure of extracted factors from correlation between the factor loadings and questions using the principal components method and varimax rotation is shown in Table 4-4.
### Table 4-4: Factor loading of 20 Items of DAS59

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor1</th>
<th>Factor2</th>
<th>Factor3</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoiding school/college/work</td>
<td>0.6338</td>
<td>0.5539</td>
<td>0.5540</td>
<td></td>
</tr>
<tr>
<td>Avoiding pubs/restaurants</td>
<td>0.6446</td>
<td>0.5539</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feel unattractive</td>
<td>0.7290</td>
<td>0.3479</td>
<td>0.2735</td>
<td></td>
</tr>
<tr>
<td>Feel unlovable</td>
<td>0.6574</td>
<td>0.3691</td>
<td>0.3228</td>
<td>0.3275</td>
</tr>
<tr>
<td>Feel isolated</td>
<td>0.7567</td>
<td>0.3028</td>
<td>0.2637</td>
<td></td>
</tr>
<tr>
<td>Feel embarrassed</td>
<td>0.8548</td>
<td>0.3071</td>
<td>0.1467</td>
<td></td>
</tr>
<tr>
<td>Feel inferior</td>
<td>0.6847</td>
<td>0.4047</td>
<td>0.3161</td>
<td></td>
</tr>
<tr>
<td>Feel rejected</td>
<td>0.7373</td>
<td>0.3530</td>
<td>0.3198</td>
<td></td>
</tr>
<tr>
<td>Feel useless</td>
<td>0.6328</td>
<td>0.3865</td>
<td>0.4129</td>
<td></td>
</tr>
<tr>
<td>Distress when others stare</td>
<td>0.3150</td>
<td>0.6953</td>
<td>0.3947</td>
<td></td>
</tr>
<tr>
<td>Distress when others make remarks</td>
<td>0.7806</td>
<td>0.3663</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distress when others ask about the 'feature'</td>
<td>0.7967</td>
<td>0.2818</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distress when seen in a particular view</td>
<td>0.6911</td>
<td></td>
<td>0.4648</td>
<td></td>
</tr>
<tr>
<td>Distress when 'feature' seen in a mirror/window</td>
<td>0.4636</td>
<td>0.5474</td>
<td>0.3269</td>
<td>0.3785</td>
</tr>
<tr>
<td>Distress when meeting strangers</td>
<td>0.6151</td>
<td></td>
<td>0.5235</td>
<td></td>
</tr>
<tr>
<td>Distress when not being able to go to social events</td>
<td>0.5600</td>
<td></td>
<td>0.5119</td>
<td></td>
</tr>
<tr>
<td>How confident do you feel?</td>
<td>0.5488</td>
<td></td>
<td>0.5848</td>
<td></td>
</tr>
<tr>
<td>How secure do you feel?</td>
<td>0.6321</td>
<td></td>
<td>0.5572</td>
<td></td>
</tr>
<tr>
<td>How cheerful do you feel?</td>
<td>0.7485</td>
<td></td>
<td>0.3814</td>
<td></td>
</tr>
<tr>
<td>How normal do you feel?</td>
<td>0.6333</td>
<td></td>
<td>0.4961</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Blanks represent absolute loading < 0.3
Uniqueness = 1-communality.
* The values for the items included in each of the factors are shown in bold underneath the heading for that factor.
* General Self-Consciousness of Appearance
* Social Self-Consciousness of Appearance
* Negative Self Concept
4-3- Predictors of irrational beliefs among burn patients

4-3-1- Socio-demographic characteristics of participants

The participants consisted of 329 burn patients (183 men and 145 women) with a mean age of 32 (SD= 6.7) and an age range of 16 to 63. Most of the participants (n=178) were educated at the high school level (from 7 to 12 years of education); while 14 (4.3%) participants were illiterate and 70 (39.5%) had received academic education. The majority, n= 271 (82.4 %) of patients lived in urban areas. Most of the patients, n= 206 (62.6 %) were married. Moreover, 90 (27.4 %) of participants was housekeeper and 33 (10.1 %) had governmental job. The median percentage of (TBSA) body area burned in this group was 16%, with a range of 7% to 33%.

Table 4-5 illustrates the socio-demographic characteristics of the participants.

The mean score of SITB was 35.08 (SD: 16.).

4-3-2- Bivariate and multivariate results

The results of T tests showed that socially and sensitive relative exposed, marital status and urbanity had significant relationships with irrational thoughts. (P< 0.05)

Moreover, one way analysis of variance revealed significant relationship between irrational thoughts and independents variables like age group, etiology of burning and intent of injury. (P< 0.05)

A significant relationship was seen between geographical areas and irrational thoughts based on Kruksal Wallis test. (P< 0.05)

Table 4-6 summarizes statistics for the linear regression model predicting irrational thoughts among burn patients by the SITB. Using forward regression, gender, marital status, geographical areas, etiology of burning, socially and sensitive relative exposed, and intent of injury were significant predictors of the SITB. The models predicted 15.5 percent (p < 0.001) of irrational thoughts.
Table 4-5: socio-demographic characteristics of the participants.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age groups</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;25</td>
<td>95</td>
<td>28.88</td>
</tr>
<tr>
<td>25-50</td>
<td>216</td>
<td>65.65</td>
</tr>
<tr>
<td>&gt;50</td>
<td>18</td>
<td>5.47</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>145</td>
<td>44.07</td>
</tr>
<tr>
<td>Male</td>
<td>184</td>
<td>55.93</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>123</td>
<td>37.39</td>
</tr>
<tr>
<td>Married</td>
<td>206</td>
<td>62.61</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonacademic</td>
<td>254</td>
<td>77.44</td>
</tr>
<tr>
<td>Academic</td>
<td>74</td>
<td>22.56</td>
</tr>
<tr>
<td><strong>Type of resident</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>271</td>
<td>82.37</td>
</tr>
<tr>
<td>Rural</td>
<td>58</td>
<td>17.63</td>
</tr>
<tr>
<td><strong>Geographical areas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fars</td>
<td>179</td>
<td>54.41</td>
</tr>
<tr>
<td>Turkish</td>
<td>76</td>
<td>23.10</td>
</tr>
<tr>
<td>Kurd</td>
<td>51</td>
<td>15.50</td>
</tr>
<tr>
<td>Other cultures</td>
<td>23</td>
<td>6.99</td>
</tr>
<tr>
<td><strong>Percent of burning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;= 20</td>
<td>184</td>
<td>61.74</td>
</tr>
<tr>
<td>20- 40</td>
<td>66</td>
<td>22.15</td>
</tr>
<tr>
<td>&gt;= 40</td>
<td>48</td>
<td>16.11</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic burn</td>
<td>204</td>
<td>62.20</td>
</tr>
<tr>
<td>Occupational burn</td>
<td>82</td>
<td>25</td>
</tr>
<tr>
<td>School</td>
<td>1</td>
<td>0.30</td>
</tr>
<tr>
<td>Others</td>
<td>41</td>
<td>12.50</td>
</tr>
<tr>
<td><strong>Duration of burning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;15 day</td>
<td>184</td>
<td>56.44</td>
</tr>
<tr>
<td>15- 30 day</td>
<td>37</td>
<td>11.35</td>
</tr>
<tr>
<td>30- 90 day</td>
<td>32</td>
<td>9.82</td>
</tr>
<tr>
<td>90- 730 day</td>
<td>35</td>
<td>10.74</td>
</tr>
<tr>
<td>&gt;730 day</td>
<td>38</td>
<td>11.66</td>
</tr>
<tr>
<td><strong>Intent of burning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unintentionally</td>
<td>305</td>
<td>92.99</td>
</tr>
<tr>
<td>Intentionally</td>
<td>23</td>
<td>7.01</td>
</tr>
<tr>
<td><strong>Etiology of burning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame</td>
<td>189</td>
<td>58.15</td>
</tr>
<tr>
<td>Non-flame</td>
<td>136</td>
<td>41.85</td>
</tr>
</tbody>
</table>
Table 4-6: Results of multivariate linear regression model predicting irrational thoughts among burned patients by the SITB

