The Scale of Attitudes Towards People with Disabilities: An Arabic Cross-Cultural Translation Study

Abdulmajeed R. Almalty[1*], Mohammad Y. Jebril[2], Husny Yousef Amerih[3], Hassan M Abdelnour[4], Nermeen Bleedy[4]

[1*]Physical Therapy Department, College of Applied Medical Sciences, The Hashemite University, Zarqa, Jordan

[2]Department of occupational therapy, Faculty of Medical Rehabilitation Sciences, King Abdulaziz University, Jeddah, Saudi Arabia, Email: myjebril@kau.edu.sa

[3]Occupational Therapy Department, Keiser University, Florida, USA

[4]Physical Therapy Department, College of Applied Medical Sciences, Jerash University, Jerash, Jordan.

*Corresponding author: Dr. Abdulmajeed Almalty
*Associate Professor, Department of Physical Therapy, The Hashemite University, Zarqa, Jordan,
Email: abedmalty@hu.edu.jo, ORCID: 0000-0003-1521-731X

Abstract

Background: The Scale of Attitudes Toward Disabled Persons (SADP) has been widely used and translated into different languages to evaluate the public's general attitude toward people with disabilities. **Purpose**: The aim of this study was to adapt the SADP to Arabic culture through the application of a systematic cross-cultural translation process and an analysis of the translated version's content validity, internal consistency, and test-retest reliability. **Subjects and Methods:** The Arabic version of SADP was created using the cross-cultural translation guidelines of the American Association of Orthopedic Surgeons. The five stages of the guidelines were expert evaluation, pre-testing, synthesis, backward translation, and forward translation. Ten specialists with PhDs in rehabilitation evaluated the content validity of the Arabic version using the content validity index (CVI) and content validity ratio (CVR). To investigate internal consistency, test-retest reliability, and split-half reliability, 160 students were selected from various colleges and given the same scale after 14 days. A mere 137 students completed the testing phase, with 14% (24/160) dropping. **Result**: For every survey item, the CVI was excellent (>0.8). For every item, there was a significant difference (p<0.03) according to the Wilcoxon Signed Rank Test. This outcome is consistent with the CVR outcomes for every item. The scale's Cronbach's alpha (α =0.78), the split-half reliability's Spearman-Brown coefficient (α=0.81), and the test-retest reliability's intraclass correlation coefficient (ICC) were 0.96. **Conclusion**: The Arabic version of the SADP exhibited good validity, good internal consistency, and excellent test-retest reliability.

Key Words: Scale, attitude, people with disability, Rehabilitation, Arabic translation

Introduction:

Disability is defined as an impairment, limitations on activities, and restrictions on participation that result from a negative interaction between an individual's environment and their health status (WHO, 2015). The number of people with disabilities has been rising over

the past few decades; according to the World Health Organization (WHO), there are an estimated 1.3 billion impaired people globally, or 16% of the total population (WHO, 2015).

The WHO has recognized the three dimensions of disability—physical, mental, and social—to better comprehend and treat the global rise in disabilities. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) explicitly mentions the importance of international development in enhancing the living conditions and social integration of individuals with disabilities across national borders (AlTarawneh et al., 2014; Qawasmeh et al., 2020). The private sector, nongovernmental organizations, the government, and society must work together to accomplish this. The Community-Based Rehabilitation (CBR) program serves as an example of this type of cooperative effort. CBR aims to increase accessibility to social and medical resources to integrate people with disabilities (PWDs) into society. Consequently, communities have implemented numerous strategies to improve PWDs' circumstances, such as professional education and awareness-raising (Al-Tarawneh et al.; 2014; Abdelnour, 2020). In many developing nations, there is a widespread stigma against PWDs, which makes it challenging for them to get the assistance they require. Perceptions about PWDs can influence an organization's policies and procedures, the services it offers, and the perception and handling of PWDs (Abdelnour, 2020; WHO, 2015; Antonak et al., 2000; Barrett et al., 1993). Estimating the prevailing views of different populations toward people with disabilities is also essential for recommending goals to legislators, creating employment and intervention plans, and reducing negative perceptions of PWD initiatives (Barrett et al., 1993; Tervo et al., 2004).

