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## The psychometric properties of the Arabic version of the Satisfaction with Daily Occupations

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## **“The Psychometric Properties of the Arabic Version of the Satisfaction with Daily Occupations (SDO)”**

### **Abstract**

**Background/Aim:** There is a shortage of tools aimed for occupational therapy practice in Arabic-speaking countries. The purpose of this study was to translate and cross-culturally adapt the original SDO to Arabic and assess the psychometric properties of the adapted tool.

**Methods:** A rigorous cross-cultural adaptation process was performed. Face, content, and criterion validity were examined, as well as internal consistency and test-retest reliability.

The study included 147 healthy adults and 73 patients with cerebrovascular accident (CVA).

They were purposefully selected from two countries (Kuwait and Jordan). **Results:** The

adapted tool comprised six domains and a total of 14 items. Face and content validity were

established through prolonged content analysis. Criterion validity was indicated by

significant differences between the healthy and the CVA group in all areas of the SDO scale

( $p < 0.001$ ). Satisfactory overall internal consistency ( $\alpha = 0.77$ ) and good test-retest reliability

for the total satisfaction score for the healthy (ICC = 0.984) and the CVA group (ICC = 0.933)

were found. **Conclusions:** The SDO-Arabic is a valid and reliable tool for use with Arabic-

speaking occupational therapy clients. This study has several implications for occupational

therapy education, practice and research in the Arab world.

**Key words:** Culture, instrument development, validity, homogeneity, occupational therapy.

## **Introduction**

Assessment is an integral part in occupational therapy practice when collecting information about a client's strengths and weaknesses in performing daily occupations (Foto, 1998). Traditionally, the core of the occupational therapy profession requires therapists to use occupation-based assessments (Alotaibi, Reed & Nadar, 2009; AOTA, 2008; Christiansen, 1999; Kielhofner, 2005; Wilcock, 2001) for understanding all aspects of clients' performance and determine the effectiveness of the services provided (Eklund & Gunnarsson, 2007; Eklund & Sandqvist, 2006).

The search for valid and reliable assessment tools is a constant concern for occupational therapists. However, in Arabic-speaking countries finding such tools is a greater challenge given the shortage of culturally-relevant assessment tools due to the profession being a relatively new feature in this part of the world. There is thus a pressing need for occupational therapists in these countries to adapt and develop standardized occupation-based assessment tools that reflect their culture and serve the needs of the local community (Gandek & Ware, 1998).

Although limitedly available, several of the assessment tools used in the Arabic region have been adopted from western communities or merely translated into Arabic without establishing its cultural fitness or psychometric properties (Yazdani, Jibril & Kielhofner, 2008). It is therefore important for the Arabic occupational therapy practitioners and researchers to carefully develop new assessment tools in Arabic or modify existing standardized tools so that their contents suit the Arabic and Middle Eastern culture. Such cross-cultural adaptation will greatly assist the development of occupational therapy in the Arab world.

Satisfaction with daily activities is one of the most important aspects of everyday life for occupational therapists to assess (Eklund, 2004; Eklund & Gunnarsson, 2007; Eklund

&Sandqvist, 2006). Occupational satisfaction and occupational performance are complementary phenomena (Carswell et al., 2004), and the former is used to describe personal evaluations of everyday life (Eklund & Morville, 2013). Occupational satisfaction is frequently overlooked by practitioners, and there is a limited number of valid and reliable tools to assess such a complex and highly subjective construct. Satisfaction is also highly influenced by culture which makes culturally relevant tools assessing this aspect an urgent matter for therapists everywhere and particularly in the non-western world.

The Satisfaction with Daily Occupations (SDO) is a valid and reliable assessment tool for clinical and research purposes in the field of occupational therapy (Eklund, 2004; Eklund & Gunnarsson, 2007; Eklund & Sandqvist, 2006). The original nine-item SDO was developed primarily for persons with mental illness and other diagnostic groups (e.g., scleroderma) (Eklund, 2004; Eklund & Gunnarsson, 2007; Eklund & Sandqvist, 2006). A more recent version has 14 items and the extra items were added to make the SDO relevant also to people with less severe health problems. The extended version had good internal consistency and construct validity in a Danish study that included both healthy people and asylum seekers (Eklund & Morville, 2013). Sample items and the SDO format are exemplified in Figure 1.

