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ORIGINAL ARTICLE

Development of the Arabic Version of Dysphagia Handicap Index (DHI)

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Abstract The Dysphagia Handicap Index (DHI) is a 25-item self-administered questionnaire. It is a noninvasive tool for measuring the handicapping effect of dysphagia on the physical, functional, and emotional aspects of people's lives. The purposes of the present study were to develop an Arabic version of the DHI and to evaluate its validity, consistency, and reliability in the normal Arabic population with oropharyngeal dysphagia. This was a prospective study that was carried out at the Communication and Swallowing Disorders Unit, King Saud University. The generated Arabic DHI was administered to 94 patients with oropharyngeal dysphagia and 98 control subjects. Internal consistency and test-retest reliability were evaluated. The results of the patients and the control group were compared. The Arabic DHI showed excellent internal consistency (Cronbach's $\alpha = 0.95$). Also, good test–retest reliability was found for the total scores of the Arabic DHI ($r = 0.9$, $p = 0.001$). There was a significant difference between the DHI scores of the control group and those of the oropharyngeal dysphagia group ($p < 0.001$). This study demonstrated that the Arabic DHI is a valid tool for self-assessment of the handicapping effect of dysphagia on the physical, functional, and emotional aspects of patients and can be used by Arabic language speakers.

Keywords DHI · Oropharyngeal dysphagia · Arabic version

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Introduction

Patients with dysphagia can be effectively evaluated and managed, particularly if the dysphagia is recognized before development of medical complications such as aspiration pneumonia [1]. Although fiber optic endoscopic evaluation of swallowing (FEES) and video fluoroscopy (modified barium swallow, MBS) are very valuable in assessing dysphagia, a comprehensive self-assessment tool is important so a patient can rate the impact of his/her swallowing problem. This tool can give an idea about how the patient perceives his/her swallowing problem and can be helpful in monitoring the patient's prognosis.

Many quality-of-life questionnaires were developed for patients with dysphagia, yet they are disease-specific. One of these is M.D. Anderson Dysphagia Inventory (MDADI) [2], which is used mainly for patients with head and neck cancer [3]. It has been translated from English to other languages, including Dutch [4], Brazilian [5], Swedish [6], Italian [7], and Korean [8], and has been used for many studies for its high validity and reliability. Similarly, Bogaardt et al. [9] performed cross-cultural adaptation and

validation of the Dutch version of the Swallowing Quality of Life tool (SWAL-QoL). Crestani et al. [10] assessed the efficacy of upper esophageal sphincter (UES) dysfunction treatments using the Deglutition Handicap Index (DHI). Carrau et al. [11] assessed patient-reported outcomes, specifically, the health-related quality of life of patients with laryngopharyngeal reflux. Gustafsson and Tibbling [12] created the Dysphagia Goal Handicap (DGH) to examine whether esophageal dysphagia can be described as a handicap and to grade the severity of the handicap as the discrepancy between the subject's own eating goals and his or her eating disability. Dakkak and Bennett [13] developed a tool for use with patients with esophageal stricture for scoring the viscosity and solidity of meals and measuring the time needed to complete a meal [3].

One of the widely used self-assessment tools for dysphagia is the SWAL-QoL [14]. This tool has been translated into other languages such as Chinese [15] and Dutch [16]. However, it has been reported that the abstracted statements and complex wording of this tool make it time-consuming for the patient and difficult to understand [3]. Belafsky et al. [17] studied the validity and reliability of the eating assessment tool (EAT-10) and found it a simple and valid tool. However, it could be used more as a survey tool when there is suspicion of a swallowing problem because it does not detect the effect of a swallowing problem on the functional, physical, and emotional aspects of the patient. All these self-assessment tools are designed to help the patient address the severity of their problem and how it affects their quality of life. At the same time, these tools indicate to the clinician the patient's self-perception of their swallowing problem that can help design the management protocol and also the follow-up process.