<table>
<thead>
<tr>
<th>Predictors</th>
<th>b coefficient</th>
<th>Confidence Interval</th>
<th>P value</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower band</td>
<td>Upper band</td>
<td></td>
</tr>
<tr>
<td>Geographical areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkish</td>
<td>Referent</td>
<td>6.20508</td>
<td>1.32766</td>
<td>11.0825</td>
</tr>
<tr>
<td>Fars</td>
<td>6.27139</td>
<td>.0192165</td>
<td>12.52342</td>
<td>0.049</td>
</tr>
<tr>
<td>Kurd</td>
<td>12.61245</td>
<td>4.117201</td>
<td>21.10769</td>
<td>0.004</td>
</tr>
<tr>
<td>Other cultures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etiology of burning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-flame Flame</td>
<td>Referent</td>
<td>4.635379</td>
<td>.8448215</td>
<td>8.425937</td>
</tr>
<tr>
<td>Flame</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>Referent</td>
<td>7.929911</td>
<td>3.843267</td>
<td>12.01656</td>
</tr>
<tr>
<td>Single</td>
<td>7.929911</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intent of injury</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unintentional</td>
<td>Referent</td>
<td>10.6247</td>
<td>2.210816</td>
<td>19.03858</td>
</tr>
<tr>
<td>Intentional</td>
<td>10.6247</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>Referent</td>
<td>4.868111</td>
<td>.8861384</td>
<td>8.850083</td>
</tr>
<tr>
<td>Female</td>
<td>4.868111</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body location burned*</td>
<td>13.31029</td>
<td>3.383012</td>
<td>23.23757</td>
<td>0.009</td>
</tr>
<tr>
<td>Constant</td>
<td>9.039905</td>
<td>-2.071247</td>
<td>20.15106</td>
<td>0.110</td>
</tr>
</tbody>
</table>

* Burns on body parts generally exposed in social environment (such as faces and hands) or parts culturally perceived as sensitive areas of body.

\[ R^2 = 15.5 \% \ (p < 0.001) \]
Chapter 5:
Discussion & Conclusion
5-1- Discussion

5-1-1- Development and psychometrics properties of SITB
The present study developed and evaluated psychometric properties of Scale for Irrational Thought after Burning (SITB). This is the first psychological scale measuring irrational beliefs in burned patients with disfigurements, to the authors’ knowledge. Our findings demonstrated that the SITB has high internal consistency and high test–retest reliability. The generally high degree of internal consistency shown by the scale and each subscale indicates that this scale can be generalizable to a larger population.

The SITB development and testing process illustrated the challenges and rewards of developing new ways to measure irrational beliefs in a population of burn victims with disfigurements. The main driver for this study was the lack of information about the relationship between burn disfigurement and irrational thinking at the start of the study; the expert panel found that it couldn’t find any adequate theoretical base to drive the development of items to be included in the scale. The first draft of the scale thus contained large numbers of items, all of which had to be discussed in terms of content validity. While the initial set of 83 items could certainly be considered comprehensive in addressing sociodemographic characteristics, and psychological reactions in the aftermath of severe and-or disfiguring burn injuries, the sheer number of items incurred increased expenses for administration of the scale, and increased the difficulty of interpretation of the scale.

Therefore, the authors computed relevance and clarity for Content Validity Index (CVI) and Kappa modified. In this regard, every item the scale was judged on appropriateness or representativeness to the construct being studied, and was revised, if necessary, for grammar and wording. Chance agreement among relevant items was adjusted by modified Kappa (69, 70).

Exploratory factor analysis was used to determine factor structure for the revised instrument because the researchers of this study didn’t have a hypothesis about the
number or nature of the factors measured by the tests. Maximum Likelihood was carried out to extract factors. This approach was the best choice because “it allows for the computation of a wide range of indexes of the goodness of fit of the model (and) permits statistical significance testing of factor loadings and correlations among factors and the computation of confidence intervals.” (74) Our model was accepted in terms of uniqueness.

In spite of some overlap for three of the 14 items on the revised scale (items 2, 3 and 6), the authors assigned them to factor 1 because of their concepts.

The SITB was developed in a period where other measurements related to irrational beliefs were also being developed. However, most of these scales focus on irrational thinking related to mental health conditions, including depression, addiction, and gambling, or health conditions, including obesity and postpartum depression (19).

Few, if any scales related to irrational thinking, have been developed for victims of disfiguring injuries. These injuries, and more specifically, injuries from burns that result in facial and body disfigurement, are those that can generate profound shame, stigmatization, isolation, negative impact on sexuality, body image and quality of life. These feelings are often likely to extend to irrational beliefs which are predictor of psychological problems, and new measurements are need to help identify at-risk patients, in order to provide effective treatment (11, 12). It’s important to address these irrational beliefs, as effective treatment can help burn victims achieve better mental health, and better quality of life, as a result.

While the need for earlier detection and management of irrational beliefs in disfigured burn victims will probably not be disputed, the development of any new scale to measure irrational beliefs must also result in discussions on generalizability to other populations, and the utility of the scale in helping people to get appropriate care.
Could SITB be used outside its country of origin, with other groups of disfigured burn victims? And, what benefits can SITB provide to disfigured burn victims and their treatment teams?

In general, the answer to the first question, about generalizability of the scale, is probably yes. The wording on the scale items measuring sexual responsiveness in partners, specifically items 1, 8, and 9, will probably require adjustment, based on the laws and cultures of different countries. The scale was developed within the context of a specific culture, and the wording on the scale was based on traditional Muslim values, which clearly state that sexual relationships are to be confined to married partners. Almost all of the items measure aspects of post-burn disfigurement that are likely to be universal—relationships with potential or current sexual partners, relationships with family members, and perceptions of how one’s appearance is measured by strangers. One item, number 7, asks single respondents to measure their agreement with the statement that family members of a potential partner will refuse to approve a marriage based on the respondent’s disfigurement. This item is probably only applicable to cultures where family involvement in marriage decisions is considered important, and may need to be omitted, or reworded, for use in other cultures.

Consequently, this scale is applicable in study population and similar setting. In this respect, the scale was designed as following:

The authors didn’t set any criteria for the percent of burn, because we decided to get a representative sample.

Although severity and size of burn injuries do not appear to directly relate to depression and anxiety, the individual’s perceptions of burns or body image play a strong role in post-injury mental health (13, 75). Therefore, participants were patients with burn scar in any part of their body. They concluded that some of the scars which cover with cloths at the outside of home are visible at home or party. However the authors had worried about the adverse effect of developed questions because of their
negative concept, during the treatment the patients need to expose with following problems and talk about their feeling (75). In spite of that, the authors set some of the questions with positive concept and recoded them in the analysis.

Words like ‘all or always’ have been used for developing the items. Some of the beliefs aren’t irrational generally, but they have altered to irrational beliefs when they were attributed to all persons or situations.

On the other hand, the purpose of the present scale is to use it for patients with varies cultures. In order to adopt cultural situations and apply the scale for patients with various cultures, the authors executed the stages of study such as development processes, content validity and construct validity at Tehran, Tabriz and Kermanshah provinces of Iran.

The answer to question, about the benefits that the scale can provide to disfigured burn victims and their care providers, is still under investigation. As far as we know, this is the first such scale to be developed, and the main driver behind its development was the need to ensure that victims who are suffering irrational beliefs receive timely and appropriate care. SITB may also be used along with other psychological assessment tools to investigate other co-morbid psychological conditions such as personality attributes of the irrational thoughts and their interrelationships (76).

Also, Derriford Appearance Scale59 was selected for assessing convergent validity based on reasons mentioned below. In Iran, a majority of the studies have been conducted to find out psychological distress and dysfunction among burned patients, but we did not find any studies that had localized a questionnaire in conjunction with Iran’s cultural adaptation specifically to disfigured burned patients.

Although there are scales that measure psychological problems related to aesthetic problems or body image dissatisfaction, they did not have overall consideration on problems related to appearance. Table 5-1 illustrated various scales developed for assessing appearance in general and related scales for burns.
Table 5-1: various scales developed for assessing appearance in general and related scales for burns