FIGURE 1 IN HERE

The SDO is a useful instrument because it can be used for both screening of disadvantaged groups and outcome evaluation (Eklund, 2004; Eklund & Sandqvist, 2006; Eklund & Gunnarsson, 2007; Eklund & Gunnarsson, 2008). The SDO only takes 10-20 minutes to administer (Eklund & Gunnarsson, 2008) and the easy administration of the SDO makes it an appealing tool for occupational therapists to use in busy hospitals and centers. The client-centered formatted questions make the tool appealing for patients to complete

during the rehabilitation process. In all, the nature of the SDO makes it a suitable tool for translation into other languages and adaptation to non-western cultures.

The purpose of this study was to develop the Arabic version of the SDO. In doing so, the specific aims of this study were to:

1. Translate the original SDO to Arabic;
2. Cross-culturally adapt the SDO to suit the Arabic culture;
3. Examine and establish the psychometric properties of the SDO Arabic version (specifically face validity, content validity, criterion validity, internal consistency and test-retest reliability).

## **Methods**

### ***Translation and Cross-Cultural Adaptation***

Cross-cultural adaptation is defined as a "process which looks at both language (translation) and cultural adaptation issues in the process of preparing a questionnaire for use in another setting" (Beaton et al., 2000, P. 3186). In this study, the adaptation included the following stages (Figure 2):

FIGURE 2 IN HERE

- *Stage I: Forward Translation:* two bilingual native Arabic speakers translated the tool from English to Arabic.
- *Stage II: Synthesis of the Translation:* the forward translators along with a mediator (recording observer) paneled to discuss the translation process, identify discrepancies, and finalize the first draft of the Arabic version (further on the SDO-Arabic).

- *Stage III: Back Translation:* backward translation of the SDO-Arabic into English by two bilingual native English speakers. This was conducted to ensure accurate semantic rather than literal translation of the SDO.
- *Stage IV: Expert Committee Review process:* the committee consisted of forward and backward translators, research methodologist, health care professionals (occupational therapists) and a language expert. The committee convened and resolved any discrepancies with the previous stages to produce the pre-final version of the SDO-Arabic.
- *Stage V: Test of Pre-final Version (face and content validity):* to pilot test the pre-final administration of the SDO-Arabic, 40 participants with various neurological conditions (cerebrovascular accident [CVA], traumatic brain injury [TBI], and multiple sclerosis [MS]) were recruited from the Physical Medicine and Rehabilitation Hospital in Kuwait. All participants were interviewed face to face by one of two research assistants. The emphasis of this pre-final administration was to ensure the clarity and understanding of the test's instructions and items. Participants were allowed to ask questions for clarification while responding to the SDO-Arabic. Upon completion of the questionnaire, participants were asked about the clarity and relevance of each item to the Arabic language and culture. The average time for the content validity interviews was 15 minutes. Field notes were taken and a content analysis of clients' feedback was performed to explore the linguistic and cultural relevance of these items to the Arabic population.

At this point, face validity of the SDO-Arabic was also assessed by individually asking the 40 Arabic clients regarding the appropriateness of the items in addressing the level of satisfaction with their daily occupations. Following the pre-final administration stage, the expert committee reconvened and addressed the

required changes based on the feedback from the participant to make the final SDO-Arabic.

### ***Participants***

The participants in the CVA group were purposefully selected from two countries (Kuwait and Jordan). The Kuwaiti participants with CVA were recruited from the Physical Medicine and Rehabilitation Hospital. The Jordanian participants with CVA were recruited from the Handicap International Organization in Jordan. The inclusion criteria for the participants in the CVA group were: a) native Arabic speaker; b) had a confirmed diagnosis of a CVA; c) were at least 18 years old; and d) cognitively intact as indicated by the Mini-Mental Status Examination (MMSE). The participants were excluded from the study if they: a) had a major diagnosis other than the CVA (e.g., spinal cord injury); b) had a diagnosis or symptoms of mental health illness (e.g., psychosis); and c) had cognitive or communication difficulties.

The convenience sample of the healthy group was randomly recruited from different local community areas (e.g., shopping malls and cafés), parks and neighborhoods. The research assistants interviewing the healthy participants confirmed their healthy status by verbally reviewing their medical history for absence of neurological, physical, or mental illnesses. Healthy participants received detailed information on the study purpose, assessment tool, and timeline for the interview. Interested participants gave their verbal consent to join the study.

This study included 220 adult participants: 147 healthy adults and 73 patients with cerebrovascular accident (CVA). The age of the healthy participants (n= 147) ranged from 20 to 81 years (Mean = 45.12, SD = 10.72) whereas the age of the CVA participants (n= 73)

ranged from 18 to 88 years (Mean = 52.15, SD = 17.24). Additional demographic variables are presented in Table 1.