In 2012, Silbergleit et al. [3] developed the DHI, which is a patient-administered 25-item questionnaire that measures the handicapping effect of dysphagia on the emotional, functional, and physical aspects of the patient's life. The DHI has 9 questions in the functional subscale, 9 questions in the physical subscale, and 7 questions in the Emotional subscale. For each question there are three choices for the answer, Never, Sometimes, and Always, with a suggested scoring of 0, 2, and 4, respectively, making the range of the total DHI score 0-100. In addition, there is a question at the end of the questionnaire about the general subjective impression of swallowing difficulty, with the answer ranging from 1 (normal) to 7 (severe difficulty). The DHI was found to be a valid and reliable tool for assessing the psychosocial handicapping effects of dysphagia. It can be used with individuals with a wide variety of swallowing disorders and lower literacy levels and in clinical and research settings alike [3].

In recent years, much attention has been paid to the importance of using patient-centered measures along with the objective and clinical subjective measures for evaluating voice and swallowing disorders. Such tools help healthcare providers decide which treatment strategy to use [3, 18]. Development of the Arabic version of the DHI (A-DHI) will help physicians better understand the handicapped feeling of the Arab patient when he/she is asked to express his/her swallowing problem. This will facilitate the development of treatment strategies. Furthermore, the A-DHI could be used as a prognostic tool to monitor and document the effect of any traditional, pharmaceutical, or surgical therapeutic intervention that the patient receives. Also, it could be used to compare the effectiveness of different treatment plans.

Currently, there is no Arabic version of DHI. An Arabic version of the DHI could significantly support the clinical practice of Arabic-speaking patients with swallowing problems. The aim of this study was to develop an A-DHI and to evaluate its internal consistency, reliability, and clinical validity.

Materials and Method

Development of the A-DHI

In the process of translation, the original English version of the DHI (Table 6 in Appendix) was translated into Arabic by two Arabic bilingual and experienced phoniatricians (consultants of communication, voice, and swallowing disorders). Items on the questionnaire were then back-translated into English and compared with the original items by a qualified professional translator familiar with American English and Arabic. The back translation was subsequently sent to the investigators for review and comments.

The Arabic version of the DHI was then pilot-tested on ten consenting Saudi subjects, from the swallowing clinic at King Khalid University Hospital, Riyadh, Saudi Arabia, with oropharyngeal dysphagia with different etiologies. Subsequently, the DHI was amended according to their suggestions after reviewing the pilot data. Additional explanatory words for questions 5 and 7 in the Emotional subscale were subsequently added because difficulties were noticed in understanding the original items clearly. The words "handicapped" and "choke" have been further explained by adding words similar in meaning to them but more culturally appropriate to the Arabic language. The final result was a culturally modified A-DHI (Table 7 in Appendix). It was then administered to the patients and the control group after the participants gave consent. According to the protocol that is followed in our swallowing clinics, all patients with swallowing difficulty undergo a bedside assessment. This protocol includes subjective assessment of the patient's cognitive abilities. Thus, any patient with affected cognition was excluded from the

study. Also, only subjects who can read Arabic were included in the study; thus, few people were excluded.

Subjects

The Institutional Review Board of the College of Medicine, King Saud University, approved the study. Patients were recruited from the swallowing clinic at King Khalid University Hospital, Riyadh, Saudi Arabia, from July 2012 to May 2013. Ninety-four adult Saudi patients with oropharyngeal dysphagia were included in the study. There were 55 males and 39 females with a mean age of 57.78 ± 22.03 years. The subjects in this study had different diagnoses, including neurological disorders (cerebrovascular accidents, brain tumors, and Alzheimer's), head and neck disorders (vocal fold paralysis, glomus jugulare, carotid body tumor, and post-mandibular surgeries), laryngopharyngeal reflux disorder (LPRD), gastrointestinal tract disorders (gastric resection, esophageal surgeries, and hiatal hernia), and other disorders like diabetes mellitus, hypothyroidism, and post-cardiothoracic surgeries. The control group included 162 asymptomatic adults with no history of any swallowing disorders, LPRD, or head and neck surgery. They were recruited from those who accompanied patients to the swallowing clinic as well as nursing and working staff. There were 59 males and 103 females with a mean age of 48.04 ± 14.36 years. The A-DHI was readministered to 22 patients (23.4 %) of the study group in a period ranging from 1 to 2 weeks to test the reliability of the generated Arabic version. During this period, the 22 patients did not receive any mode of swallowing intervention, either behavioral, medical, or surgical, because they were still under hospital investigation.