<table>
<thead>
<tr>
<th>Authors</th>
<th>Scale name</th>
<th>Year</th>
<th>Source language</th>
<th>Number of items</th>
<th>Applied population</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carr et al (77)</td>
<td>Derriford Appearance Scale 59</td>
<td>2000</td>
<td>English</td>
<td>59</td>
<td>Clinical and nonclinical people, patients on plastic surgery waiting list</td>
<td>Developed for people with problem of appearance due to trauma, congenital malformation and disease</td>
</tr>
<tr>
<td>Carr et al (79)</td>
<td>Derriford Appearance Scale 24</td>
<td>2005</td>
<td>English</td>
<td>24</td>
<td>Clinical (out-patients and in-patients) and general population sample</td>
<td>Developed for people with problem of appearance due to trauma, congenital malformation and disease</td>
</tr>
<tr>
<td>Pishnamazi et al (80)</td>
<td>Burn Specific Health Scale-brief</td>
<td>2013</td>
<td>English</td>
<td>40</td>
<td>Burned patients</td>
<td></td>
</tr>
<tr>
<td>Lawrence et al (78)</td>
<td>Satisfaction With Appearance</td>
<td>1998</td>
<td>English</td>
<td>14</td>
<td>Burn patients requiring hospitalization</td>
<td></td>
</tr>
<tr>
<td>Lawrence et al (81)</td>
<td>Social Comfort Questionnaire</td>
<td>2006</td>
<td>English</td>
<td></td>
<td>Burned patients</td>
<td></td>
</tr>
<tr>
<td>Lawrence et al (81)</td>
<td>Perceived Stigmatization Questionnaire</td>
<td>2006</td>
<td>English</td>
<td>38</td>
<td>Burned patients</td>
<td></td>
</tr>
<tr>
<td>Frederick et al (82)</td>
<td>Body Part Satisfaction Scale</td>
<td>2014</td>
<td>English</td>
<td></td>
<td>General population</td>
<td></td>
</tr>
<tr>
<td>Rosen et al (83)</td>
<td>Body Image Avoidance Questionnaire</td>
<td>1991</td>
<td>English</td>
<td>19</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Cash et al (84)</td>
<td>Body image Quality Of Life Inventory</td>
<td>1991</td>
<td>English</td>
<td>19</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Cash et al (85)</td>
<td>Body Image Disturbance Questionnaire</td>
<td>2004</td>
<td>English</td>
<td>7</td>
<td>General population</td>
<td></td>
</tr>
<tr>
<td>Cash et al (86)</td>
<td>Situational Inventory of Body Image Dysphoria</td>
<td>2002</td>
<td>English</td>
<td>48</td>
<td>General population</td>
<td></td>
</tr>
<tr>
<td>Brown et al (87)</td>
<td>Body Self-Relations Questionnaire</td>
<td>1990</td>
<td>English</td>
<td>54</td>
<td>General population</td>
<td></td>
</tr>
<tr>
<td>Cash et al (88)</td>
<td>Appearance Schemas Inventory</td>
<td>1996</td>
<td>English</td>
<td>14</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Rosen et al (89)</td>
<td>Body Dysmorphic Disorder Examination</td>
<td>1995</td>
<td>English</td>
<td></td>
<td>Body Dismorphic Patients (BDD), clinical and non-clinical sample</td>
<td></td>
</tr>
</tbody>
</table>
The Derriford Appearance Scale provided an effective measure and description of the difficulties associated with living with a problem of appearance. Although DAS59 had been developed to measure psychological distress and dysfunction due to disfigurement, deformities, and aesthetic problems of appearance, we found high correlation between SITB and DAS59 which suggest that these scales may be a valuable instrument for research on social-behavioral burn.

5-1-2- Determining predictors of irrational beliefs among burned patients

The objective of this section of the study was to determine predictors of irrational beliefs among patients with burn injuries in Iran. To our knowledge, this study is the first of its kind in Iran.

In a multivariate model, the authors found that female had higher scores of irrational thoughts, compared to males. Although specific studies about irrational beliefs among patients with burn injuries have not been found in the international literature, previous studies of other populations are consistent with our findings, as they have shown that women experience higher levels of irrational beliefs compared to men (90). This may be based on social conditioning, as research shows that females make greater investments in their appearance and experience more negative body-image evaluations than men (91-93). Research also shows that factors related to appearance and attractiveness, are more important to females than males (94).

Research also shows that girls have higher scores on depressive symptoms caused by more negative automatic thoughts and that girls experience more negative orientation toward social problems and concern about how they are evaluated by others, compared to boys (95-98).

In the present study, we found that those with burns on body parts generally exposed in social environment (such as faces and hands) or parts culturally perceived as sensitive areas of body have higher levels of irrational thinking. This is corroborated by another study that reported a linear relationship between psychological adjustment and subjective severity of both specific body sites and overall appearance. This study
reported that poorer psychological adjustment was related to greater subjectively perceived severity, particularly in injuries resulting in disfigurement (99). On the other hand, other research identifies a stronger relationship between symptoms of depression and the number of burn sites (multiple burn sites) on a person, while burn location was not considered significant (100). This may be attributed to correlation between number of burn sites and location. Number of burn sites is a surrogate of extent (size) of burning. Although one study of patients with facial burns and burns to other body areas failed to show a significant association with depression in the study group (due to the small number of respondents who met the criteria for facial burns) (100), other studies of burn survivors show that burns to sensitive body parts are significantly associated with psychological outcomes like depression, anxiety and PTSD (10, 101-106).

In the present study, patients with intentional burn-related injuries had on average 10.6 points higher scores for irrational thinking compared to unintentional burn-related injuries. Self-immolation has consistently been reported to have higher rates in low and middle income countries (LMICs). Depression, diagnoses of adjustment disorders and PTSD are reported to be common psychiatric risk factors for self-immolation in Iran (107, 108).

Patients with flame burns, had higher score on irrational thoughts, compared to patients with burns caused by other sources.

In view of the fact that flame burns are far more common in the developing countries compared to other types of burn injuries, the present study shows that there is a need to address the issue of irrational thinking for burn survivors who live in countries where this type of burn is common (109). Several factors might contribute to the higher rates for flame burns, including; cultural issues such as using flammable fuel for heating, cooking; and the custom of wearing loose fitting clothing (108, 110, 111), Socioeconomic status and psychological and personal characteristics, may
provide other explanations. These variables haven’t been measured in this study and should be assessed in the future studies.

The present study’s analyses showed that single patients had, on average scores that were almost 8 points higher, for irrational thoughts compared married respondents. While married respondents had already established relationships with spouses, single individuals might be worried about their future life and whether they can find suitable mates, and how a potential spouse would react to disfigurement. In contrast, married respondents reported receiving support and sympathy from their spouses after burn injuries; which reduced feelings of loneliness.

The present study also shows that patients who were Kurd, Fars or members of other cultures had higher scores of irrational thoughts, compared to the group of Turkish respondents. This is in keeping with another study, that found that race (white majority and minority groups) was a weak predictor for PTSD (112).

Variables included in the multivariate regression model could predict 15.5% of the variance of irrational thoughts scores. This means that it is difficult to predict irrational thoughts just based on variables such as marital status, gender and so on. Moreover, prediction of irrational thoughts requires more exploration to all aspects of patients’ lives from past experiences, through the lived experience of surviving a burn injury. There are other factors affecting irrational thinking such as cultural issues, genetic predictors, socioeconomic status and psychological predictors such as personality status that haven’t been thoroughly measured in this study. Considering to these factors could improve the prediction of irrational thoughts in burn survivors and should be considered in future research.
5-2- Conclusion

The results indicate that SITB reflects acceptable levels of validity and reliability which may be used to assess irrational thoughts among Iranian patients. Moreover, the testing populations of both patients with burned faces and patients with other burned body parts indicates that the scale is applicable for patients burn disfigurements on any part of their bodies. According to the findings, a significant relationship was seen between irrational thoughts and demographic characteristics. It confirmed that SITB is a valid scale.

5-3- Recommendations

Since this was the first study of this kind, uniqueness of the scale was not excellent. In order to improve construct of the scale, it may need to test SITB in other societies and modify it if needed. The authors suggest that researchers in other countries, and other cultures, consider testing this scale in order to develop a body of knowledge that helps disfigured burn victims who are suffering from irrational thoughts, to obtain early treatment, and improved quality of life.

5-4- Limitations and positive aspects of the present study

-We didn’t have comprehensive psychiatry and psychological assessment.

-Acceptable context variability due to execute stages of the study at 3 locations (Tehran, Tabriz and Kermanshah provinces of Iran).

-Scale development novelty in the field of injury research
References
5-4- References:

33. Jones RG. A factored measure of Ellis’ irrational belief system with personality and maladjustment correlates: Texas Tech University; 1968.
57. Macavei B. DYSFUNCTIONAL ATTITUDES SCALE, FORM A; NORMS FOR THE ROMANIAN POPULATION. Journal of Cognitive & Behavioral Psychotherapies. 2006;6(2).
Appendices
<table>
<thead>
<tr>
<th>Items</th>
<th>Completely disagree N(%)</th>
<th>Disagree N(%)</th>
<th>No idea N(%)</th>
<th>Agree N(%)</th>
<th>Completely disagree N(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- My (future) partner/ spouse will be never be sexually responsive to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2- I will be ashamed of my appearance whenever my (future) partner/ spouse looks at my face.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3- When I’m with my friends, I will be always ashamed of my appearance because of my burn injuries.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4- I can no longer be an appropriate partner for my spouse or find my perfect partner (because of my burn injuries).</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>5- I will undoubtedly succeed in my workplace and home (life).</td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>6- My (future) partner/spouse will always be ashamed to accompany me to parties or public places.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7- <strong>With married respondents:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My partner/spouse’s family will definitely try to persuade him/her to get divorced due to my appearance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>For single respondents:</strong></td>
<td>I am sure that the families of potential partners/spouse would never agree to their relative marrying me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8- My (future) partner/spouse and I will be able to have satisfying sexual relations irrespective of my burnt face and appearance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. My (future) partner/spouse will avoid having sex with me because of my appearance.

10. My marriage will be based on my partner’s pity for me.

11. People will look at me with pity from now on.

12. I have no doubt that my appearance will be disgusting to my family.

13. I have no doubt that my appearance will be disgusting to my friends and relatives.

14. I have no doubt that my appearance will be disgusting to strangers who see me.
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Tania Olliver

Editorial Manager, Dove Medical Press Ltd
1- همسرم (همسر آینده ام) برای همیشه از نظر رفتار جنسی با من سرد خواهد شد.