According to a 2015 fact document from the Higher Council for the Affairs of Persons with Disabilities (HCD), the prevalence of disability among Jordanians aged five years and older is approximately 11.25%. Including those under five years in their statistics will match the WHO's proposed 15% prevalence (HCD, 2019; Thompson, 2018). In addition, Jordan has experienced a large influx of refugees in recent years, a significant percentage of whom (30%) have disabilities or special needs, increasing the prevalence by at least 2% (Thompson, 2018). This increases the burden and cost to the Jordanian government of the already-existing population of PWD. This significant number suggests that people with disabilities in this country face numerous obstacles. The country has made efforts to provide improved access to education and healthcare for these individuals, but the situation is still far from ideal. People with disabilities in Jordan still have restricted access to healthcare, education, and employment prospects (HCD, 2021). Furthermore, PWDs still face widespread stigma in many parts of the nation, which makes it challenging for them to get the assistance they require. Roush (1986) asserts that society widely harbors negative attitudes towards disabled individuals, despite their lack of open expression. Positive views toward individuals with disabilities, on the other hand, can

support their social integration, acceptance in their community, and opportunities for future learning and employment (Findler et al., 2007). All these factors have a positive influence on the day-to-day lives of people with disabilities. These factors will affect their self-perception, level of life satisfaction, and capacity for self-determination (Lucas-Carrasco et al., 2012).

The significance of societal perceptions of individuals with disabilities compels us to seek a metric that assesses the prevalent attitudes towards disabled people in Arabic culture, with a particular focus on Jordan. The Scale of Attitudes towards Disabled Persons (SADP), developed by Antonak in 1982, was intended to evaluate the general attitudes of those who participated toward individuals with disabilities, encompassing mental as well as physical disabilities. Professionals have made extensive use of the scale due to its widely acknowledged validity and reliability (Antonak, 1985). Twenty-four items comprise the scale, which measures a variety of attitudes toward PWDs, including negative beliefs, respect, and acceptance (Satchidanand et al., 2012). The scale demonstrated sufficient adaptability, enabling its utilization by various communities and populations and its translation into multiple languages. As illustrated by the works of Bakheit and Shanmugalingam (1997) in Tamil, Packer et al. (2000) in Russian, and Shin & Lee (2011), Han et al. (2023) in Korean, In Arabic culture, only two investigations in literature used the SADP. Nagata (2007) conducted an initial research investigation in Jordan, while Abdulwahab and Al-Gain (2007) conducted a study in Saudi Arabia. Nevertheless, in both investigations, the scholars employed their own interpretations of the scale rather than adhering to the cross-cultural translation protocol. That could potentially impact the outcomes of both investigations. As a result, a dependable and validated cross-cultural instrument is required to examine the general attitude of Arabic culture toward people with disabilities. The primary aims of this research are as follows: initially, to implement a methodical strategy for the cross-cultural translation of SADP into Arabic. The second step is to examine the internal consistency and validity of the translated version.

Antonak (1982) developed the SADP which has a set of 24 items measuring different dimensions of attitudes. Every item has a six-point Likert scale with a score of +3 to -3 for strongly disagreeing and strongly agreeing, respectively. The SADP assesses three aspects of attitude: pessimism-hopelessness (6 items), behavior-misconceptions (7 items), and optimism-human rights (11 items). The Cronbach's alpha coefficient reported an internal consistency of 0.81, 0.77, and 0.82, respectively (Antonak & Livneh, 1988).

Materials and Methods

We aimed to create an instrument that most Arabic respondents could understand, using a simple, classic Arabic language. There were two stages involved in the execution of this investigation. Cross-cultural adaptation of the Arabic version of the SADP comprised the initial phase. The second phase involved conducting a

psychometric analysis of the Arabic version of the SADP. This analysis encompassed an assessment of the instrument's content validity, internal consistency, and test-retest reliability.

Translation and adaptation
The criteria for ensuring a valid cross-cultural translation are multifaceted, and a universal guideline has yet to be agreed upon. However, they unanimously agreed on four universally acknowledged phases of procedure: 1) forward translations; 2) backward translations; 3) expert committee review; and 4) pre-final testing (Survey Research Center, 2016; Guillemin et al., 1993; Varni, 2002). The American Association of Orthopedic Surgeons (AAOS) ratified the guideline that Beaton et al. (2000) proposed. We adhered to the five phases outlined in this cross-translation guideline.

1: forward translation
Two multilingual translators independently translated the Arabic version of the scale. The first translator, with a background in healthcare, is well-versed in the goals and concepts of the scale. The second translator was neither in healthcare nor familiar with the scale goals and concepts. The translators must accompany the translated version with a report. We instructed them to highlight any confusing terminology, phrasing, or ambiguities in the report's instructions, item content, or response options.

2: synthesis
After the translators concluded their task, the two translated scale versions underwent a synthesis to produce a unified, accepted version of the forward translations. The translators engaged a third, bilingual, independent person to produce a synthesis of the two translations. The person taking part conducted an examination of the original scale and both translated versions, in addition to documenting the challenges faced during the synthesis stage and the corresponding solutions.