Validation and Statistical Testing

The final version was validated using content validity. Two independent, experienced, and bilingual phoniatricians judged all items of the final Arabic version for language and cultural appropriateness and found them to be completely relevant to the purpose for which the A-DHI was meant.

The internal consistency of the A-DHI was assessed using Cronbach's α coefficient. A value greater than 0.7 was considered "satisfactory," a value greater than 0.8 was considered "good," and a value greater than 0.9 was considered "excellent." Test–retest reliability was assessed by estimating the intraclass correlation coefficient (ICC) for the 25 items, the separate subscales' scores, and the total score of A-DHI.

A Kolmogorov test was done to test whether the data followed a normal curve and it revealed that the data are nonparametric, so the Mann-Whitney test was used to compare the mean scores of the individual items, the three subscales, and total scores of the A-DHI between the patient group and the control group. Spearman's rank correlation coefficient was used to study the correlation between the DHI items and total scores. Kruskal–Wallis and Dunn post hoc tests were used for multiple comparisons between the self-reported severity of dysphagia and the A-DHI subscales and the total scores. The Statistical Package for the Social Sciences (SPSS) ver. 16 was used (SPSS, Inc., Chicago, IL, USA).

Table 1 Features of DHI subscale distributions of the patient group

DHI scale	No. of items	Possible range	Observed range	Mean	Median	SD
Total	25	0–100	0–90	32.5	28	24.7
Physical	9	0–36	0–34	13.3	12	9.6
Functional	9	0–36	0–36	12.3	11	10.1
Emotional	7	0–28	0–28	6.9	4	7.4

Results

Fifty-five males and 39 females were included in the patient group (mean age = 57.78 ± 22.03 years). The mean total DHI score of the patient group was 32.5 (SD 24.7), with a possible minimum to maximum score ranging from 0 to 100. The features of the total A-DHI score and the subscales' scores are shown in Table 1. The mean total DHI score of the control group was 2.6 (SD 3.2). The comparison between the A-DHI items and subscales of the patients and the control group is presented in Table 2.

Correlations between the DHI items and the total DHI score and between the subscales and the total DHI score for the patient group are presented in Table 3. All the A-DHI items are significantly correlated to the total A-DHI score. Also, the three subscales of DHI are significantly correlated to the total A-DHI.

The overall internal consistency of the A-DHI was excellent for the total score of the A-DHI in the study group ($\alpha = 0.94$). Cronbach's α was good for the three subscales of DHI (Table 4). Twenty-two (23.4 %) of the 94 patients completed the A-DHI twice over a period of 1-2 weeks. The test–retest reliability for the total scores and three subscales of the A-DHI showed strong reliability using both Spearman's rank correlation coefficient and intraclass correlation coefficient, ranging from 0.87 to 0.89 and from 0.79 to 0.96, respectively (Table 4).

At the end of the DHI form is the self-reported severity. A scale of general severity was defined, adapted from the original version of DHI, into four categories: 1 = normal, 2 and 3 = mild, 4 and 5 = moderate, and 6 and 7 = severe. Of the 94 dysphagia patients, 19 (20 %)