2- هر موقع همسرم (همسر آینده ام) به صورت (ظاهر) نگاه کند خجالت خواهم کشفید.

3- من به خاطر قیافه و ظاهر سوخته ام یک عمر بیش دوستانم خجالت می کشم.

4- دیگر نمی توانم شریک زندگی مناسبی برای همسرم باشم یا شریک زندگی مناسب خود را پیدا کنم.

5- بدون شک من در محیط کار و زندگی ام بهترین خواهم بود.

6- حتی همسرم (همسر آینده ام) خجالت خواهد کشفید که با من در مهمانی ها و مکان‌های عمومی حاضر شود.

7- (در صورت مجرد بودن) مطمئنم کسی راضی نمی شود که من با فرزندش ازدواج کنم.

(در صورت مناهل شدن) بدون شک خانواده همسرم از او می خواهند از من جدا شود.
8- من و همسرم(همسر آینده ام) خواهیم توانست بدون توجه به چهره و ظاهر سوخته ام، رابطه جنسی خوب و ارضا کننده ای داشته باشیم.

9- به خاطر ظاهر سوخته من، همسرم (همسر آینده ام) از رابطه جنسی با من متنفر خواهد شد.

10- تداوم یا شروع زندگی مشترک براساس ترحم خواهد بود.

11- از این به بعد همه با ترحم به من نگاه می کنند.

12- شکی ندارم که دیدن چهره (ظاهر) من برای خانواده ام چندش آور خواهد بود.

13- شکی ندارم که دیدن چهره (ظاهر) من برای دوستان و آشناانم نیز چندش آور خواهد بود.

14- شکی ندارم که دیدن چهره (ظاهر) من برای مردم کوچه و بازار نیز چندش آور خواهد بود.
چکیده
مقدمه
قربانیان حادثه سوختگی بیشتر از بیماران دیگر مستعد ابتلا به اختلالات روان‌شناختی می‌باشند. تفکرات غیرمنطقی، یکی از مشکلات ناشی از بدهکاری به دلیل سوختگی می‌باشد که باعث مشکلات روان‌شناختی، رفتارهای نامناسب، افسردگی و اختلال در ارتباط می‌شوند. بنابراین، هدف از مطالعه حاضر طراحی و ارژیابی ابزاری جهت سنجه تفکرات غیرمنطقی در بیماران دچار سوختگی بود.

روش‌ها
مطالعه حاضر یک مطالعه‌روان‌سنجی بود. جمعیت هدف اصلی در این مطالعه شامل زنین و مردان دچار سوختگی، سنین ۱۴ سال و بالاتر شهروی تهران، تبریز و کرمانشاه در طی یک سال از خرداد سال ۱۳۹۲ و ۹۴ بود. طراحی پرسشنامه در چندین مرحله شامل جستجوی ابزارهای مشابه یا مرتبط، مصاحبه با متخصصان و بیماران انجام شد. از کیا‌ها تصدیق شده براساس مناسبت و شفافیت برای ارزیابی روابطی محتوای استفاده شد. برای برسی پایایی ابزار از آلفا کرونباخ و ثبات آزمون- بازآزمون استفاده شد. برای تعیین اعتبار سازه‌ای از روش تحلیل عاملی اکتشافی با روش حداکثر درست نمایی و چرخش واریانس استفاده شد.

نتایج
کیا‌ها تصدیق شده به ترتیب ۲۰/۸۰ و ۹۱/۰۰ برای مناسبت و شفافیت محاسبه شد. آلفا کرونباخ برای کل پرسشنامه و حیطه‌های ۱ (خود پذیرشی) و ۲ (چندش آوری و ترحم) به ترتیب ۸۹/۰۰ و ۸۹/۰۰ و
به دست آمد، همچنین همبستگی درون رده‌ای برای کل پرسشنامه قابل قبول بود. تحلیل

عامل اکتشافی منجر به استخراج ۲ عامل با ۱۴ آیتم شد.

عامل اول "خود پذیرشی" شامل ۱۰ آیتم با ارزش ویژه ۴/۰/۵/۰ بود که ۶۰/۰٪ از واریانس کل توسط

آن قابل تبیین می‌باشد و عامل دوم "چندش آوری و ترحم" شامل ۴ آیتم با ارزش ویژه ۵۲/۳ بود

که ۴۰/۰٪ از واریانس کل توسط آن قابل تبیین می‌باشد.

نتیجه‌گیری

نتایج نشان می‌دهد که سطوح قابل قبولی از روایی و پایایی را منعکس می‌کند که می‌تواند SITB برای سنجه تفکرات غیرمنطقی در بین بیماران دچار سوختگی ایرانی مورد استفاده قرار گیرد. همچنین بقارگیری SITB برای بیماران دارای زخم سوختگی در صورت و هم بیماران دارای زخم سوختگی در نواحی دیگری از بدن شان نشان دهنده کاربرد پرسشنامه طراحی شده برای بیماران

دارای بدن شکلی در هر قسمتی از بدن شان می‌باشد. از طرف دیگر، توجه به تفکرات غیرمنطقی و

غیربالگری بیماران دچار سوختگی به منظور درمان به موقع و بهبود کیفیت زندگی را پیشنهاد می‌کنیم.
1- مقدمه و بیان مسئله

حادثه از دیدگاه سازمان بهداشت جهانی، رویدادی ناگهانی و ترکم می‌کند نشده است که موجب آسب (تخربی شیمیایی و کیفی) قابل تشخیص در بدن انسان می‌شود و معمولاً در جریان حمل و نقل، محل کار، اماکن آموزشی و یا مراکز تفریحی رخ می‌دهد. سوختگی‌های اعم از تخریب کامل یا بخشی از بوسله انسان حطری حرارتی از شعله، بخار و مایعات گرم، تماس با اشیاء داغ، انفجار و چربی الکتریکی می‌باشد. صدمات به راهای هواپیمایی یا ارگان‌های دیگر به‌دست انجام شده بوسله مکانیسم‌های مشابه همچنین به عنوان سوختگی تعیین شده است. صدمات ناشی از سوختگی به صورت سنتی بوسله درصد کل سطح سوخته بدون (% TBSA) که تحت تأثیر قرار گرفته، تعیین شده است.

حوادث سوختگی یکی از مخرب‌ترین حوادث است و به عنوان یکی از مشکلات اساسی بهداشت عمومی جهان به شمار می‌رود. سوختگی‌ها چهارمین نوع آسب در سراسر جهان بعد از حوادث ترافیکی، سقوط و خشونت‌های میان فردی و یا نزدیک‌های علت منجر شونده به بار بیماری محسوب می‌شوند. بطوریکه سالانه بیش از 400 هزار نفر به دلیل حوادث سوختگی جان خود را از دست می‌دهند و سالانه 10 میلیون از سال‌های زندگی به صورت تطبیق یافته با ناتوانی از دست می‌رود. تقییاً 90% همه سوختگی‌ها و بیش از 95% همه مрг‌های ناشی از سوختگی در کشورهای بی‌درآمد کم و متوسط رخ می‌دهد. تخمین زده می‌شود که سوختگی‌های مرتبط با آتش در کشورهای متوسط و کم درآمد شش‌مین علت مرگ کودکان 14-5 ساله و هشتمین علت مرگ در بین افراد
29-15 ساله می‌باشد. بررسی حوادث در ایران نشان می‌دهد که سوختگی یکی از رایج‌ترین
صدمات غیرعمدی مربوط به منزل می‌باشد که مسئول ۵۰% صدمات در همه سنین است.

در سال‌های اخیر به دلیل بی‌طرفی‌های پزشکی میزان بنف افراد با جراحت سوختگی بطور
معنی‌داری افزایش یافته است. در نتیجه بیماران با مشکلاتی از جمله: دوره‌های دمایی طولانی و
دردناک، بستری شدن در بیمارستان، ملزم انجام چندین عمل جراحی، محدودیت‌های پزشکی،
مشکلات همراه با استرس بعد از جراحت شامل اضطراب، افسردگی و غیره مواجه هستند.

حوادث سوختگی همچنین یک علت منجر شونده به ناتوانی و تغییر شکل بدن می‌باشد که
تاثیرات اقتصادی، روانشناختی و اجتماعی بر افراد بیمار و خانواده‌هایشان دارد.

تغییرات فیزیکی آشکارترین تاثیرات صدمات سوختگی می‌باشد. صدمات سوختگی منجر به
پیامدهای طولانی مدت برای بیماران‌گان می‌شود مانند: ناتوانی، چاپ زخم‌های دائمی، تغییر رنگ
پوست و بدکلی، از دست دادن انگشتان، گوش یا مو.