3: Backward translation
The Arabic version of the scale that was generated by synthesis was subsequently translated back into the original language. Two people who were bilingual but lacked access to the original scale or medical knowledge produced the back translations. This approach mitigated any potential bias and corrected any unanticipated flaws or inconsistencies in the language used.

4: Expert committee review
Four PhD holders, two physiotherapists, one occupational therapist, and one editor of Arabic comprised the committee. Every committee member understood and could communicate in English, both orally and in writing. The committee examined and contrasted the forward and backward translations of the original scale. The committee analyzed, discussed, and recorded certain semantic, idiomatic, and conceptual discrepancies between the terms in all versions during the process of establishing the translated scale. After that, the committee came to an agreement and created the final Arabic translation.

5: Pre-testing
Upon completing the final iteration of the scale, we prepared it for field testing. We carried out an initial investigation involving 20 participants. The participants were asked to fill out the questionnaire and give feedback on the clarity of the items, phrasing, and Likert scale options by detailing their responses on the provided sheet. The majority found the questionnaire clear and easy to comprehend, with only a few minor wording issues. Using their feedback, we made the needed adjustments and created the final version of the Arabic translation (Appendix 1), which is now ready for validity and reliability testing.

Validity and reliability
Content validity:
The researchers prepared the items for evaluation using Critical Values for Lawshe's (Almanasreh et al., 2019; Gilbert et al., 2016; Ayre et al., 2014). We used the content validity ratio (CVR) and content validity index (CVI) to assess the content validity. The tool inquiries about experts' opinions by filling out a questionnaire with a Likert scale for each item over three qualities: item is linked to the scale topic (yes or no), item is essential to the scale (not essential, beneficial but not essential, may be essential, definitely essential), and quality of the item (poor, fair, good, excellent) (figure 1). The researchers invited ten experts from higher education institutes in Jordan to participate in the validity study. Ten experts, all physical therapists and one occupational therapist with a PhD degree, more than 5 years of clinical experience, and a research background in rehabilitation, received the Arabic version of the SADP scale. The experts took 10–15 minutes to complete the questionnaire. The researchers followed the recommendation of Ayre et al. (2014) on the selected number of experts included in the study.

Figure 1: Shows the design of the content validity inquiry form

Item	linked		Essential to the scale				Quality of item			
	yes	no	Not	Useful, not essential	May be	Definitely	Poor	Fair	Good	Excellent
1.										
⋮										
24.										

The researchers collected ten filled-out forms of the Arabic version of "The Scale of Attitudes Toward Disabled Persons" from the experts. Each item's content validity ratio (CVR) was calculated for essential rating (Figure 1). All ratings of "may be essential" and "definitely essential" were counted as essential to calculate the content validity according to the following equation:

$$CVR = \frac{n_e - \left(\frac{N}{2}\right)}{\frac{N}{2}}$$

where (CVR) is the content validity ratio, (ne) is the number of participants indicating the item is "Essential," and (N) is the total number of participants. We will exclude all items with a CVR less than 0.8 from the translated scale. Next, we calculated the entire scale content validity index (CVI) using the following equation:

$$CVI = \frac{\sum CVR}{N_{CVR}},$$

Where CVI is the content validity index, it represents the sum of the content validity ratio for the items included in the scale (items with a CVR ≥ 0.8); N_{CVR} entails the total number of the included items. In addition, one sample Wilcoxon Signed Rank Test was performed to evaluate the probability of essential responses at level of $p<0.05$.

Reliability:
We investigated the internal consistency of the scale's three dimensions. These dimensions of pessimism—hopelessness, optimism—human rights, and

pessimism— misconceptions were assessed using the Cronbach's alpha coefficient. To examine the internal consistency, the Cronbach's alpha values were described as poor, moderate, good, and excellent, with rates of > 0.50, 0.50-0.75, 0.75-0.90, and ≤ 0.90, respectively (Tavakol et al., 2011; George et al., 2003; Wang and Ji, 2020).

We examined the internal consistency and test-retest reliability among students at Hashemite University. We randomly assigned four colleges and one class in each college. We selected university students to guarantee the same participants took the test and the retest two weeks later. The proper sample size for test-retest reliability was estimated using a web sample size calculator, which was recommended by Wang and Ji (2020). The sample size was 120 at significance level (α) = 0.01, type I error probability of α = 0.05, power of 1-β = 90%, and expected correlation coefficient (ICC) (ρ) = 0.85. However, we recruited 160 students (Table 1) to account for student absences and dropouts during the retest phase. We implemented ethical considerations to safeguard the rights of the study participants. Each participant provided written consent, and the questionnaires underwent an anonymous coding process. The Institutional Review Board of Hashemite University granted approval for the study procedures and consent form. We administered a three-part questionnaire to 160 participants, which included demographic information, written consent, and the Arabic version of the SADP scale. Following a 14-day interval, 137 of the same participants re-completed the questionnaire. Absences among students accounted for 14% (24/160).

