



## The Caring Dimension Inventory (CDI-29): Modified Arabic Version

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### Abstract

**Purpose:** This study was designed to examine the psychometric properties of modified Arabic version of the Caring Dimension Inventory.

**Methods:** The cross-sectional survey was conducted in Jordan in four psychiatric clinical settings. Data were collected from three psychiatric hospitals and one psychiatric ward. The sample size was 205 nurses. Ethical approval was granted to conduct this study by the relevant research ethics committees of the involved hospitals.

**Results:** The Exploratory Factor Analysis with principal component analysis using Varimax rotation for the CDI-29 resulted in four factors. The psychometric properties of the modified scale are well established in this study.

**Conclusion:** The modified scale can be used to determine caring behaviors and nurses' perceptions of the importance of caring behaviors in the Arabic culture.

### Keywords

CDI-29, Arabs, Nursing care, Factor analysis

### Introduction

Caring is the essence of nursing. It is directly connecting patients' overall fulfillment and sense of well-being [1,2]. It is reported that high level caring vitally enhances clients' emotional as well as physical health which, corresponds with the ultimate goal of achieving good mental and physical health status [3]. Literature emphasized the importance of caring for patients' wellbeing. For example, studies indicated that a therapeutic relationship is a caring relationship, and considered an essential element in professional nursing [4,5]. In spite of a lack of consensus on caring as part of the meta-paradigms of nursing, caring has appeared during the past three decades as a dominant element in nursing profession [6]. Caring relies on situations, and nurses should consider the various emotions for the clients when providing the necessary care [7]. The patient must be the center of the health care focus [1].

Nurses working in psychiatric hospitals need to acquire the skills of therapeutic communication such as being genuine, an active listener, and being a patient advocate [8,9]. In mental health nursing, the interpersonal interaction is the core element of the practice. In

order to promote the client with mental health issue, nurses caring attitude towards their patients is essential [10]. This requires mental health nurses to recognize the necessity of caring in a client-nurse relationship [11].

Translating questionnaires into other languages is a common procedure these days [12]. The underlying principle being that it is wise to use existing instruments that are proven to effectively measure variables rather than develop new tools with all the time-consuming measures that this involves. Actually, a translated instrument to evaluate different populations in new cultural setting is preferable and will support the validity of the measure [13-15]. Nationwide, mental health issues in many parts of Jordan continue to be under-discussed topic [16,17]. To the best of our knowledge, no studies have been found in the published literature that had assessed caring among nurses in mental health settings in Jordan. Therefore, this study may contribute to the body of knowledge and lead to an evaluation of the quality of nursing care provided to patients diagnosed with a mental health challenge.

This study intended to explore the fundamental structure of caring, and this was addressed by the addition of four new items to the original Caring Dimension Inventory (CDI-25). These additional items were Item 26 (assess the psychosocial aspects of the patient); item 27 (assess the patient with a high risk of suicide), item 28 (assess the patient with a high risk of violence) and item 29 (modify the environment to be more therapeutic). All the modification processes were applied according to the pre-pilot committee suggestions (Two Assistant Professor, one Lecturer, and clinical nurse specialist in Psychiatric/Mental health Nursing) and after obtaining the permission of the original author of the instrument. From the perspective of the panel, the rationale for these modifications was that caring in a specialized area such as the psychiatric unit involves dealing with special situations such as violent and suicidal behaviors; thus, nurses may need to modify the environment to be more therapeutic. Therefore, the aim of this study was to examine the psychometric properties (validity and reliability) of an Arabic version of the modified CDI-29 among mental health nurses in Jordan.

### Methods

#### Instrument

The need for an instrument to measure the Caring Dimension

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Inventory (CDI) is vital. There are few instruments identified in the published literature that may be used to measure caring. The CDI-25 is one of these instruments which was developed by Watson in 1997 [18]. However, the CDI-25 was not adequately developed to measure caring for the Arab world, as well as in mental health nursing. The instrument originally was designed to assess the perception of caring by asking people to indicate their agreement to statements about their nursing practice as constituting caring. Therefore, four items focusing on a safe and therapeutic environment were added to the instrument. Then, the measure was examined to establish its validity and reliability in this study.