TABLE 1 IN HERE

### ***Data Collection***

Ethical approval from the Committee for the Protection of Human Subjects was obtained from each of the following sites: Kuwait University Health Sciences Center, Physical Medicine and Rehabilitation Hospital in Kuwait and Handicap International Organization in Jordan. Two research assistants were trained to collect the data from all participants. All participants were asked to complete a form with demographic details (e.g., age, gender, marital status...etc.). The administration of the SDO-Arabic version was performed in a quiet place. Participants were reassured about the anonymity of their information and were informed that they had the right to withdraw from the study at any time. The data collection was completed over the period between May 2012 and May 2013.

### ***Instrumentation***

#### **Satisfaction with Daily Occupations (SDO)**

The original SDO is an interview-based questionnaire that inquires about the level of satisfaction when participating in daily activities. It comprises 14 items within the occupational areas of Work (4 items), Leisure (3 items), Home management (4 items) and Self-care (3 items). Each of the 14 items is scored, based on the individuals response, on whether they participate in an activity, "Yes=1" or not "No=0", making the total participation score ranging between 0 and 14. In addition to the Yes/No participation response, individuals then rate their level of satisfaction about that participation (whether participating or not) on a



scale from 1 (least satisfaction) to 7 (most satisfaction), making the total satisfaction score range from 14 to 98.

### ***Estimations of Psychometric Properties of the SDO-Arabic***

#### **Validity**

Validity indicates the instrument's ability to measure what it is supposed to measure (Polit & Beck, 2004). In this study, three forms of validity for the SDO-Arabic were evaluated: face, content, and construct validity, in terms of criterion validity. Face validity was tested by asking participants whether they thought the tool actually looked like it measures participation and satisfaction with daily occupations. Content validity was tested by examining whether the experts and clinicians in the field of occupational therapy agreed that the instrument's 14 items properly represent the construct being evaluated. Construct validity, which is an estimate of the instrument's ability to measure the construct it is intending to measure, was tested by examining the instrument's ability to highlight differences between two groups that are expected to differ on a specific construct (i.e., Known Group Method) (Polit & Beck, 2004), in this case healthy people and patients with CVA. This aspect of construct validity is often termed criterion validity (Streiner & Norman, 2008).

#### **Reliability**

Reliability of an assessment tool (instrument) relates to its consistency with which it measures the target attribute (Polit & Beck, 2004). It indicates how reliable the instrument is in helping therapists making informed decisions about individuals' performance. In this study, two forms of reliability were examined: internal consistency and the test-retest reliability. Internal consistency relates to the association of instrument's items to each other (Polit & Beck, 2004). Test-retest reliability is defined as the consistency of the scores over

time in which similar results are obtained for the two separate administrations of the same assessment tool by the same people (Polit & Beck, 2004; Streiner & Norman, 2008). The test-retest administration was conducted with 33 patients with CVA and 26 healthy participants with an interval of 5-7 days.

### ***Data Analysis***

The data sets were analyzed using the Statistical Package for Social Sciences (SPSS version 21). Descriptive analysis was conducted for all used variables. Internal consistency was assessed by calculating the Cronbach's alpha coefficient. Test-retest reliability was assessed using the Inter-Class Correlation Co-efficient (ICC) of two factor mixed effects model and type consistency (McGraw and Wong, 1996). In order to be sure about the normality of the data, the Kolmogorov Smirnov test was used prior to any analysis for testing differences between two groups of participants. T-test was used for testing the difference between two groups of participants with a normal distribution. Mann–Whitney U test was used for testing the difference between two groups of participants with a non-normal distribution.

## **RESULTS**

### ***Translation and Cross-cultural Adaptation***

After completing the translation and cross-cultural adaptation process, several linguistic and cultural issues were addressed and appropriate changes were made accordingly. The adaptation process yielded a few structural changes to the Arabic version. First, two new areas that are important to the Arab culture were added: social life (3 items: visiting a relative, visiting friends and attending social gathering) and religious life (1 item: participating in a religious activity). These two added areas were well addressed by almost all

the participants during the pre-final administration of the SDO-Arabic and therefore a consensus for their inclusion was reached by all the expert committee reviewers. Hence, the complete Arabic SDO comprised of six areas, including work, leisure, home management tasks, self-care, social life and religious life.

