

## TRANSLATION AND VALIDATION OF DIMENSIONS OF ANGER REACTIONS-REVISED

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### ABSTRACT

*The purpose of the current study was the translation and validation of a Dimensions of Anger Reactions-Revised scale. 400 type 2 diabetic patients (30-60 years) were selected through purposive and snowball sampling technique for this study. Cross-sectional research design was used. Psychosocial problems scale for type II diabetes (PPSTD), Dimensions of Anger Reactions-Revised (DAR-R), Couples Satisfaction Index (CSI-16), was used. Results indicates a high alpha reliability of a scale i.e .82. Bivariate correlation was also carried out to establish convergent and divergent validity of DAR-R. Significant positive correlation was found between DAR-R and PPSTD ( $p < 0.01$ ). Moreover, significant negative correlation was found between DAR-R and CSI-16 ( $p < 0.01$ ). so it was concluded that Urdu translated version of DAR-R is a valid and reliable scale.*

**Keywords:** anger, type 2 diabetics, validation

### Translation and validation of Dimensions of Anger Reactions-Revised

Most diabetic patients experience anger at some point in their lives, and it's a natural reaction to feeling helpless because of the disease. Anger, is a natural and a universal emotion made to unsatisfied wishes, expectations and outcomes, and can potentially turn into aggressive and extremely devastating reactions reflected in destructive behaviours out of control (Bodur, Infal, & Kurt, 2010).

Diabetic patients experience anger, on initial diagnosis, constant monitoring of blood sugar, and food deprivation that have sugar in them. They get angry and embarrassed due to hypoglycaemia, engaging in physical activity, relatives and thinking that they have an incurable disease (Bodur, Infal, & Kurt, 2010). Although anger can be beneficial and motivating, but excessive anger can lead to physical and mental health issues, as well as impede the patient from thinking positively due to elevated blood pressure (BP) and other bodily changes. (APA, 2018). When anger is used to deal with problems, it can worsen the situations with other people (Australian Psychological Society, 2018). Usually, other negative emotions are linked with anger and a patient could express anxiety, frustration, depression or feelings of hurt, associated with anger. Expression of anger is different between men and women; men express it physically and verbally, women verbally (Butler, Meloy-Miller, Seedall, & Dicus, 2018). Anger is followed by depression (Pasquini, Picardi, Biondi, Gaetano & Morosini, 2004). Diabetic African Americans express challenges in their social relationship, as well as irritation and anger with the disease, according to studies (Hill-Briggs, Cooper, Lorman, Brancati & Cooper, 2003). Diabetic patients getting treatment for mental health concerns were more enraged than non-diabetics (Kolbasovsky, 2004). Anger, denial, despair, and finally acceptance are the phases of grief that newly diagnosed diabetics go through (Sridhar & Madhu, 2002).

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Individuals with higher levels of anger consumed more calories and were more prone to smoke (Golden et al., 2005). So, literature indicates that anger is a natural response towards a problematic situation in which person feels helpless. Diabetes and anger go hand in hand. Because diabetes is an incurable disease and to deal with diabetes is not an easy task. This struggle makes a person feel angry and this anger lead to wards the elevation of blood glucose level. Diabetic patients experience denial, anger and depression on the diagnosis of a disease (Ijaz & Ajmal, 2011). Cherrington, Ayala, Sleath, and Corbie-Smith (2006) investigated the level of awareness, depression, attitudes, and views about oneself among Latinos who had type 2 diabetes. Participants expressed feelings of anger, grief, fear, disbelief, disappointment, and worry in response to the disease diagnosis. When they encountered into complications with their diabetes control, they got very anxious and depressed. They also discussed various influences on the link between diabetes and emotions. Anderson et al. (2000) discovered that patients were afraid of diabetes and insulin therapy, in addition to sadness, denial, tension, mood swings, anger, and embarrassment. They also have a strong belief in God and church members, as well as prayer, which has been proved to be a source of help for diabetes management. Anger is the result of a complete lifestyle shift. Diabetic patients become irritated by the limitations imposed by the disease. They must rearrange their lives, as well as their food, which differs from that of most people. Furthermore, the disease's life-long course is a cause of rage (Saudek & Christopher, 1997). Many men sense guilt, wrath, and sorrow after hearing they have type 2 diabetes, according to nutritional researcher Sam Graci (Rhys, 2006). Diabetes management and treatment can be difficult, and it can have negative consequences for people. It can induce annoyance and rage, especially if your blood sugar is out of control (Snoek & Skinner, 2005). As described by African Americans with diabetes, the resentment and anger associated with their diabetes can have an impact on interpersonal relationships (Hill-Briggs, Cooper, Lorman, Brancati & Cooper, 2003). Furthermore, newly diagnosed diabetic patients go through grieving stages such as denial, rage, despair, and acceptance. (Sridhar & Madhu, 2002).