سوختگی‌ها اغلب منجر به علل فیزیکی دامنی می‌شوند که در مطالعه حاضر، به عنوان تاثیرات
زیبایشناختی به جا مانده بوسیله صدمات سوختگی یا درمان شامل: نشانه، جوش، اثر زخم یا
تغییرات آشکار در رنگ و ظاهر پوست به علت بی‌پوشه‌ی پوست، و عدم قرنیه‌گی یا از کارافتادگی
صورت یا قسمت‌هایی از بدن تعیین شده است. چنین حوادثی همچنین منجر به نقاصل ملکرده
مانند تاثیرات التهاب مفصل بر دست شخص یا از دست دادن چشم و غیره می‌شود.
مفهوم ب بشأن شکلی شامل یک عکس عملي بوسیله تماشاگران (هم قربانیان سوختگی و هم دیگران) می بایست که به تأثیرات بعد از حوادث سوختگی به عنوان یک عامل ناخواسته و منجر کننده توجه می کنند.

در حالی که اثرات ثانویه فیزیکی صدمات سوختگی اغلب آشکار هستند، تأثیرات روانشناسی چنین حوادثی شامل برشانی و افسردگی نیز به همان اندازه جدی می باشد. افراد سوختگی که بخشی از آنها قابل توجه می باشند، افراد سوختگی که دچار بخشکی شدهاند بوزه در صورت، با 3 مسئله روانشناسی اجتماعی وابسته به هم مواجه هستند.

اول از همه، این بیماران بارها اضطراب و برشانی مربوط به مراقبتی بررسیکی را تجربه کرده‌اند. آنها نگران فرآیندهای درمانی‌شن هستند که اغلب بسیار دردناک می باشد، مسائل درون فردی به‌طور مکرر با عزت نفس، احساس هویت، درک خودبپردازه و رفاه عاطفی مواجه هستند که بوسیله تغییرات ظاهر تحت تأثیر قرار می گیرند.

مسائل بین فردی اغلب دیده شدهاند که با تأثیری که اشخاص بخشکی شده در ارتباط با دیگران تجربه کرده‌اند مرتبط می باشند. افرادی که براهمانه سوختگی‌های بخشکی کننده هستند بطور ثابت با تعامل‌های اجتماعی منفی به دلیل ظاهرشان روی می‌شوند مانند: نگاه‌های خبره شده مردم، مورد اجتناب قرار گرفتن، سوالات کنجکاوی مردم، منع شدن از حضور در محیط‌های
عمومی (مانند رستوران، مراکز خرید، مراکز تفریحی و غیره)، طرف شدن توسط آشناپان و همسر، و گوش شیر شدن، حفظ و ناشی‌شته بودن.

طبق گزارش سازمان جهانی بهداشت شیوع اختلالات رویی بین ۱۸ تا ۳۴ درصد است. بیماران دچار سوختگی بیشتر از بیماران دیگر مستعد ابتلا به اختلالات رویی هستند. مشکلات روانتشختی در قربانیان، بر کیفیت زندگی و همچنین همکاری آنها در جدل‌های بازتوانی تاثیر می‌گذارد.

با توجه به موارد گفته شده لازم است مستندان بخش درمان علاوه بر تمرکز بر موضع‌های درمانی به مشکلات روانتشختی بیماران سوخته نیز توجه کنند، به دلیل اینکه مشکلات روانتشختی ناشی از محدودیت حرکتی، تغییرات در ظاهر و پوست دیرتر آشکار می‌شوند. بیماران رنجیده از حادثه سوختگی ممکن است شغل خود را از دست بدهند و ملزم به پرداخت هزینه‌ها باز پرداخت درمان باشند و همچنین از نداشتن ظاهر و چهره مناسب رنج برند.

پطور معمول تصویر می‌شود بیماران دچار سوختگی بستری در بیمارستان، سطویی از افسردگی را نجره خواهند کرد. طبق مطالعه انجام شده توسط Wiechman, S., et al., ۵۴ درصد از بیماران ۱ ماه بعد از مرخص شدن از بیمارستان نشانه‌های متوسط تا شدید افسردگی را نشان دادند و ۴۳ درصد از بیماران ۲ سال بعد مبتلا به افسردگی متوسط تا شدید شدند. در این مطالعه علائم افسردگی در زنان بیشتر از مردان بود.

در مطالعه‌های که توسط Hoogewerf, C.J., et al., انجام شده، نتایج نشان دادند که صورت، سر و گردن از مکان‌های رایج سوختگی هستند که میزان‌های شیوع متغیرت از ۶ تا ۶۰ درصد دارند و منجر به کناره‌گیری بیماران از جامعه و خانواده می‌شوند. مطالعات پیشنهاد می‌کند که شدت و اندام‌های
سخنگی بطور مستقیم با درجه اضطراب و پریشانی مرتبط نیست. اما با اظهار و درک فرد از شکل بدی (BODY IMAGE) در ارتباط است. شکل بدن بخصوص برای زنان اهمیت زیادی دارد. در مطالعه‌ای که توسط Thombs, B.D., et al مطرح شده، نتایج نشان دادند که شیوع نشانه‌های افسردهگی انجام ۴۶٪ بود. بطوریکه بعد از تطیف زنان و مردان از نظر درصد و نسبت سخنگی شروع شیوع در زنان بیشتر بود.

یکی دیگر از عوارض تغییر شکل بدن و چهره ناشی از سخنگی، تفکرات غیرمنطقی است که به صورت "فرآیندهای استدلالی کلامی غیرمنطقی بر واقعیت که بوسیله واقعیت تفسیر شده از طریق هیجانات عاطفی رخ می‌دهد" تعیین شده است. از بین محققان و روانشناسانی که ابزارهایی در تئوری های متفاوتی Albe Ellis, Aaron Beck درباره طبیعت تفکرات غیرمنطقی در ایجاد اختلالات روان‌شناختی دانستند. طبق نظریه‌هایهم‌مرنین علت اصلی رفتارهای متناقض و نامناسب حوادث و رخدادها نیستند بلکه تفکرات افراد درباره آنها می‌باشد. همچنین طبق نظریه‌های اختلالات بسیاری بوسیله افکار منفی و شیوه‌های تفکری که افراد از خودشان، حوادث و آینده شان دارند، ایجاد می‌شود. منشور از تفکرات غیرمنطقی آن دسته‌ای از اروتیک و هنگرها است که ممکن است افراد در زندگی فراگیرند و به طور اساسی واقع، گران‌انداز و متساند نباید. این عقاید غیر منطقی می‌تواند به ایجاد مشکلات روان‌شناختی و هیجانی منجر شود. تفکرات غیرمنطقی در سیاست به موارد باعث ظهور و تداوم افسردهگی، رفتارهای غیرعادی، روان رنجوری، اختلال ارتباطی و کاهش عملکردی روان‌شناختی و عاطفی می‌شود. همچنین مطالعات نشاندهند ارتباط بین سلامت روان و تفکرات غیرمنطقی
هستند. تفکر، احساس و عقل به طور کامل با یکدیگر در تعامل هستند و هر یک از این عوامل، بیوسته در حال تاثیر گذاری از دو عامل دیگر و تاثیر گذاری بر آنها می‌باشد.

به دلیل اینکه صدمات سوختگی از رایج‌ترین حوادث در ایران و چشم‌های با درآمد کم و متوسط است و همچنین به دلیل افزایش میزان بقای بیماران، لازم است میزان تفکرات غیرمنطقی بیماران اندام‌گیری شود تا مورد استفاده پزشکان و روانشناسان جهت درمان صحیح اینگونه بیماران قرار گیرد.

اگر چه تعداد زیادی از مقياسها برای اندازه‌گیری جنبه‌های گوناگونی از تفکرات غیرمنطقی وجود دارد. اما با توجه به اینکه پس از بررسی متنوع و سیستم‌بندی میزان تعبیری این تفکرات غیرمنطقی بیماران دچار سوختگی یافت نشد، مطالعه حاضر تحت عنوان "طراحی و ارزیابی افزایش سنجش تفکر غیرمنطقی در بیماران دچار سوختگی" با هدف درمان موفقیت بیماران دچار حادثه سوختگی طراحی شده است.

تعريف وازه‌هاي اختصاصي:

حادثه: حادثه از دیدگاه سازمان بهداشت جهانی رودادی ناگهانی و برنامهریزی نشده که موجب آسیب (تخربی فیزیکی و شیمیایی) قابل تشخیص در بدن انسان می‌شود و معمولا در جریان حمل و نقل، محل کار، اماکن آموزشی، محل کار و یا مراکز تفریحی رخ می‌دهد.

سوختگی: سوختگی تخربی کامل یا بخشی از پوست بوسیله انرژی حرارتی از شعله، بخار و مایعات گرم، نماس با اشباع داغ، انفجار و جریان الکتریکی می‌باشد. صدمات به راههای هوایی یا
درجه بازیافت پذیری و تکرار پذیری داده‌ها از سوی سایر افراد.
روایی:

واقعی بودن توصیف‌ها و یافته‌های پژوهش و درجه‌ی اعتماد به واقعی بودن یافته‌ها برای شرکت کننده‌گان پژوهش و برای زمینه‌ای که پژوهش در آن انجام شده است.