Table 1. Demographic information of participants and reliability analysis

Variable		N	%
Age (Mean ± SD) year		22.50 ± 3.85	
Gender	female	83	51.9
	Male	77	48.1
Marital status	Single	133	83.1
	Married	27	19.2
Level at BSc	1st year	16	10
	2nd year	30	18.7
	3rd year	56	35
	4th year	58	36.3
Student Major	Art	40	25
	Business	55	42.4
	Occupational Therapy	25	14.6
	Biomedical Engineering	40	25

Reliability analysis		α-value
Internal consistency	The total scale	0.78
	Optimism-human rights	0.70
	Behavior-misconceptions	0.67
	Pessimism-hopelessness	0.73
Split-half reliability	Spearman-Brown Coefficient	0.81
Test-retest reliability	Cronbach's Alpha	0.98

Data Analysis

We assessed the test-retest reliability for SADP by calculating the intraclass correlation coefficient (ICC). We analyzed the data using SPSS software (version 23.0, SPSS Inc., Chicago, IL, USA). Cronbach's alpha was used for the internal consistency of the scale and the three subscale dimensions of the Arabic version of SADP. The Spearman-Brown coefficient was used to measure split-half reliability. The Wilcoxon Signed Rank Test was performed to evaluate the probability of essential responses of the experts for validating the items of the Arabic version of SADP.

Result

Content validity responses (CVR) and content validity index (CVI) were calculated (Table 2). CVI= 0.93 which indicated an excellent content validity index (Gilbert et al., 2016). The Wilcoxon Signed Rank was calculated using SPSS version 20 at probability ($p < 0.05$) for each item and found to be significant for all items (Table 2). This result conforms with the calculated CVR and CVI values for all items (Table 2).

Reliability analysis (internal consistency) revealed Cronbach's alpha of 0.78 and the existence of three subscales (Table 1) that make up the scale: optimism-human rights (α =0.70), behavior-misconceptions (α =0.67), and pessimism-hopelessness (α =0.73). These data were corroborated by the split-half reliability method and the Spearman-Brown coefficient (α =0.81). We found a high degree of reliability between the test-retest measurements. The average measure ICC was 0.96 with a 95% confidence interval from 0.94 to 0.97 ($F (159,136) = 25.417$, $p < .001$).

Table 2. The statistical analysis of CVR, CVI, and the result of Wilcoxon Signed Rank Test

No.	Items	Missing	Not Essential	Beneficial but not Essential	May be Essential	Definitely Essential	Total Essential	CVR	Wilcoxon Signed Rank Test *	CVI
1	Disable children should not be provided with a free public education	0	0	0	2	8	10	0.1	0.005	0.93
2	Disabled people are not more accident prone than other people	0	0	1	1	8	9	0.8	0.020	
3	A disabled individual is not capable of making moral decisions	0	0	1	2	7	9	0.8	0.034	
4	Disabled people should be prevented from having children	0	0	0	1	9	10	0.1	0.003	
5	Disabled people should be allowed to live where and how they choose	0	0	1	1	8	9	0.8	0.020	
6	Adequate housing for disabled people is neither too expensive nor too difficult to build	0	0	0	2	8	10	0.1	0.005	
7	Rehabilitation programs for disabled people are too expensive to operate	0	0	0	0	10	10	0.1	0.002	
8	Disabled people are in many ways like children	0	0	1	2	7	9	0.8	0.034	
9	Disabled people need only the proper environment and opportunity to develop and express criminal tendencies	0	0	1	2	7	9	0.8	0.034	
10	Disabled adults should be involuntarily committed to an institution following arrest	0	0	1	1	8	9	0.8	0.020	
11	Most disabled people are willing to work	0	0	0	2	8	10	0.1	0.005	
12	Disabled individuals are able to adjust to a life outside an institutional setting	0	0	0	1	9	10	0.1	0.003	
13	Disabled people should not be prohibited from obtaining a driver's license	0	0	0	1	9	10	0.1	0.003	
14	Disabled people should live with others of similar disability	0	0	0	1	9	10	0.1	0.003	
15	Zoning ordinances should not discriminate against disabled people by prohibiting group homes in residential districts	0	0	1	1	8	9	0.8	0.020	
16	The opportunity for gainful employment should be provided to disabled people	0	0	0	1	9	10	0.1	0.003	
17	Disabled children in regular classrooms have an adverse effect on other children	0	0	0	1	9	10	0.1	0.003	
18	Simple repetitive work is appropriate for disabled people	0	0	0	1	9	10	0.1	0.003	
19	Disabled people show a deviant personality profile	0	0	0	3	7	10	0.1	0.008	
20	Equal employment opportunities should be available to disabled individuals	0	0	0	0	10	10	0.1	0.002	
21	Laws to prevent employers from discriminating against disabled people should be passed	0	0	0	0	10	10	0.1	0.002	
22	Disabled people engage in bizarre and deviant sexual activity	0	0	1	2	7	9	0.8	0.034	
23	Disabled workers should receive at least the minimum wage established for their jobs	0	0	0	0	10	10	0.1	0.002	
24	Disabled individuals can be expected to fit into competitive society	0	0	0	0	10	10	0.1	0.002	