### Setting and sampling

Data were collected from three psychiatric hospitals and one psychiatric ward; "A" hospital is a government hospital with a capacity of 220 beds, "B" hospital is a government hospital with a capacity of 125 beds, "C" hospital is a private hospital with a capacity of 75 beds. The psychiatric ward is part of a large educational and multispecialty hospital with a capacity of 10 beds. According to the data obtained from the human resources departments in the selected hospitals, the total number of nurses was 260 nurses. A list with the demographics of all nurses working in the selected hospitals was checked for the inclusion criteria (to be a registered nurse and to be from one of the Arab nationalities). The total number of eligible participants for this study was 220 nurses. Those who met the inclusion criteria received a package containing the questionnaires used in the present study.

### Ethical Considerations

Ethical approval was granted to conduct this study by the relevant research ethics committees of the involved hospitals. The purpose, benefits, and risks were explained to the sample before they decided to participate. The participants were assured that their contribution would be completely voluntary. The expected time to complete the questionnaire was between 5 and 10 minutes.

### Results

#### Participants' characteristics

Out of the 220 eligible nurses, 205 of them (93%) completed the survey. The mean age of the participants was 33.6 years. More than half of the participants were male (n = 110; 54%). Almost three-quarters of the participants were married (n = 150; 73%). Moreover, 135 (66%) participants held bachelor degrees with an average of seven years nursing experience in the mental-health field. Over half of the participants had some training in mental-health nursing (n = 105; 51%) and 58% (n = 118) received organizational and managerial support. The mean number of the participants' working time was 45.5 hours weekly.

Exploratory factor analysis (EFA) is used to group together the intercorrelated variables or items [19,20]. Table 1 presents the means and standard deviations for the 29 items of the CDI scale. The highest mean was (4.74) for the item "Assess the patient who high risk for suicide," and the lowest mean was (3.17) for the items "Sharing your personal problems with a patient."

The EFA principal component analysis with Varimax rotation resulted in four latent variables with items distribution among the factors as shown in table 2. The cumulative variance for the four factors in the model was 44.67%, with the highest contribution from the first factor with 27.82%. The Cronbach's Alpha for the 29-item scale was 0.89, and it was 0.85, 0.77, 0.69, and 0.65 for the factors one to four respectively. The first factor was called "Psychosocial," and it is composed from 10 items; the second factor was called "Technical," and it is composed from eight items; the third factor was called "Professional," and it is composed from six items; and the fourth factor was called "Empathy" and is composed from five items.

### Discussion

For many reasons, the Caring Dimension Inventory-25 was

**Table 1:** Descriptive statistics with means and standard deviations (N = 205).

	Items	M	SD
1	Assisting a patient with an activity of daily living (washing, dressing, etc.).	4.10	0.98
2	Making a nursing record about the patient.	4.53	0.68
3	Feeling sorry for a patient.	3.72	1.09
4	Getting to know the patient as a person.	4.29	0.84
5	Explaining a clinical procedure to a patient.	4.14	0.85
6	Being neatly dressed when working with a patient.	4.19	0.77
7	Sitting with a patient.	4.15	0.63
8	Exploring a patient's lifestyle.	4.00	0.64
9	Reporting a patient's condition to a senior nurse.	4.41	0.73
10	Being with a patient during a clinical procedure.	4.34	0.75
11	Being honest with a patient.	4.66	0.56
12	Organizing the work of others for a patient.	4.40	0.65
13	Listening to a patient.	4.45	0.67
14	Reporting with the doctor about a patient.	4.70	0.51
15	Instructing a patient about an aspect of self-care (washing, dressing, etc.).	4.31	0.82
16	Sharing your personal problems with a patient.	3.17	1.19
17	Keeping relatives informed about a patient.	3.89	0.93
18	Measuring the vital signs of a patient (e.g., pulse and blood pressure).	4.35	0.70
19	Putting the needs of a patient before your own.	3.71	1.04
20	Being technically competent with a clinical procedure.	4.30	0.67
21	Involving a patient with his or her care.	4.15	0.76
22	Giving reassurance about a clinical procedure.	4.39	0.63
23	Providing privacy for a patient.	4.62	0.68
24	Being cheerful with a patient	4.37	0.68
25	Observing the effects of a medication on a patient	4.53	0.61
26	Assess the psychosocial aspects of the patient.	4.36	0.66
27	Assess the patient who high risk for suicide.	4.74	0.55
28	Assess the patient who high risk for violence.	4.66	0.61
29	Modify the environment to be more therapeutic.	4.48	0.72