روایی سازه‌ای:

شکل گیری مقياس‌های عملیاتی مناسب برای مفاهیم برسی شده.

هدف کلی طرح

ساخت و ارژباپ ابزار پرسشنامه جهت تعیین میزان تفکر غیرمتنقی در بیماران دچار حادثه سوختگی.

اهداف اختصاصی طرح

- طراحی پرسشنامه
- تعیین اعتبار محترم‌ی
- تعیین پایایی
- تعیین اعتبار سازه‌ای

هدف ثانویه

- تعیین پیشگویی کننده‌های تفکرات غیرمتنقی در بین بیماران دچار سوختگی ایرانی
۲- مروری بر متن

فکرات غیرمنطقی با اختلالات روانشناختی گوناگونی مانند پریشانی و افسردگی و ... در ارتباط می‌باشد. اندوزه‌گیری فکرات غیرمنطقی یک مولفه مهم برای بررسی مشکلات روانشناختی و تصمیم‌گیری کلینیکی می‌باشد. براساس مروری که بر مطالعات انجام شده، ایزئرهای در دژ سنجش فکرات غیرمنطقی در زمینه‌های گوناگون وجود دارد ولی ایزئرهای استانداردی که بطور اختصاصی برای بیماران دچار سوختگی بدنی شده بکار رود وجود ندارد.

در زیر به تعدادی از ایزئرهایی که در زمینه‌ی سنجش فکرات غیرمنطقی طراحی شده است، اشاره می‌کنیم:

ابزاری تحت عنوان Irrational Belief Test (IBT) توسط Jones طراحی شده است که شامل ۱۰۰ آیتم، ۲۰ حیطه و طیف لیکتری ۵ قسمتی می‌باشد و فکرات غیرمنطقی را براساس ۱۰ نوع تفکر غیرمنطقی بیان شده توسط Ellis بالاتر بیانگر فکرات غیرمنطقی بیشتر و نمره باشند.

ابزاری تحت عنوان Rational Behavior Inventory (RBI) توسط Whiteman و Shorkey طراحی شده است که شامل ۳۷ آیتم، ۱۱ حیطه و طیف لیکتری ۵ قسمتی می‌باشد. نمره بالاتر منعکس کننده فکرات منطقی می‌باشد، در حالیکه نمره بالای یا زیر ۳۷ نمره برای افراد مناسب، سنجش غیرمنطقی بیشتری دارد. همکستگی بالایی بین RBI و مقياس‌های انددازه‌گیری افسردگی و پریشانی دیده شده است.
ابلاغی تحت عنوان The Belief Scale (BS) شامل 20 آیتم براساس انواع تفکرات غيرمنطقی به The Belief Scale اصلی بیان شده توسط Ellis و طیف لیکتری 5 قسمتی می‌باشد. پرسشنامه منظور به‌همدروی و تصحیح مشکلات روانی محتوای ابزارهای قبلی مانند RBI و IBT طراحی شده است. همچنین BS ثبات و همسانی درونی خویب را نشان داده است و همبستگی بالایی با سایر پرسشنامه‌های تفکرات غيرمنطقی دارد.

ابلاغی تحت عنوان The Irrational Parenthood Cognition Scale (IPC) شامل 14 آیتم و طیف لیکتری 5 قسمتی طراحی شده که بطور ویژه تفکرات غيرمنطقی مربوط به نیاز به داستان فرزند برای زندگی بهتر و انداده‌های می‌کند. نمره ابزار از 0 تا 55 می‌باشد. هر چه نمره بالاتر باشد نشان دهنده نیاز بیشتر به داستان فرزند می‌باشد. ألفا کرونباخ برای پاسخ‌دهندگان مرد و زن به ترتیب ۰/۸۴ و ۰/۸۷ محاسبه شده است.

ابلاغی تحت عنوان Posttraumatic Cognition Inventory (PTCI) به منظور سنگش تفکرات غیرمنطقی مرتبط با حادثه طراحی شده است. آیتم‌های PTCI از مشاهدات کلینیکی و تنوری‌های رایج در روانپزشکی بعد از حادثه استخراج شده است. پرسشنامه دارای ۳ حیطه می‌باشد که همسانی درونی عالی و ثبات آزمون- بازآزمون خویب را نشان داده است. همبستگی متوسط تا قوی بین PTCI و افسردگی و پریشانی دیده شده است.

ابلاغی تحت عنوان Trauma- Related Irrational Belief Scale (TRIBS) شامل 8 آیتم و طیف لیکتری 5 قسمتی به منظور سنگش تفکر غیرمنطقی مربوط به تجربه اتفاق آسیب‌زا زندگی طراحی
شده است. پرسشنامه TRIBS دارای زیبای مقیاس برای هر ۴ نوع تفکر غیرمنطقی می‌باشد و هر کدام با ۲ آیتم سنجش می‌شود. همچنین دارای همسانی درونی رضا بخش می‌باشد.
۳- مواد و روش‌ها

مطالعه حاضر از نوع روان‌سنجی (psychometric) بود. جمعیت هدف اصلی در مطالعه حاضر شامل زنان و مردان دچار سوختگی، سنین ۱۴ سال و بالاتر شهرهای تهران، تبریز و کرمانشاه در طی یک سال از خرداد سال ۱۳۹۳ بود. نمونه‌گیری از نوع نمونه‌گیری در دسترس بود.

طراحی ابزار پرسشنامه

جهت تهیه نسخه اولیه مراحل زیر را طی کردیم:

- مروری بر مطالعات انجام شده جهت شناسایی ابزارهای مرتبط و یا مشابه
- مصاحبه کیفی با بیماران
- مصاحبه با متخصصین

به منظور تهیه نسخه اولیه پرسشنامه ابتدا مروری بر مطالعات انجام شده در ایران و سایر کشورها جهت شناسایی ابزارهای مرتبط و یا مشابه انجام شد. در ادامه پرسشنامه‌های مرتبط یا مشابه به منظور طراحی پرسشنامه مورد مطالعات قرار خواهد گرفت و پس از ایبده گرفتن از سوالات پرسشنامه‌ها، ایتم‌های ابزار مورد نظر ساخته شد. همچنین به منظور ارتقا و بهبود کیفیت سوالات مصاحبه عمیق فردی با بیماران دچار سوختگی انجام گرفت. در مصاحبه از بیماران به صورت فردی، از آنها خواسته شد که درباره احساساتان بعد از حادثه و اینکه چگونه در جامعه حاضر خواهد شد و نگاه افراد جامعه به آنها چگونه خواهد بود، صحبت کنند. سپس سوالات طراحی شده از طریق مطالعه پرسشنامه‌های مرتبط با اظهارات بیماران برسی شد و تغییرات لازم اعمال شد.

جلسه‌ها با هدف استفاده از نظرات روان‌شناسان و جراحان پوست در زمینه تفکرات غیرمنطقی
بیماران بعد از سوختنگی تشکیل شد و سوالات طراحی شده در مراحل قبل بررسی شد و در صورت لزوم سوالاتی اضافه شد یا تغییراتی اعمال شد. سپس پرسشنامه اولیه در اختیار تعدادی از بیماران قرار داده شد و نحوه برخورد بیماران با سوالات بررسی شد و در صورت لزوم تغییراتی در سوالات ایجاد شد و یا سوالاتی حذف شد.

به دلیل اینکه پرسشنامه طراحی شده قابل استفاده برای زنان، مردان، افراد متاهل، مجرد و بیماران در هر مرحله ای از بیماری باشد، سوالات به گونه‌ای طراحی شد که اهداف طرح را در برگیرد.

ابزار طراحی شده را Scale for Irrational Thoughts after Burning (SITB) نامگذاری شد.

تعریف اعتبار محتوایی

برای تعیین روایی محتوایی بعد از تهیه نسخه اولیه، از قضاوت افراد خبره، تحت عنوان پانل خبرگان، متشکل از ۲۴ نفر از متخصصین روانشناسی، اپیدمیولوژیست، چراج‌پوست، فیزیوتراپیست، کاردرمان و پرستار استفاده شد. بدین منظور پرسشنامه طراحی شده به آدرس متخصصان فرستاده شد. در انتها از متخصصان درخواست شد در صورتی که سوالات دیگر و یا پیشنهادی جهت بهبود سوالات دارند بیان کنند.

برای بررسی روایی محتوایی از شاخص روایی محتوا (Content Validity Index (CVI) و کایا تعیین شده استفاده کرده شد. برای بررسی شاخص روایی محتوا ۲ معيار اختصاصي (modified Kappa) یا کار بر روی وضوح به صورت جدا در یک طیف لیکتری ۴ قسمتی (شامل: کاملاً موافق، مرفت، موافق و کاملاً موافق) برای هر یک از آیتم‌ها توسط متخصصان مورد یک سوال گرفت. بدین منظور امتیاز CVI پس از بازکپت کردن امتیازات موافق برای هر آیتم بر تعداد کل متخصصان
محاسبه شد. بعد از تعیین روایی محتوایی پرسشنامه را به منظور تعیین قابلیت اجرای و اعمال
اصلاحات لازم بطور پیش فرض در اختیار ۱۰ نفر از بیماران قرار دادیم.