In addition, certain items within the original areas of the SDO version were modified, combined, or removed to reflect the nature of the Arabic culture. For example, in the work area, the item of being engaged in work/school was deleted because it had the same meaning as currently being employed/or in school. Two more items, attending some form of work training and engaging in activity programs, were not included in the SDO Arabic questionnaire because of the unavailability of such work programs in most Arabic countries. The item regarding attending work or school at present was kept as it was in the original SDO, but another item was added addressing whether the person has been receiving rehabilitation services. Another example is in the leisure domain, where items on planning for household activities were deleted as it is not habitual in the Arabic culture to plan for household activities. Moreover, to reflect the Arabic culture with respect to rest and relaxation, some new items were added within the self-care domain, such as reading/listening to the Holy Quran or reading/ listening to music, as such relaxation activities are generally practiced in the Arabic and Muslim culture.

In agreement with the original version of the SDO and to reflect gender roles, some items within the domain of home management tasks were retained as they were in the original SDO version. Additional examples were added to address Arabic male culture such as shopping for the home needs and performing manual labour work. More details on the new SDO domains and items are presented in Table 2.

TABLE 2 IN HERE

Finally, based on comments and suggestions from a majority of the participants during the pre-final administration of the SDO-Arabic, the expert committee reviewers decided to modify the satisfaction rating scale to be more user friendly. Thus, the original 7-point scale was condensed into to a 5-point scale where 1=extremely dissatisfied, 2=dissatisfied, 3=neutral, 4=satisfied, and 5= extremely satisfied.

### ***Psychometric properties of the SDO-Arabic***

#### *Validity*

The face validity was well-supported by the agreement of all the participants in acknowledging the relevance and appropriateness of the SDO-Arabic items for assessing the satisfaction level of their daily occupation. The content validity was also assured by the consensus of nine occupational therapists combined from both Kuwait and Jordan concerning the appropriateness and relevance of the SDO-Arabic items. *T*-test showed that there were significant differences between the healthy adults and the CVA group in all areas of the SDO participation scale ( $p < 0.001$ ). The Mann–Whitney U test showed that there were significant differences between the healthy adults and the CVA group in all areas of the SDO satisfaction scale ( $p < 0.001$ ). These group differences thus indicated criterion validity.

#### *Reliability*

*Internal consistency of the participation and satisfaction scales.* Regarding the SDO participation scale, the results demonstrated overall raw alpha coefficients of 0.52 and 0.83 for the healthy and CVA groups, respectively. For the SDO satisfaction, the results demonstrated an overall raw alpha coefficient of 0.759 for the healthy group and 0.817 for the CVA group.

*Test-retest reliability.* The ICC for the total participation score in the healthy group was 0.997 (95% CI= 0.993-0.999). The ICC for the CVA group was 0.942 (95% CI=0.883-0.972). Moreover, the ICC for the total satisfaction score in the healthy group was 0.984 (95% CI=0.965-0.993). The ICC for the total satisfaction score in the CVA group was 0.933 (95% CI=0.865-0.967).

## **Discussion**

In this study, we translated and adapted the occupation-based assessment tool SDO. The Arabic version covers a spectrum of daily occupations within the areas of work, leisure, home management tasks, self-care, social life, and religious life in the Arab world. By addressing these predefined areas, found to be relevant by both patients and occupational therapists, the SDO-Arabic would be useful for occupational therapists working in the Arab world to estimate clients' levels of participation in daily occupations and their satisfaction with these.

The adaptation process yielded two new domains, social life and religious life that were not a feature of the original version. Those two domains were added into the SDO-Arabic version because they are essential aspects in the Muslim and Arab societies, which encourage people to involve in various levels of social and religious activities. The importance of social support has been documented in many studies performed in various types of societies (Albrecht & Devlieger, 1999; Eklund & Hansson, 2007; King, 1996; Kim et al., 1999). It has also been shown that social life and satisfaction with daily occupations are closely related phenomena (Eklund, 2006), and it may be argued that all areas targeted in the original SDO encompass occupations that may be performed with others. However, Arabs tend to have multiple social networks because of the family-oriented and collectivistic nature of the Arab culture. Social connections to the extended families and relatives thus top the social priorities in collectivistic cultures, and this has implications for how illness and rehabilitation need to be assessed (Pooremamali, Persson & Eklund, 2011). Given this situation, it was deemed

relevant to include social life as a specific occupational area in the SDO-Arabic.

Additionally, Muslims practice their religion in several ways. They engage in various religious activities such as praying five times a day, reading and/or listening to the Holy Quran, or attending religious lectures, (Manee, Nadar, Al-Naser, & Al-Ramezi, 2012).