* *P* = 0.05

Discussion:

This research aimed to adapt and validate the Scale of Attitudes Toward Disabled Persons (SADP) for Arabic-speaking populations, specifically focusing on Jordan. The study highlights the importance of utilizing comprehensive cross-cultural adaptation techniques to

guarantee that psychometric tools are culturally and contextually appropriate. This discourse will examine the study's findings, implications, contributions to the discipline, limits, and prospects for future research.

This study's findings offer compelling evidence for the validity and reliability of the Arabic version of the SADP. A content validity index (CVI) of 0.93 shows that the scale items are more closely aligned with the target constructs. This means that the translated items have been expertly changed to reflect how people in Arabic-speaking cultures feel about disabled people.

The reliability assessments further confirm the scale's efficacy. As for overall scale reliability, Cronbach's alpha was recorded at 0.78, indicating strong internal consistency. The subscales—optimism-human rights (α = 0.70), behavior-misconceptions (α = 0.67), and pessimism-hopelessness (α = 0.73) exhibited moderate to good reliability. Additionally, the high intraclass correlation coefficient (ICC = 0.96) confirms the scale's consistency across repeated administrations, which is essential for longitudinal studies and repeated evaluations.

These results indicate that the scale is not only reliable but also consistent over time, making it a valuable tool for tracking changes in attitudes toward individuals with disabilities. The subscales highlight the complexity of people's perceptions by demonstrating how various factors, such as optimism, behavior, and pessimism, affect attitudes. Overall, the strong internal consistency and reliability of the scale suggest that it can be a useful instrument for research and interventions aimed at improving attitudes and perceptions towards individuals with disabilities in Jordan. The scale may also be applicable in other cultural contexts with similar language and societal norms.

The comprehensive translation and validation methodology employed in this study corresponds with analogous efforts in other languages, such as Tamil, Korean, and Russian. As demonstrated by the works of Bakheit et al. (1997), Packer et al. (2000), Shin et al. (2011), and Han et al. (2023). These adaptations, alongside the findings of this study, illustrate the universal significance of the SADP when tailored for cultural and language contexts. This underscores the importance of precise methodological approaches in cross-cultural research. It is crucial to ensure that assessments are not only linguistically accurate but also culturally sensitive in order to maintain the validity and reliability of research findings. The success of the SADP in various cultural contexts highlights the importance of adapting assessments to fit the specific needs and nuances of different populations.

The Arabic adaptation of the SADP is a crucial tool for evaluating social attitudes towards individuals with disabilities in Arabic-speaking regions, effectively filling a substantial gap in the current literature. Its application can be extended across multiple sectors: Policy Development: Policymakers can leverage insights from SADP evaluations to devise targeted policies that address stigmatizing attitudes and promote inclusive behaviors in education, employment, and healthcare sectors. The scale evaluates the effectiveness of training programs for healthcare professionals, educators, and employers, ensuring these individuals develop a more positive and informed perspective on disability. Community Interventions: Findings from the SADP can guide community-based rehabilitation (CBR) programs by identifying certain beliefs or stigmas prevalent among different demographics. To create interventions that are culturally relevant and efficacious. The findings of this study underscore the scale's capability to not only evaluate attitudes but also act as a standard for tracking societal advancements towards inclusivity and equity for individuals with disabilities. By utilizing the SADP in various cultural and language contexts, researchers can accurately measure the progress of societies in promoting equal opportunities and rights for people with disabilities. Additionally, the adaptation of the SADP for different contexts further emphasizes its utility as a versatile tool for assessing societal attitudes and progress towards inclusivity and equity.

Contribution to the Field

The comprehensive cross-cultural adaptation of the SADP presented in this study significantly enhances both the methodological and practical aspects of disability research. By following the guidelines established by the American Association of Orthopedic Surgeons, this research points out the necessity of a systematic and transparent approach in the adaptation of psychometric tools. Such a methodology reduces the likelihood of cultural or linguistic biases that could undermine the validity of the results.