Table 2 Comparison of DHI items between the patients and the controls

DHI items	Group	*N*	Mean	SD	*p* (Mann–Whitney test)
F1	Patients	94	1.702	1.605	<0.001
	Control	162	0.259	0.674	
F2	Patients	94	1.596	1.454	<0.001
	Control	162	0.272	0.723	
F3	Patients	94	2.043	1.710	<0.001
	Control	162	0.174	0.565	
F4	Patients	94	1.723	1.675	<0.001
	Control	162	0.173	0.564	
F5	Patients	94	1.085	1.515	<0.001
	Control	162	0.099	0.435	
F6	Patients	94	0.979	1.368	<0.001
	Control	162	0.086	0.408	
F7	Patients	94	1.277	1.655	<0.001
	Control	162	0.173	0.564	
F8	Patients	94	0.575	1.332	<0.001
	Control	162	0.000	0.000	
F9	Patients	94	1.319	1.621	<0.001
	Control	162	0.074	0.379	
P1	Patients	94	1.702	1.374	<0.001
	Control	162	0.309	0.725	
P2	Patients	94	1.489	1.494	<0.001
	Control	162	0.173	0.564	
P3	Patients	94	1.809	1.581	<0.001
	Control	162	0.519	0.934	
P4	Patients	94	1.936	1.537	<0.001
	Control	162	0.667	0.997	
P5	Patients	94	1.510	1.677	<0.001
	Control	162	0.148	0.525	
P6	Patients	94	1.596	1.622	<0.001
	Control	162	0.309	0.725	
P7	Patients	94	1.149	1.481	<0.001
	Control	162	0.173	0.564	
P8	Patients	94	1.170	1.507	<0.001
	Control	162	0.111	0.460	
P9	Patients	94	0.915	1.267	<0.001
	Control	162	0.099	0.435	
E1	Patients	94	0.936	1.397	<0.001
	Control	162	0.148	0.525	
E2	Patients	94	0.979	1.368	<0.001
	Control	162	0.111	0.460	
E3	Patients	94	1.404	1.491	<0.001
	Control	162	0.161	0.545	
E4	Patients	94	0.809	1.322	<0.001
	Control	162	0.074	0.379	
E5	Patients	94	0.787	1.351	<0.001
	Control	162	0.025	0.222	
E6	Patients	94	0.766	1.282	<0.001
	Control	162	0.074	0.379	
E7	Patients	94	1.234	1.499	<0.001
	Control	162	0.210	0.654	
Functional	Patients	94	12.3	10.1	<0.001
	Controls	162	1.3	2.1	<0.001
Physical	Patients	94	13.3	9.6	
	Controls	162	2.5	2.8	<0.001
Emotional	Patients	94	6.9	7.4	
	Controls	162	0.8	1.7	
DHI Total	Patients	94	32.489	24.737	<0.001
	Control	162	4.630	4.906	

Comparison is significant at the 0.01 level

reported no dysphagia (normal), 11 (12 %) reported mild, 50 (53 %) reported moderate, and 14 (15 %) reported severe dysphagia. Mean DHI subscales and total scores for the four severity scales were calculated (Table 5). The differences between severity groups were significant for both the DHI and the three subscales ($p < 0.001$). However, post hoc analyses of the severity groups showed that all the pairwise comparisons were significant ($p < 0.01$) except for the comparison between the normal and mild severity groups with respect to total and subscales scores ($p = 0.246$). The correlation between the total DHI scores, DHI subscale scores, and the self-reported dysphagia severity scores for the patient group was tested using Spearman's rank correlation coefficient and it showed moderate-high correlation between the total score ($r = 0.74$) and all of the DHI subscale scores (Physical, $r = 0.68$; Functional, $r = 0.72$; and Emotional, $r = 0.60$).

Discussion

Apart from evaluating the physiological and anatomical abnormalities of swallowing in dysphagic patients through instrumental assessment, it is highly important to develop quality-of-life assessment tools for patients to report their perception of swallowing problems. The DHI was developed to be a valid and reliable patient-reported outcomes tool for dysphagia [3]. The aim of this study was to develop and validate an Arabic version of the DHI and to test its reliability. The results of this study indicate that the A-DHI has an excellent internal consistency and it maintained its reliability and validity. This is in agreement with the results of the original version of DHI [3]. These findings support the psychometric properties of the A-DHI.

Table 3 Correlation between 25 questions and the total score of DHI in the patient group