### **Objective of the study**

- To translate and validate the dimensions of anger reaction-revised scale.

### **Method**

The translation and validation of Dimensions of Anger Reactions-Revised was carried out in two phases, first phase was about the translation of a scale and pilot study. In the second phase, alpha reliability, convergent and divergent validity was established.

### **Phase I: Translation of DAR-R**

For the current study, DAR-R was translated into Urdu language. For the translation of DAR-R, standard back translation guidelines were used:

- Translators were instructed to concentrate on conceptual equivalence in the statements rather than strict word-for-word translation.
- Translators were asked to use brevity, making straightforward, clear and concise sentences.
- They were asked to consider respondents age, don't use jargon and technical terms so that items could be understood for all audiences.

Three multilingual specialists translated the scales from English to Urdu, which were then examined by another competent translator, who created a full version with the most consistent items added, then without viewing the original, Urdu translations were given to three bilingual specialists must convert the scale back into English. Finally, a panel of specialists, consisting of two assistant professors and two PhD academics, scrutinised back-translated items and retained those for the final DAR-R that were relevant.

### Pilot Testing.

A pilot study was undertaken to see if all of the items were easily understandable and acceptable. As a consequence, participants discovered no issues with any of the items, so they were all kept in the final version.

### Phase II:

The second phase of the study focused on determining DAR- R's internal consistency. Purposive and snowball sampling was used to choose 200 male and female patients with type-2 diabetes from Lahore for this aim. The participants ranged in age from 30 to 60 years old ( $M = 48.17$ ,  $SD = 11.77$ ). These patients were chosen from the Diabetic Institute of Pakistan (DIP). The study excluded participants who did not have diabetes or who had type 1 gestational diabetes. Participants under the age of 30 or over the age of 60 were also excluded from the study.

### Instruments

**Dimensions of Anger Reactions-Revised (DAR-R).** Novaco developed "The Dimensions of Anger Reactions" in 1975. It's a seven-point scale. The response options ranged from 0 (not at all) to 4 (very) (very much). DAR-R is a scale that evaluates one's anger toward others (Forbes et al., 2004). The DAR-R is a scale that is both reliable and psychometrically sound. DAR-R items had a reliability of .91 and test-retest reliability of .86. It had .76, .65, and .61 correlations with "PCL-C, STAXI Anger Out, and STAXI Anger In", respectively (Forbes et al., 2004).

**Psychosocial Problem Scale for Diabetes (PPSTD).** PPSTD is a 5-point Likert scale and has 45 items consisting of three subscales, social and occupational problems (7 items), sexual life satisfaction (22 items) and psychological problems (16 items). Overall reliability of the scale was very high ( $\alpha = .96$ ) and reliabilities of subscales were moderately high to very high (SOP  $\alpha = .94$ ; SLS,  $\alpha = .83$ ; PP,  $\alpha = .89$ ) (Ijaz, Muazzam & Malik, 2020).