Additionally, this study serves as a valuable framework for other researchers aiming to adapt similar instruments for various cultural settings. The meticulous documentation of the translation and validation processes promotes replicability, establishing a standard for future cross-cultural investigations. Moreover, the SADP's capacity to evaluate multiple dimensions of attitudes offers a detailed insight into societal perceptions, thereby providing a robust foundation for intervention planning.

Limitations

Although the study's aims were successfully met, many limitations must be acknowledged to contextualize the findings. The study's sample predominantly consisted of university students, a demographic that may not fully represent the broader population in Jordan. This group may hold more progressive perspectives owing to their educational background and experience, which could potentially skew the results. Including individuals from various age demographics, rural areas, and differing educational backgrounds may provide a more comprehensive insight into society's perspectives. This method would alleviate inherent biases and yield a more thorough analysis of public sentiment. Secondly, despite the meticulous nature of the translation process, certain cultural nuances specific to Jordan or other Arabic-speaking countries may not have been fully conveyed. These nuances may influence respondents' interpretation and interaction with the objects.

Future recommendation

This research provides a solid foundation for future investigations and the implementation of the Arabic version of the SADP. Multiple prospective avenues for more investigation and improvement are proposed. Subsequent study ought to endeavor to include a broader spectrum of participants, encompassing diverse age groups, both rural and urban settings, and varying socioeconomic backgrounds. This method would enhance the scale's representativeness and provide a more comprehensive knowledge of attitudes towards those with disabilities. A longitudinal study is recommended to track changes in societal attitudes over time via the Arabic SADP, potentially providing valuable insights into the effects of awareness activities, governmental reforms, and educational programs. Moreover, it is recommended to do comparative research through cross-cultural analyses utilizing the SADP across different Arabic-speaking countries, which can elucidate regional disparities and commonalities in attitudes, thereby guiding tailored solutions.The Arabic SADP can be employed in future research to evaluate the efficacy of programs designed to modify societal attitudes within a specific group or community. Ultimately, more study is recommended to augment quantitative findings with qualitative methods, such as interviews or focus groups, which can elucidate the underlying motivations behind particular attitudes and beliefs.

References

1 Abdelnour, H. (2020): Evaluating the feasibility of the expansion of community-based rehabilitation into the physiotherapy curriculum in Ahfad University for women Sudan. Retrieved on 20/6/2023. Online at: https://etd.uwc.ac.za/bitstream /handle/11394/7273/abdelnour_phd_chs_2020.pdf? sequence=1&isAllowed=y.

2 Abdulwahab SS, Al-Gain SI(2003): Attitudes of Saudi Arabian health care professionals towards people with physical disabilities. Asia Pacific Disabil Rehabil J. 14:63-70.

3 Almanasreh E, Moles R, Chen TF. (2019): Evaluation of methods used for estimating content validity. Res Social Adm Pharm.15(2):214-221.

4 Al-Tarawneh, M., & Al-Tarawneh, A. (2014): Attitudes toward Persons with Disabilities in Jordan (1). Journal of Disability Policy Studies. 25(4), 229-237.

5 Antonak RF, Livneh H. (2000): Measurement of attitudes towards persons with disabilities. Disabil Rehabil. 22(5): 211-24.

6 Antonak, R. F. (1982): Development and psychometric analysis of the Scale of Attitudes toward Disabled Persons. Journal of Applied Rehabilitation Counseling,13(2), 22-29.

7 Antonak, R. F. (1985): Construct validation of the Scale of Attitudes toward Disabled Persons. Journal of Applied Rehabilitation Counseling,16(1), 7-10, 48.

8 Antonak, R. F., & Livneh, H. (1988): The measurement of attitudes toward people with disabilities: Methods, psychometrics, and scales. Springfield, IL: C Thomas.

9 Ayre C, Scally AJ. (2014): Critical values for Lawshe's content validity ratio: revisiting the original methods of calculation. Measurement evaluation in counseling development.47(1):79-86.

10 Bakheit AM, Shanmugalingam V. (1997): A study of the attitudes of a rural Indian community toward people with physical disabilities. Clin Rehabil.11(4):329-34.

11 Barrett, K., & Pullo, R. (1993): Attitudinal change in undergraduate rehabilitation students as measured by the attitudes toward disabled persons' scale. Rehabilitation Education. 7, 119-126.

12 Beaton DE, Bombardier C, Guillemin F, Ferraz MB. (2000): Guidelines for the process of cross-cultural adaptation of self-report measures. Spine.25:3186-91.

13 Findler, L., Vilchinsky, N., & Werner, S. (2007): The multidimensional attitudes scale toward persons with disabilities (MAS) construction and validation. Rehabilitation Counseling Bulletin. 50(3),166-176.