	Spearman's rho	DHI total
F1	Correlation coefficient	0.615
	Sig. (2-tailed)	0.000
F2	Correlation coefficient	0.594
	Sig. (2-tailed)	0.000
F3	Correlation coefficient	0.680
	Sig. (2-tailed)	0.000
F4	Correlation coefficient	0.739
	Sig. (2-tailed)	0.000
F5	Correlation coefficient	0.683
	Sig. (2-tailed)	0.000
F6	Correlation coefficient	0.762
	Sig. (2-tailed)	0.000
F7	Correlation coefficient	0.767
	Sig. (2-tailed)	0.000
F8	Correlation coefficient	0.428
	Sig. (2-tailed)	0.000
F9	Correlation coefficient	0.717
	Sig. (2-tailed)	0.000
P1	Correlation coefficient	0.576
	Sig. (2-tailed)	0.000
P2	Correlation coefficient	0.617
	Sig. (2-tailed)	0.000
P3	Correlation coefficient	0.430
	Sig. (2-tailed)	0.000
P4	Correlation coefficient	0.651
	Sig. (2-tailed)	0.000
P5	Correlation coefficient	0.683
	Sig. (2-tailed)	0.000
P6	Correlation coefficient	0.707
	Sig. (2-tailed)	0.000
P7	Correlation coefficient	0.675
	Sig. (2-tailed)	0.000
P8	Correlation coefficient	0.731
	Sig. (2-tailed)	0.000
P9	Correlation coefficient	0.652
	Sig. (2-tailed)	0.000
E1	Correlation coefficient	0.582
	Sig. (2-tailed)	0.000
E2	Correlation coefficient	0.672
	Sig. (2-tailed)	0.000
E3	Correlation coefficient	0.712
	Sig. (2-tailed)	0.000
E4	Correlation coefficient	0.564
	Sig. (2-tailed)	0.000
E5	Correlation coefficient	0.697
	Sig. (2-tailed)	0.000
E6	Correlation coefficient	0.640
	Sig. (2-tailed)	0.000
E7	Correlation coefficient	0.686
	Sig. (2-tailed)	0.000
Functional	Correlation coefficient	0.925
	Sig. (2-tailed)	0.000
Physical	Correlation coefficient	0.906
	Sig. (2-tailed)	0.000
Emotional	Correlation coefficient	0.886
	Sig. (2-tailed)	0.000

Correlation is significant at the 0.01 level

Table 4 Reliability estimates for the dysphagia group

DHI scale	Cronbach's α ($n = 94$)	Test-retest ($n = 22$)	
		Spearman rank correlation coefficient	Intraclass correlation coefficient
Total	0.95	0.88	0.9
Physical	0.88	0.88	0.91
Functional	0.89	0.89	0.79
Emotional	0.88	0.87	0.96

Dysphagia group Cronbach's α, $n = 94$

Dysphagia group test-retest, $n = 22$

The excellent correlation that has been demonstrated with the test-retest results shows that the A-DHI has high reproducibility. The strong internal consistency of the A-DHI items along with the highly significant correlation that was found between the items and total score show the validity of this instrument. This also signifies that not only the total score but also each item of A-DHI should be considered when assessing patients with swallowing difficulties. This was more obviously demonstrated by the significant correlation that was found between the severity groups and both the total and the subscales scores of the A-DHI, which gives this tool even more validity.

Moreover, the A-DHI succeeded in differentiating between the patients and the control group when the results of both groups were compared with respect to the items and the subscales (Table 2). This finding matches the results of the original version of DHI where it was found that the control group had significantly lower scores in all subscales when compared to the dysphagia group. Also, significant correlation was found between item to total score and subscale to total score (Table 3).

Table 5 DHI subscales and total DHI for the self-reported dysphagia severity scales

DHI subscales	Normal	Mild	Moderate	Severe
Total	7.47 ± 11.23	20.55 ± 12.59	34.64 ± 18.27	68.14 ± 20.04
Physical	3.79 ± 4.57	8.90 ± 6.09	14.4 ± 7.37	25.57 ± 9.12
Functional	2.11 ± 5.48	7.64 ± 5.99	13.4 ± 8.22	25.86 ± 5.63
Emotional	1.58 ± 3.75	4 ± 4.90	6.84 ± 6.12	16.71 ± 7.71