The results showed that the SDO-Arabic demonstrated good psychometric properties in terms of the homogeneity of the items (i.e., internal consistency) and stability over time (i.e., test-retest). The results also showed that the instrument had the ability to discriminate between healthy adults and patients with CVA. As expected, participants with CVA scored significantly lower than the healthy group in both the participation and satisfaction scores, indicating that the patients participated less in occupations and were less satisfied with their occupations, most likely because of the illness-related impairments and disability. This is in agreement with other SDO studies, showing that the original SDO had equivalent psychometric properties (Eklund, 2004; Eklund & Gunnarsson, 2007; Eklund & Gunnarsson, 2008; Eklund & Sandqvist, 2006).

The clinical utility of the SDO was also established. The time required to fill out the SDO-Arabic was considered reasonable and the items were considered easy to read. This indicated that the SDO-Arabic can be applicable to a client population such as persons with CVA. This adds to findings from previous studies, which revealed that the SDO was applicable to client populations such as people with mental illnesses and people with scleroderma (Eklund, 2004; Eklund & Gunnarsson, 2007; Eklund & Gunnarsson, 2008; Eklund & Sandqvist, 2006).

### **Implications**

The SDO-Arabic has important implications for occupational therapy education, clinical practice, and research. For example, for education purposes, students can learn how

to assess abstract constructs such as satisfaction, which cannot be tangibly measured.

Moreover, by discussing different version of the SDO, students can learn how culture is an important aspect to consider when assessing patients' needs and functional performance.

In terms of occupational therapy practice, the use of the SDO-Arabic can enhance the client-centered nature of the profession by allowing practitioners to address such a central aspect to the patients as satisfaction with daily occupations. Moreover, the fact that the SDO showed good psychometric properties will allow practitioners to make valid and reliable assessments, monitor patients' progress over time, compare outcomes between patients, and collect information for research purposes. Consequently, the SDO can be of value to occupational therapy in supporting the development of an evidence-based practice (Hayes, 2000; Tickle-deggen, 2000; Unsworth, 2000).

In terms of implications for research, the translation and adaptation of standardized outcome measure questionnaires, such as the SDO, will introduce and support new areas of research (MacDermid, 2001). Having equivalent versions of the SDO in different languages might also promote comparative studies from different countries (Durand et al., 2005). It may promote cross-cultural communication and collaboration among occupational therapy practitioners and/or researchers to validate occupational therapy outcomes internationally. The fact that the SDO-Arabic was amended, in terms of both items and the response scale, limits the possibility for making direct comparative analyses. On the other hand, however, a culturally relevant measure was obtained and the original version and the SDO-Arabic are similar enough to allow for cross-cultural discussions.

### **Limitations**

The study included only one diagnostic group, one that exhibited mainly neuromuscular long-term impairments. Future studies are encouraged to include other

populations with physical disabilities (e.g., back pain) or with disabilities of another nature (e.g., fluctuating nature such as multiple sclerosis). Further research regarding the SDO should address its responsiveness, sensitivity to change, inter-rater reliability, and other aspects of construct validity (convergent validity).

### **Conclusion**

The SDO-Arabic is the first culturally adapted valid and reliable assessment tool for assessing satisfaction with daily occupations. It can be used by occupational therapy students, practitioners, and researchers in Arabic-speaking countries. Future studies are needed to examine the utility of the new tool in various diagnostic and healthy groups.

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## References

- Albrecht, G.L. & Devlieger, P.J. (1999). The disability paradox: High quality of life against all odds. *Social Science Medicine*, 977-988.
- American Occupational Therapy Association, (2008). Occupational therapy practice framework: Domain and process. *American Journal of Occupational Therapy*, 62, 625-683.
- Alotaibi, N., Reed, K., & Nadar, M. (2009). Assessments used in occupational therapy practice: An exploratory study. *Occupational Therapy in Health Care*, 23, 302-318.
- American Occupational Therapy Association. (2008). Occupational Therapy Practice Framework: Domain and Process. *American Journal of Occupational Therapy*, 56, 609-639.
- Beaton, D.E., Bombardier, C., Guillemin, F., & Ferraz, M.B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, 25; 3186-3191.
- Carswell, A., McColl, M. A., Baptiste, S., Law, M., Polatajko, H., & Pollock, N. (2004). The Canadian Occupational Performance Measure: a research and clinical literature review. *Canadian Journal of Occupational Therapy*, 71, 210-222.
- Christiansen, C. (1999). Defining lives: Occupation as identity; an essay on competence, coherence and creation of meaning. *American Journal of Occupational Therapy*, 53, 547-558.
- Cortina, J.M. (1993). What is Coefficient Alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98-104.