تغییرات پایایی

جهت اندازه‌گیری پایایی ایزهاز دو روش استفاده کرده‌ایم:
- همسانی درونی: بدين منظور پرسشنامه را در جهت تکمیل و اندازه‌گیری اولیه همسانی درونی
در اختیار ۵۰ نفر از بیماران دچار سوختگی قرار دادیم و از ضریب همبستگی آلفای کرونباخ
استفاده شد. (در خصوص تعیین حجم نمونه برای آلفای کرونباخ، با استفاده از نرم افزار SAS
با پیش فرض احتمالی ۲۰ آیت، بی‌آورد نقطه ای ۸/۰ و فاصله اطمینان ۲/۰ حجم نمونه ۷۵ بیمار بی‌آورد
شد ویل به منظور بهبود کیفیت مطالعه ۵۰ بیمار را در نظر گرفته شد.)

- آزمون－باز آزمون: بدين صورت كه پرسشنامه در اختیار ۴۹ نفر از بیماران جهت تکمیل و
ارزیابی پاسخ ها قرار گرفت و بعد از یک فاصله ۱۵ روزه، پرسشنامه در اختیار همان بیماران قرار
داده شد. (تعداد نمونه لازم برای آزمون－باز آزمون براساس همبستگی ۷/۰ بطور پیش فرض و
سطح اطمینان ۹۵/۰ در ابتدا بطور ۳۰ بیمار بی‌آورد شد. ویل به منظور بهبود کیفیت مطالعه ۴۹
بیمار را در نظر گرفتیم.)

برای ارزیابی ثبات آزمون－باز آزمون از ضریب همبستگی درون ردهای
(Intraclass Correlation Coefficient (ICC))

شد.
تعیین اعتبار سازهای

برای تعیین اعتبار سازهای از روش تحلیل عاملی اکتشافی با روش حداکثر درست نما یا واریمکس استفاده شد که با توجه به استفاده از تحلیل عاملی اکتشافی نیاز است حداقیل به ازای هر آیتم تعیین شده در پرسشنامه ۱۰ نمونه وجود داشته باشد. بررسی نامه بین ۳۲۹ بیمار دچار سوختگی نوزع و جمع آوری شد. مقدار نمونه هم برای تحلیل عاملی اکتشافی ۳۲۹ بیمار بود که بیشتر از حداقیل مقدار توصیه شده می‌باشد.

تعیین اعتبار همگرایی

جهت تعیین روابط همگرایی از پرسشنامه Derriford Appearance Scale (DAS59) استفاده شد.

ضرب همبستگی پیرسون برای تعیین همبستگی بین DAS59 و SITB محاسبه شد.

1 maximum likelihood
2 Varimax Rotation
4- نتایج

مشخصات افراد شرکت کننده در مطالعه:

در این مطالعه ۲۲۹ بیمار دچار سوختگی شامل ۱۸۳ مرد و ۱۴۵ زن با میانگین سنی ۳۲ (انحراف معیار = ۷/۶ و رنگ سنی ۱۶ تا ۶۳ سال شرکت کردند. بیشتر شرکت کننده ها (۵۴/۱/%) دارای تحصیلات دبیرستانی بودند، در حالی که ۳۹/۵% از آنها دارای تحصیلات دانشگاهی و ۴/۳% بیساد بودند. اکثریت بیماران (۸۲/۴%) در شهر زندگی می کردند. همچنین ۶۷/۶% مناهل بودند. میانه درصد سوختگی شرکت کننده ۱۶ درصد با دامنه ۲ تا ۳۳ درصد بود.

نتایج روابی محتوايی:

پس از توزیع سوالات اولیه در بین متخصصین خارج از مطالعه، روابی محتوایی براساس SITB بیشتر در نهایت پایل خبرگان و محاسبه شاخص روابی محتوایی و کاهش تعیین شده بر مبنای مناسبت و شفافیت بررسی شد. در نتیجه، کاهش تعیین شده ۸۰/۰ و ۹/۱ به ترتیب براساس مناسبت و شفافیت محاسبه شد.

روابی همگرايی:

آزمون همبستگی پیرسون رابطه مثبت (۵/۴۵ = P و معنی داری (۱/۲۰ < P) را بین نمره های کلی پرسشنامه طراحی شده (SITB) و پرسشنامه ۵۹ نشان داد.

نتایج پایاپی انسانی درونی:
بررسی‌نامه نهایی شامل ۲ حیطه (عامل) می‌باشد که آلفای کرونباخ برای کل بررسی‌نامه و حیطه‌های ۱ (خود پذیرشی) و ۲ (جنگش آوری و ترحم) به ترتیب ۰/۸۹ و ۰/۸۱ به دست آمد.

نتایج پایایی ثبات:

همبستگی درون ردهای برای کل بررسی‌نامه و حیطه‌های ۱ (خود پذیرشی) و ۲ (جنگش آوری و ترحم) به ترتیب ۰/۸۰، ۰/۴۹ و ۰/۸۰، ۰/۴۹ به دست آمد. باوجود کمترین مقدار همبستگی درون ردهای برای حیطه جنگش آوری و ترحم از مقدار قابل قبول که تعداد سوالات کمتری هم داشته‌اند به دلیل بالا بودن همبستگی درون ردهای کلی حذف نشدنید.

نتایج روایی سازهای:

به منظور تعیین روایی سازهای، آنالیز عاملی اکتشافی با روش‌های مختلف استخراج عامل‌ها انجام شد. علی رغم شبهه بودن نتایج، روش حداکثر درست نمایان انتخاب شد.

در نهایت مدل ۲ عاملی بهترین نتیجه‌ی یک الگوی روشان از بارا بود که منجر به باقیماندن ۱۴ منغیر شد که ارزش ویژه هر یک بیشتر از ۱ بودند. در مجموع ۶۹/۸ درصد از واریانس کل با مدل قابل تنبیه بود. بر اساس نتایج، مقدار کرویت بارتلت برابر با (۱۹۶/۱۰) و سطح معنی‌داری KMO=۰/۸۷ به دست آمده است از طریق مقدار (۰/۰۰۱) به دست آمده است بنابراین نتیجه‌ی جزئی می‌شود تعداد نمونه‌ها برای اجرای تحلیل عاملی بسیار مناسب است.
عامل اول شامل ۱۰ آیتم با ارزش ویژه ۵/۵ بود که ۶۰٪ از واریانس کل توسط آن قابل تبیین می‌باشد و تفکرات غیرمنطقی بیماران را درباره زندگی اجتماعی و شخصی‌شناسی به دلیل احساس خجالت و اعتماد به نفس پایین شرح می‌دهد. عامل اول "خود پذیرشی" نامگذاری شد.

عامل دوم شامل ۴ آیتم با ارزش ویژه ۱/۵۲ بود که ۴۰٪ از واریانس کل توسط آن قابل تبیین می‌باشد و تفکرات غیرمنطقی بیماران را درباره تأثیرات ظاهرشان بر مردم دیگر توصیف می‌کند. عامل دوم "چندش‌آوری و ترجم" نامگذاری شد.
5- بحث

در مطالعه حاضر ابزار "تفکرات غیرمنطقی بعد از سوختگی" طراحی شد و خصوصیات روانسنجی آن مورد بررسی قرار گرفت.

براساس اطلاعات نویسنده‌گان پرسشنامه فوق، اولین ابزار سنجش تفکرات غیرمنطقی در بین بیماران دچار سوختگی با بدخشکی (disfigurement) می‌باشد. یافته‌های بدست آمده نشان داد همسایی درونی بالا و ثابت آزمون–پای‌آزمون قابل قبولی را دارد. بطور معمول درجه بالا همسایی درونی نشان داده شده بوسیله ابزار و هر حیطه بیانگر این است که ابزار مذکور به جمعیت بزرگتر قابل تعمیم می‌باشد.

مراقب طراحی و بررسی SITB نشان دهنده چالش‌ها و روش‌های جدید طراحی به منظور اندازه‌گیری تفکرات غیرمنطقی در بین جمعیتی از قربانیان دچار سوختگی با بدخشکی می‌باشد. مسئله اصلی برای مطالعه حاضر فقدان اطلاعات در رابطه با ارتباط بین تفکرات غیرمنطقی و بدخشکی ناشی از سوختگی در ابتدای مطالعه بود، در نتیجه کارشناسان مطالعه نتوانستند اساس تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل شود، پیدا کنند. بنابراین، تئوریکی کافی جهت طراحی ایمیل‌های که لازم است در پرسشنامه شامل ش
به دلیل اینکه محققان مطالعه حاضر فرضیهای در رابطه با تعداد عامل ها نداشتند، بنابراین تحلیل عاملی اکتشافی جهت تعیین روابط سازهای مورد استفاده قرار گرفت. جهت استخراج عامل ها از روش حد اکثر درست نمایی استفاده شد که یکی از جنبه های مثبت مطالعه حاضر می باشد.