**Table 2:** Factors loading with Varimax rotation.

Item #	Factor 1 Psychosocial	Factor 2 Technical	Factor 3 Professional	Factor 4 Empathy
CDI-28	0.795			
CDI-27	0.769			
CDI-26	0.686			
CDI-25	0.629			
CDI-23	0.606			
CDI-29	0.572			
CDI-24	0.572			
CDI-14	0.482			
CDI-18	0.409			
CDI-2	0.386			
CDI-11		0.691		
CDI-6		0.682		
CDI-15		0.571		
CDI-12		0.467		
CDI-5		0.467		
CDI-13		0.453		
CDI-22		0.443		
CDI-20		0.422		
CDI-19			0.634	
CDI-18			0.595	
CDI-7			0.587	
CDI-9			0.577	
CDI-10			0.529	
CDI-21			0.436	
CDI-16				0.713
CDI-3				0.700
CDI-17				0.687
CDI-4				0.482
CDI-1				0.427

\*Empty cells means that the loading is less than 0.30

modified in this study. In addition to the original 25 items, the researchers added four items: Item 26 (assess the psychosocial aspects of the patient); item 27 (assess if the patient with a high risk of suicide), item 28 (assess if the patient with a high risk of violence) and item 29 (modify the environment to be more therapeutic).

Mental health nursing has been considered to be a demanding profession [21,22]. Nurses face various challenges, such as increased patient acuteness, decreased duration of stay in hospitals, and altering patient anticipations [23,24]. The primary issues that mental health nurses are experiencing while giving care includes the ability to provide a safe environment, and providing therapeutic care [16,25]. Furthermore, Rey *et al.* (2004) reported that patients with a mental illness lean to be more challenging, acute, and distressed [26]. Mental health nursing responsibilities consist of assessments, establishing a safe and therapeutic environment, and promoting stabilization [27]. On the other hand, while mental health nurses endeavor to provide a safe environment, they struggle to give therapeutic care [28], frequently raising nurses' burdens, and negatively influencing their capability to provide quality care [16] because caring in a specialized area such as the psychiatric unit involves dealing with special stressful situations such as the psychological aspects [29,30] violent or aggressive [31-33] and suicidal [34] behaviors.

In the Principal Components Analysis with Varimax rotation, the four-factor model accounted for 45% of the variance. Our results show that the reduced version of 29 items improves the validity of the instrument in the Arab culture. Furthermore, internal consistency coefficients were relatively high in the modified version. In conclusion, the modified 29-item CDI scale is recommended for use when determining caring behaviors and nurses' perceptions of caring behaviors in the Arabic culture. However, the psychometric properties of the modified scale needs further assessment in future studies.

## Summary Points

- Measurement of caring is a relatively new area in the health studies literature.
- Exploratory factor analysis indicated that the 29-item scale is better than the 25-item scale in measuring caring in the Arab culture.
- The four-factor model is valid, reliable, and empirically supported.

## Conflicts of Interest

The authors have no financial or any other kind of personal conflicts with this article.

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