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Durand, M., Vachon, B., Hong, Q.N., & Loisel, P. (2005). The cross-cultural adaptation of the DASH questionnaire in Canadian French. *Journal of Hand Therapy* 18: 34–39.

Eklund, M. (2004). Satisfaction with Daily Occupations: A tool for client evaluation in mental health care. *Scandinavian Journal of Occupational Therapy*, 11, 136-142.

Formatted: English (United States)

Eklund, M. (2006). Occupational factors and characteristics of the social network in people with persistent mental illness. *American Journal of Occupational Therapy*, 60, 587-594.

Eklund, M., & Gunnarsson, A.B. (2007). Satisfaction with Daily Occupations (SDO): Construct validity and test-retest reliability of a screening tool for people with mental disorders. *Australian Occupational Therapy Journal*, 54, 59-65.

Eklund, M., & Gunnarsson, A.B. (2008). Content Validity, Clinical Utility, Sensitivity to Change and Discriminant Ability of the Swedish Satisfaction with Daily Occupations (SDO) Instrument: a Screening Tool for People with Mental Disorders. *British Journal of Occupational Therapy*, 71, 487-495.

Formatted: English (United States)

Eklund, M., & Hansson, L. (2007). Social network among people with persistent mental illness: Associations with sociodemographic, clinical and health-related factors. *International Journal of Social Psychiatry*, 53, 293-305.

Eklund, M., & Morville, A.-L. (2013). *Psychometric evaluation of the Danish version of Satisfaction with Daily Occupations (SDO)*. Manuscript submitted for publication.

Formatted: English (United States)

Eklund, M., & Sandqvist, G. (2006). Psychometric properties of the Satisfaction with Daily Occupations (SDO) instrument and the Manchester Short Assessment of Quality of

Life (MANSA) in women with scleroderma and without known illness. *Scandinavian Journal of Occupational Therapy*, 13, 23-30.

Finlay, L. (2004) *The Practice of Psychosocial Occupational Therapy*. (3rd ed.) Nelson Thornes, Cheltenham.

Foto, M. (1998). Change, commitment, and ethics: Where do we stand? *American Journal of Occupational Therapy*, 52, 87–89.

Gandek, B., & Ware, J. (1998). Overview of the SF-36 health survey and the international quality of life assessment (IQOLA) project. *Journal of Clinical Epidemiology*, 51, 903–912.

Hayes, R. (2000). Evidence based occupational therapy needs strategically-targeted quality research now. *Australian Occupational Therapy Journal*, 47, 186–190.

Kielhofner, G. (2005). Scholarship and practice: Bridging the divide. *American Journal of Occupational Therapy*, 59, 231–239.

Kim, P., Warren, S., Madill, H., & Hadley, M. (1999). Quality of life of stroke survivors. *Quality of Life Research*, 8, 293-301.

King, R.B. (1996). Quality of life after stroke. *Stroke*, 27, 1467-1472.

Manee, F. Nadar, M., Al-Naser, M., & Al-Ramezi, K. (2012). Quality of Life among Kuwaiti Women Living with Chronic Neuromuscular Conditions. *Applied Research Quality Life*, DOI 10.1007/s11482-012-9189-3

MacDermid, J. (2001). The outcome issue. *Journal of Hand Therapy*, 14: 61–62.

McGraw, K., & Wong, S. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods*, 1, 30-46.

Patterson, C. (2008). A short history of occupational therapy in psychiatry. In: Creek J, Lougher L (Eds) *Occupational Therapy and Mental Health*, pp. 3–16. Edinburgh: Churchill Livingstone, Elsevier.

Polit, D. F., & Beck, C. T. (2004). *Nursing Research: Principles and Methods* (7<sup>th</sup> ed.). Philadelphia: Lippincott Williams & Wilkins.

Pooremamali, P., Persson, D., & Eklund, M. (2011). Occupational therapists' experience of working with immigrants in mental health care. *Scandinavian Journal of Occupational Therapy*, 18, 109-121.

Streiner, D. L., & Norman, G. R. (2008). *Health measurement scales: A practical guide to their development and use* (4<sup>th</sup> ed.). New York: Oxford University Press.

Tickle-Degnen, L. (2000). Monitoring and documenting evidence during assessment and intervention. *American Journal of Occupational Therapy*, 54, 434–436.

Unsworth, C. (2000). Measuring the outcome of occupational therapy: Tools and resources. *Australian Occupational Therapy Journal*, 47, 147-158.

World Health Organization (2001). *International classification of functioning, disability & health (ICF)*. Geneva, Switzerland: World Health Organization.