با وجود اینکه ایمپلی ۳ و ۶ دارای همبستگی در عامل ها ۱ و ۲ بودند، نویسنده ها آیتم های مذكور را به دلیل مفهوم شان جزء عامل ۱ در نظر گرفتند.

زمانی طراحی شد که ابزارهای دیگر مرتبط با تفکرات غیرمنتقلی طراحی شده بودند. در حاليه تمرکز بیشتر ابزارهای موجود بر تفکرات غیرمنتقلی در زمینه شرایط سلامت رواني شامل افسردگی، اعتیاد، قماربازی، چاقی و افسردگی بعد از زایمان بود.

تعداد کمی ابزار مرتبط با تفکرات غیرمنتقلی برای قربانیان حوادث بدرکننده طراحی شده است. چنان حوادثی و بویژه حوادث سوختگی که منجر به بدنی صورت و بدن می شود، می تواند باعث ایجاد احساس خجالت، بدنامی، انزوا شود و تأثیر منفی بر روابط جنسی و کیفیت زندگی بیماران داشته باشد. چنان پیامدهای اغلب منجر به گسترش تفکرات غیرمنتقلی می شود که پیشگویی کندن مشکلات روشنایی در سیستم ابزارهای جدید برای کمک به بیماران در معرض خطر به منظور فراهم کردن درمان مؤثر لازم می باشد. بنابراین در نظر گرفتن تفکرات غیرمنتقلی به عنوان درمان مؤثر، می تواند به بیماران گذارده سوختگی برای دستیابی به سلامت رواني و کیفیت زندگی بهتر کمک کند.

در حالیکه نیاز به تشخیص ابزار برای فرآیند ابزار نخواهند گرفت، طراحی هر ابزار جدیدی برای اندماه گیری بهدراک شده احتمالاً مورد بحث قرار نخواهد گرفت و طراحی طراحی ابزار جدیدی برای اندماه گیری
تفکرات غیرمنطقی لازم می‌باشد که از نظر قابلیت تعمیم به جمعیت‌های دیگر و همچنین قابلیت استفاده از ابزار برای کمک به مردم جهت دستیابی به درمان مناسب، مورد بحث قرار گیرد.

آیا می‌تواند خارج از کشور مبدا (ایران) برای گروه‌های دیگری از بیماران دچار سوختگی SITB مورد استفاده قرار گیرد؟ و چه مزایایی را می‌تواند برای بیماران دچار سوختگی و تیم درمان شان فراهم کند؟

بطور کلی پاسخ به سوال اول، درباره قابلیت تعمیم ابزار، محتملاً به می‌باشد. به منظور تطبیق وزه‌های مورد استفاده با قوانین و فرهنگ کشورهای دیگر، از وزه "شریک جنسی/ همسر" برای آیتم‌های ۸ و ۹ استفاده کردیم.

ابزار SITB بر مبنای فهرنگ ویژه (کشور ایران) طراحی شده و انتخاب وزه‌ها براساس ارزش‌های سنتی مسلمانان بود.

توجه کنید همه ی ایتم‌ها جنبه‌های گوناگونی از بدن شکلی بعد از سوختگی را اندازه‌گیری می‌کند که شامل ارتباط با اعضای خانواده و درک اینکه ظاهر فرد چگونه توسط افراد غیره سنجیده می‌شود، می‌باشد. به عنوان مثال، آیتم ۷ از پاسخ‌دهنده مجرد می‌خواهد که موفقیت را در رابطه با عبارتی که "خانواده همسر آینده را به نمودند" نظر داشته باز ازدواجه کنم" اندارد گیری کند. آیتم مذکور احتمالاً قابل استفاده برای فرهنگ‌هایی خواهد بود که نظر خانواده در تصمیم‌گیری برای ازدواج مهم می‌باشد و ممکن است لازم باشد جهت استفاده فرهنگ‌های دیگر حذف شود یا تغییراتی اعمال شود.
قابل استفاده برای جمعیت مورد مطالعه و محیط‌های مشابه می‌باشد. در این زمینه، ابزار SITB حاضر براساس موارد ذیل طراحی شد:

به منظور داشتن نمونه گوناگون، معیاری برای درصد سوختگی شرکت کنندگان در نظر گرفته شد.

براساس مطالعات انجام شده، شدت و انداره حادثه سوختگی بطور مستقیم با افسردگی و برشانی ارتباط نداده به‌طور کلی از سوختگی یا شکل بدن نقش مهمی را در سلامت روانی بعد از سوختگی بازی می‌کند. بنابراین شرکت کنندگان مطالعه حاضر بیماران با زخم سوختگی در هر قسمت از بدن‌شناسی بودند. آنها بیان کردهند که بعضی از زخم‌های سوختگی که در محیط بیرون با لباس پوشیده می‌شود در خانه یا مهمامی قابل دیدن می‌باشد.

به دلیل اینکه آیتم‌های تفکرات غیرمنطقی بطور بی‌در شرکت دارای مفهوم منفی می‌باشد نویسنده‌گان تعدادی سوال با مفهوم مثبت به پرسشنامه اضافه کرده تا از تأثیر نامطلوب آیتم‌های طراحی شده بر بیماران جلوگیری شود. آیتم‌های دارای مفهوم مثبت در تحلیل امری تشخیص شدند. اگر چه براساس مطالعات انجام شده بیان شده است که بیماران در طی دوره درمان لازم است که با مشکلات احتمالی شان بعد از حادثه مواجه شوند و درباره احساسشان صحبت کنند.

از وازههای مانند "همه یا همیشه" برای طراحی آیتم‌ها استفاده شد تا مفهوم بعضی از تفکرات را که بطور معمول منطقی هستند را به غیرمنطقی تغییر دهد.

هدف از مطالعه حاضر طراحی ابزاری با قابلیت استفاده برای بیماران با فرهنگ‌های گوناگون بود. به منظور تطیف شرایط فرهنگی و بکارگیری ابزار برای بیماران با فرهنگ‌های گوناگون، مراحل
متفاوت مطالعه مانند طراحی اولیه سوالات، روایی محتوایی و سازه‌ها در استان‌های تهران، تبریز و کرمانشاه انجام شد.

پاسخ به سوالات مرتبط با فواید SITB برای بیماران و تیم درمانی بود. هنوز تحت بررسی قرار گرفته بررسی آلی سیب SITB اولین ابزار هم‌زمانی در زمینه مطرح شده می‌باشد. و مسئله اصلی این است که مطمئن شویم قربانیانی که از واکنشات غیرمنتظره رنج می‌برند درمان مناسب و به موقع دریافت کنند.
6- نتیجه‌گیری

نتایج نشان می‌دهد که SITB سطوح قابل قبولی از روابط و پارامترهای را منعکس می‌کند که می‌تواند برای سنجش تفکرات غیرمنطقی در بین بیماران دچار سوختگی ایرانی مورد استفاده قرار گیرد.

برای بیماران دارای زخم سوختگی در صورت و هم بیماران دارای زخم SITB یک‌گیری سوختگی در نواحی دیگری از بدنه نشان دهنده کاربرد پرسشنامه طراحی شده برای بیماران دارای بدشکلی در هر قسمتی از بدن می‌باشد.

براساس نتایج بدست آمده، ارتباط معنی‌داری بین تفکرات غیرمنطقی و ویژگی‌های دموگرافیک SITB شده است که تایید کننده اعتبار SITB می‌باشد.

7- پیشنهادات

بدلیل اینکه مطالعه حاضر اولین مطالعه در زمینه مورد بحث بود، بدست نیامد. بنابراین به منظور بهبود ساختار پرسشنامه به محققان پیشنهاد می‌کنیم که SITB در جوامع دیگر بکار ببرند و در صورت نیاز تغییراتی را اعمال کنند.
8- محدودیت‌ها

- بررسی جامع روانپزشکی و روانشناسی نداشتیم.

9- نقاط قوت مطالعه

- قابلیت یکتاگری ایزه طراحی شده برای بیماران با فرهنگ‌های متفاوت به دلیل اجرای مراحل مطالعه حاضر در ۳ استان تهران، تبریز و کرمانشاه
- ایزه طراحی شده دارای نواوری در زمینه حوادث سوختگی می‌باشد.
دانشگاه علوم پزشکی تبریز

دانشکده بهداشت

پایان نامه جهت دریافت درجه کارشناسی ارشد

ایپدیمیولوژی

عنوان پایان نامه:

طراحی و ارزیابی ابزار سنجش تفکر غیرمنطقی در بیماران دچار سوختگی

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شماره پایان نامه: ۲۶۳/ب