14 George, D., & Mallery, P. (2003): SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon. Pp 231.

15 Gilbert GE, Prion S. (2016): Making sense of methods and measurement: Lawshe's content validity index. Clinical Simulation in Nursing.12(12):530-1.

16 Guillemin F, Bombardier C, Beaton D. (1993): Cross-cultural adaptation of health-related quality of life measures: literature review and proposed guidelines. J Clin Epidemiol. 46(12):1417-32.

17 Han, N., Park, S. Y., & Bang, J. B. (2023): Pharmacy Students' Attitudes Toward Persons With Disabilities and Perceptions of Right to Self-Determination. American Journal of Pharmaceutical Education, 87(4).

18 Lucas-Carrasco, R., & Salvador-Carulla, L. (2012): Life satisfaction in persons with intellectual disabilities. Research in Developmental Disabilities. 33(4), 1103–1109.

19 Nagata, Kozue Kay. (2007): The Scale of Attitudes Towards Disabled Persons (SADP): Cross-cultural Validation in a Middle-Income Arab Country, Jordan. The Review of Disability Studies: An International Journal, 3(4):1-8.

20 Packer TL, Iwasiw C, Theben J, Sheveleva P, Metrofanova N. (2000): Attitudes to disability of Russian occupational therapy and nursing students. Int J Rehabil Res.23(1):39-47.

21 Qawasmeh MA, Aldabbour B, Momani A, Obiedat D, Alhayek K, Kofahi R, Yassin A, El-Salem K. (2020): Epidemiology, Risk Factors, and Predictors of Disability in a Cohort of Jordanian Patients with the First Ischemic Stroke. Stroke Res Treat.:1920583.

22 Roush SE. (1986): Health professionals as contributors to attitudes toward persons with

disabilities. A special communication, Phys Ther.66(10):1551-4.

23 Satchidanand N, Gunukula SK, Lam WY, McGuigan D, New I, Symons AB, Withiam-Leitch M, Akl EA. (2012): Attitudes of healthcare students and professionals toward patients with physical disability: a systematic review. Am J Phys Med Rehabil. 91(6):533-45.

24 Shin EK, Lee HN. (2011): Validation of the Scale of Attitudes towards Disabled Person (SADP and ATDP-O) in Korea. Korean J Soc Welf. 63:267-289.

25 Survey Research Center. (2016): Guidelines for Best Practice in Cross-Cultural Surveys. Ann Arbor, MI: Survey Research Center, Institute for Social Research, University of Michigan. Retrieved Aug, 10, 2023, from http://www.ccsg.isr.umich.edu/.

26 Tavakol M, Dennick R. (2011): Making sense of Cronbach's alpha. Int J Med Educ. 27;2:53-55.

27 Tervo, R. C., & Palmer, G. (2004): Health professional student attitudes towards people with disability. Clinical rehabilitation.18(8), 908-915.

28 The Higher Council for The Affairs of Person with Disability (2021), Second annual report on the situation and rights of persons with disabilities in the Hashemite Kingdom of Jordan for 2019/2020 (Arabic). Retrieved on 01/16/2024. Online at: https://hcd.gov.jo/AR/List

29 Thompson S. (2018): The current situation of persons with disabilities in Jordan. K4D Helpdesk Report. Brighton, UK: Institute of Development Studies. Retrieved on 01/31/2024 online at: https://opendocs.ids.ac.uk/opendocs/handle/123456789/14064

30 Varni JW. (2023): Linguistic validation of the PedsQL™-A quality of life questionnaire. Mapi Research Institute; 2002. Retrieved Aug, 10, , from: https://www.pedsql.org/translations.html

31 Wang, X. and Ji, X., (2020): Sample size estimation in clinical research: from randomized controlled trials to observational studies. Chest, 158(1): S12-S20.

32 World Health Organization (WHO) (2015): WHO global disability action plan 2014-2021: Better health for all people with disability. Geneva, Switzerland: World Health Organization.

Appendix 1

استبانة الموقف العام للناس تجاه الأشخاص ذوي الإعاقة

البيانات الواردة أدناه تُعبر عن آراء أو أفكار الناس تجاه الأفراد الذين يعانون من إعاقة في المجتمع. هناك العديد من الاختلافات في الرأي؛ قد يتوافق رأيك وقد لا يتوافق مع الكثير من الناس على أي من البيانات التالية، نود معرفة رأيك بها.

أرجو وضع " X " في المربع الذي يتوافق مع ما تشعر به إزاء البيان من خلال العدد المناسب من (-٣) إلى (+٣). مع العلم أنه لا توجد هناك إجابة صائبة أو خاطئة كما نود منك الإجابة بوقت قصير، ولكن دون استعجال مع ضرورة الرد على كل بيان.