Wilcock, W. (2001). Occupational science. The key to broadening horizons. *British Journal of Occupational Therapy*, 4, 56–61.

Yazdani, F., Jibril, M., & Kielhofner, G. (2008). A study of the relationship between variables from the Model of Human Occupation and Subjective Well-Being among university students in Jordan. *Occupational Therapy in Health Care*, 22, 125-138.

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**Figure 1.** Examples of the SDO items.

The SDO is an interview-based instrument and each item has two parts. The first is fact-oriented and asks if the client does the targeted occupation. Please ask the client, and then circle yes or no. Then ask about the client’s satisfaction with the occupation, regardless of whether he or she presently performs the occupation or not. Show the satisfaction scale (see below) to the client, and ask him/her to give his/her rating.

**Work**

1. Is presently employed or is enrolled in college/trade school.  
**yes            no        ALWAYS note the satisfaction score \_\_\_\_ (1-7)\***

**Leisure**

7. Has during the past two months performed cultural activities at least once a week, such as reading, listening to music, going to the movies and/or concerts.  
**yes            no        ALWAYS note the satisfaction score \_\_\_\_ (1-7)\***

**Domestic tasks**

9. Has during the past two months been doing household chores almost daily (e.g., cleaning, cooking, doing laundry).  
**yes            no        ALWAYS note the satisfaction score \_\_\_\_ (1-7)\***

**Self-care**

11. Has during the past two months been doing activities that offer rest and relaxation or “filling one’s reserves” at least once a week.  
**yes            no        ALWAYS note the satisfaction score \_\_\_\_ (1-7)\***

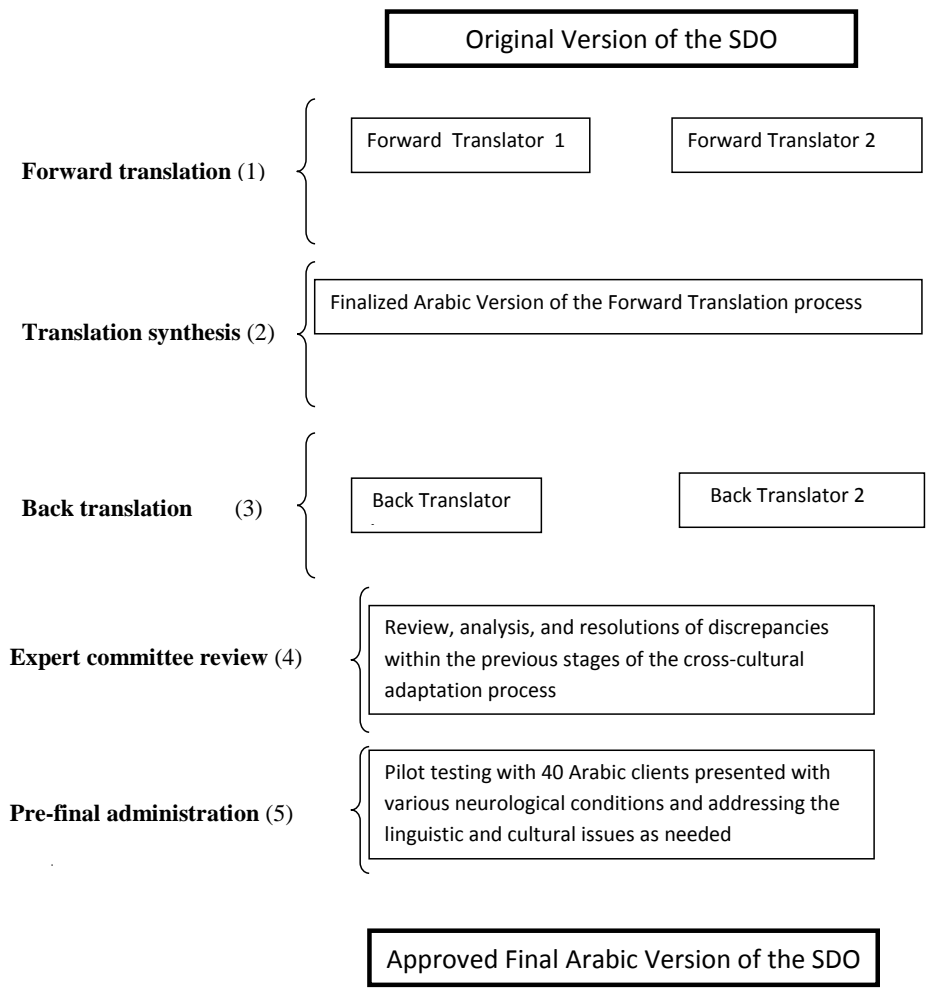
**\* The patient’s satisfaction with performing/not performing the occupation is noted. The result of the performed occupation is not rated per se, but should be weighed into the satisfaction rating in case the result influences the satisfaction.**