**Couples Satisfaction Index (CSI-16).** CSI-16 was developed by Funk and Rogge (2007) as a 16-item questionnaire to assess marital satisfaction. "Please specify the degree of happiness of your relationship, all things considered," is a one global item, which ranges from 0 to 6. The other items, on the other hand, employed a variety of answer anchors, all of which were graded on a 6-point scale. For the entire scale, the Cronbach's coefficient was 0.98. (Funk & Rogge, 2007).

### Procedure

All participants signed an informed consent form. Following that, all participants received instructions on how to use the scales. Participants were told that their responses would be kept hidden and wouldn't be shared with anybody else unless the data was coded to ensure anonymity. The scale's psychometric properties were assessed after the data had been collected.

### Result

Table 1 showed characteristics of the sample, men and women were equal and so were other sample sizes (adequate) for other characteristics except education at the master or higher level.

**Table 1**

*Demographic characteristics of the participants*

| Variables        | Male (f) | Female (f) | Total |
|------------------|----------|------------|-------|
| <b>Gender</b>    | 200      | 200        | 400   |
| <b>Education</b> |          |            |       |
| Uneducated       | 65       | 68         | 133   |
| Matric to FA     | 60       | 68         | 128   |
| BA to MA         | 68       | 54         | 122   |

|                             |     |     |     |
|-----------------------------|-----|-----|-----|
| Above MA                    | 8   | 9   | 17  |
| <b>Monthly Income (PKR)</b> |     |     |     |
| Below 50,000                | 100 | 101 | 201 |
| Above 50,000                | 95  | 104 | 199 |

Note.  $f$  = Frequency

### Internal consistency

Cronbach Alpha coefficient was used to calculate internal consistency of the DAR-R.

**Table 2**

*Cronbach Alpha of DAR-R (N=400)*

|       | No. of Items | Alpha Coefficient |
|-------|--------------|-------------------|
| DAR-R | 7            | .82               |

*DAR-R: Dimension of anger reaction-revised*

Note. The internal consistency of the DAR-R is shown in Table 2. The alpha value of DAR-R was significantly high, at .82.

To establish the convergent validity, a purposive sample of 200 diabetic patients that ranged in age from 30-60 years ( $M = 51.29$ ,  $SD = 7.77$ ) were selected. Bivariate correlation was carried out to establish convergent validity between two scales and it was found that there was a significant moderate positive correlation ( $r=0.4$ ,  $**p<0.01$ ) between the DAR-R and PPSTD (Ratner, 2009)

To establish the divergent validity, a separate sample of 200 diabetic patients was selected through purposive sampling technique. The overall mean age was 49.39, Standard deviation was 7.97 (range: 30-60 years). There was significant moderate negative correlation ( $r=-0.33$ ,  $**p<0.01$ ) between DAR-R and couple satisfaction index (CSI-16) (Ratner, 2009).

### Discussion

Individuals' physical activity and social functioning are substantially impacted by chronic diseases such as diabetes (CDC, 2002). Patients are subjected to a variety of physical challenges as a result of their illnesses, but the relationship issues they experience are surprisingly similar. (Lyons, 1999). They have the potential to change the dynamics of disease, the economy, social activities, and interaction. (Kaye & Gracely, 1993). Both patients and spouses value emotional well-being and relationship quality (Coyne & Smith, 1994). According to the findings, type 2 diabetics who display less anger are more likely to be happy in their marriage. Previous research also indicated that illness causes psychological issues. (Franks et al., 2012; Hagedoorn et al., 2008) like marital distress for both partners (Badr & Acitelli, 2005; Badr & Carmack Taylor, 2009). Reduced diabetes-specific emotional distress improved socioemotional functioning, mental health, and general well-being were all linked to better marital satisfaction, according to Trief et al. (2001). Negative life experiences, anxiety, drug usage, and depressive symptoms were all found to have strong positive connections with anger in prior research. (Puskar et.al., 2008).

**Conclusion:** Urdu version of Dimensions of Anger Reactions-Revised is found to be a reliable and valid scale.

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