أوافق بشدة ٣+	أوافق ٢+	أوافق قليلاً ١+	لا أوافق قليلاً ١-	لا أوافق ٢-	لا أوافق بشدة ٣-	
☐	☐	☐	☐	☐	☐	١) لا ينبغي توفير تعليم عام مجاني للأطفال ذوي الإعاقة.
☐	☐	☐	☐	☐	☐	٢) الأشخاص ذوو الإعاقة ليسوا أكثر عرضة للحوادث من الناس الآخرين.
☐	☐	☐	☐	☐	☐	٣) لا يستطيع الأشخاص ذوو الإعاقة اتخاذ قرارات أخلاقية.
☐	☐	☐	☐	☐	☐	٤) ينبغي منع الأشخاص ذوي الإعاقة من إنجاب الأطفال.
☐	☐	☐	☐	☐	☐	٥) ينبغي السماح للأشخاص ذوي الإعاقة العيش أينما وكيفما شاؤوا.
☐	☐	☐	☐	☐	☐	٦) توفير مساكن كافية وملائمة للأشخاص ذوي الإعاقة أمر غير مكلف أو صعب.
☐	☐	☐	☐	☐	☐	٧) تشغيل برامج تأهيل الأشخاص ذوي الإعاقة أمر مكلف جداً.
☐	☐	☐	☐	☐	☐	٨) يشبه الأشخاص ذوو الإعاقة الأطفال في العديد من النواحي.
☐	☐	☐	☐	☐	☐	٩) يحتاج الأشخاص ذوو الإعاقة إلى البيئة والفرصة المناسبة لتطوير ميولهم الإجرامية والتعبير عنها.
☐	☐	☐	☐	☐	☐	١٠) يجب قصراً إلزام الأشخاص البالغين من ذوي الإعاقة في مؤسسة خاصة بعد الإمساك بهم.
☐	☐	☐	☐	☐	☐	١١) يرغب معظم الأشخاص ذوي الإعاقة في العمل.
☐	☐	☐	☐	☐	☐	١٢) الأشخاص ذوو الإعاقة قادرون على التأقلم للعيش خارج إطار المراكز المخصصة لهم.
☐	☐	☐	☐	☐	☐	١٣) لا ينبغي منع البالغين من ذوي الإعاقة من الحصول على رخصة قيادة.
☐	☐	☐	☐	☐	☐	١٤) ينبغي للأشخاص ذوي الإعاقة أن يعيشوا مع أشخاص آخرين ذوي إعاقة مماثلة.
☐	☐	☐	☐	☐	☐	١٥) ينبغي ألا يكون تقسيم المناطق السكنية مميزاً ضد الأشخاص ذوي الإعاقة وذلك بمنع المساكن الجماعية لهم في الأحياء السكنية.
☐	☐	☐	☐	☐	☐	١٦) ينبغي توفير فرص عمل مدفوعة الأجر للأشخاص ذوي الإعاقة.
☐	☐	☐	☐	☐	☐	١٧) وجود الأطفال ذوي الإعاقة في فصول دراسية عادية قد يكون له أثر سلبي على الأطفال الآخرين.
☐	☐	☐	☐	☐	☐	١٨) العمل البسيط ذو الطبيعة المتكررة هو عمل مناسب للأشخاص ذوي الإعاقة.
☐	☐	☐	☐	☐	☐	١٩) يظهر الأشخاص ذوو الإعاقة ملامح شخصية شاذة.
☐	☐	☐	☐	☐	☐	٢٠) ينبغي توفير فرص عمل متكافئة للأشخاص ذوي الإعاقة مع غيرهم من غير ذوي الإعاقة.
☐	☐	☐	☐	☐	☐	٢١) ينبغي سن قوانين لمنع أرباب العمل من التمييز ضد الأشخاص ذوي الإعاقة.
☐	☐	☐	☐	☐	☐	٢٢) ينخرط الأشخاص ذوو الإعاقة في نشاطات جنسية شاذة ومنحرفة.
☐	☐	☐	☐	☐	☐	٢٣) ينبغي أن يحصل العمال ذوو الإعاقة على الأقل على الحد الأدنى للأجر المحدد لعملهم.
☐	☐	☐	☐	☐	☐	٢٤) يُتوقع من الأشخاص ذوي الإعاقة القدرة على الإنتاج في مجتمعنا التنافسي.

إذا كنت طالباً:

الكلية: ....

التخصص: ....

معلومات شخصية:

الجنس: ☐ ذكر   ☐ أنثى

العمر: ....

المهنة: ....

المستوى الثقافي: ....

The final translated Arabic Version of Scale of Attitudes Toward Disabled Persons based on the work of Antonak (1982).