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The satisfaction scale is presented on a separate sheet of paper and is formulated as below:

1	2	3	4	5	6	7
Worst possible			Best possible			

**Figure 2:** The cross-cultural adaptation process of the SDO-Arabic



**Table 1: Demographic variables for the CVA and the healthy participants**

Variable	Total Participants		Healthy group		CVA group		
	N	%	N	%	N	%	
<b>Gender</b>							
Man	112	50.9	70	47.6	42	57.5	
Woman	108	49.1	77	52.4	31	42.5	
Total	220	100.0	147	100.0	73	100.0	
<b>Level of education</b>							
Elementary	25	11.4	6	4.1	19	26.0	
Middle	35	15.9	19	12.9	16	21.9	
High school	64	29.1	47	32.0	17	23.3	
University	85	38.6	70	47.6	15	20.5	
Graduate level	8	3.6	5	3.4	3	4.1	
Missing	3	1.4	-	-	3	4.1	
Total	220	100.0	147	100.0	70	95.9	
<b>Type of occupation</b>							
Retired	43	19.5	24	16.3	19	26.0	
Employed	117	53.2	95	64.6	22	30.1	
Housewife	48	21.8	28	19.0	20	27.4	
Student	6	2.7	-	-	6	8.2	
Unemployed	5	2.3	-	-	5	6.8	
Others	1	0.5	-	-	1	1.4	
Total	220	100.0	147	100.0	73	100.0	
<b>Nationality</b>							
Kuwait	149	67.7	127	86.4	22	30.1	
Other Arab countries	69	32.3	20	13.6	51	69.9	
Total	220	100.0	147	100.0	73	100.0	

**Table 2:** Comparison between original and Arabic versions of the SDO

Original SDO version	Arabic SDO version
<b><u>Work (4 items)</u></b>	<b><u>Work (2 items)</u></b>
<b>Item 1</b> (presently employed or in school)	<b>Item 1</b> ( presently employed or in school)
<b>Item 2</b> (engage in work/school)	<b>Item 2</b> (receiving rehabilitation services)
<b>Item 3</b> (attending work training / rehabilitation)	
<b>Item 4</b> (engaged in some kind of activity program)	
<b><u>Leisure (3 items)</u></b>	<b><u>Leisure (2 items)</u></b>
<b>Item 1</b> (participated in some kind of organized hobby or leisure activity)	<b>Item 1</b> (1 (participated in/performed some kind of leisure activity)
<b>Item 2</b> (performed some kind of hobby or leisure activity)	<b>Item 2</b> (performed cultural activities: reading/writing Arabic poetry or stories, camping, fishing, etc.....)
<b>Item 3</b> (performed cultural activities)	
<b><u>Home management (4 items)</u></b>	<b><u>Home management (3 items)</u></b>
<b>Item 1</b> (doing household chores daily)	<b>Item 1</b> (doing household chores daily: cleaning, cooking, laundry, house work)
<b>Item 2</b> (doing repair or maintenance work)	<b>Item 2</b> (doing any activity inside and/or outside home: gardening, shopping, manual labour work)
<b>Item 3</b> (doing most of the planning and organization of the home management tasks.	<b>Item 3</b> (taking care of others)
<b>Item 4</b> (taking care of others)	
<b><u>Self-care (3 items)</u></b>	<b><u>Self-care (3 items)</u></b>
<b>Item 1</b> (performs daily self-care)	<b>Item 1</b> (performs daily self-care)
<b>Item 2</b> (doing exercises)	<b>Item 2</b> (doing exercises)
<b>Item 3</b> (doing activities that offer rest and relaxation)	<b>Item 3</b> (doing activities that offer rest and relaxation: reading/listening to the Holy Quran or reading/listening to music)
-	
-	<b><u>Social life (3 items)</u></b>
-	<b>Item 1</b> (visiting relative(s) and/or someone visits you)
-	<b>Item 2</b> (visiting friend(s) and/or someone visits you)
-	<b>Item 3</b> (attending any social event)
-	
-	<b><u>Religious life (1 item)</u></b>
-	<b>Item 1</b> (participate/perform any religious activity: going to mosque/church., reading/listening to Holy Quran, attending religious event, etc. .... )
<b>Total items= 14</b>	<b>Total items= 14</b>