Values are given as mean ± SD

Normal, $n = 19$; mild, $n = 11$; moderate, $n = 50$; severe, $n = 14$

There was a significant difference in the total and subscales scores of the A-DHI when the dysphagia severity groups were compared. However, the post hoc test revealed a nonsignificant difference between the normal and mild severity groups in their total and subscales scores. This was unlike the original study where the investigators found that all the pairwise comparisons were significant. The possible explanation of this nonsignificant finding between the normal and mild severity groups is that patients who labeled themselves as normal or having mild dysphagia problems could have overlapped scores on rating the A-DHI. The A-DHI has 25 items that can address even minor problems of the patients, and with this comprehensive questionnaire patients can rate their swallowing difficulties in a more precise way than can a general single question on severity. In this general-question scale, patients cannot express their swallowing problem in detail as they are asked only to rate the severity of their problem on a scale of 1-7, regardless whether it is a major or minor swallowing problem. Thus, it is very likely for those patients with mild dysphagia to have overlapped scores with the normal subjects. On the other hand, having a wider rating scale in the DHI items might avoid this overlap and allow patients with mild dysphagia to give a proper rating of the swallowing problems they have. Another explanation is that although the patients felt handicapped while answering the 25 questions, they rated their dysphagia severity as normal to mild since they were on oral feeding with some diet modifications.

One of the limitations of the current study is the short test-retest period for the selected 22 subjects, which was 2 weeks. However, those 22 subjects were randomly selected from patients who were on a regular follow-up schedule at the swallowing clinic for therapy. We were concerned more about any change in the patient's condition during the interval between the test and the retest which is why the A-DHI was administered 2 weeks after the primary evaluation to guarantee no change in the patient's condition that may affect the patient's perception of swallowing difficulty. Also in this study, A-DHI was not compared to other quality-of-life instruments but this will be considered in future work.

Only one study used DHI to monitor the effect of therapy; the effect of deep brain stimulation on Parkinson's disease revealed significant improvement in subject self-perception of swallowing 3 and 12 months after the procedure compared with baseline for the DHI total scores and all the subscales scores [19]. We recommend that future studies use either the original DHI or the A-DHI to correlate between self-reported severity and actual impairment in order to monitor the effect of interventional strategies in managing oropharyngeal dysphagia like behavioral management, medical and surgical intervention, and electrical stimulation of swallowing. Also, our future studies will utilize DHI as a screening tool for some normal individuals who are at risk of developing dysphagia such as the geriatric population. To the best of our knowledge, there is no other dysphagia self-assessment questionnaire that was translated into Arabic. Therefore, a study comparing A-DHI to other general quality-of-life tools should be considered in the future.

Conclusion

A-DHI maintained its validity and reliability as a self-assessment tool for patients with oropharyngeal dysphagia. The A-DHI showed results comparable to those of the original version of DHI in significantly differentiating dysphagia patients from healthy subjects. It has been shown to be an easy and less time-consuming tool for clinicians to understand the manner in which patients perceive their dysphagia problem.

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Conflict of interest The authors have no conflict of interest to report.

Appendix

See Tables 6 and 7.

Table 6 The Dysphagia Handicap Index (DHI)

	Never	Sometimes	Always
1P. I cough when I drink liquids			
2P. I cough when I eat solid food			
3P. My mouth is dry			
4P. I need to drink fluids to wash food down			
5P. I've lost weight because of my swallowing problem			
1F. I avoid some foods because of my swallowing problem			
2F. I have changed the way I swallow to make it easier to eat			
1E. I'm embarrassed to eat in public			
3F. It takes me longer to eat a meal than it used to			
4F. I eat smaller meals more often due to my swallowing problem			
6P. I have to swallow again before food will go down			
2E. I feel depressed because I can't eat what I want			
3E. I don't enjoy eating as much as I used to			
5F. I don't socialize as much due to my swallowing problem			
6F. I avoid eating because of my swallowing problem			
7F. I eat less because of my swallowing problem			
4E. I am nervous because of my swallowing problem			
5E. I feel handicapped because of my swallowing problem			
6E. I get angry at myself because of my swallowing problem			
7P. I choke when I take my medication			
7E. I'm afraid that I'll choke and stop breathing because of my swallowing problem			
8F. I must eat another way (e.g., feeding tube) because of my swallowing problem			
9F. I've changed my diet due to my swallowing problem			
8P. I feel a strangling sensation when I swallow			
9P. I cough up food after I swallow			

1	2	3	4	5	6	7
Normal			Moderate problem		Severe problem	

Please circle the number that matches the severity of your swallowing difficulty (1 = no difficulty at all; 4 = somewhat of a problem, 7 = the worse problem you could have)

Table 7

مؤشر إعاقة صعوبة البلع

ضع علامة في المربع لكل سؤال والذي يصف صعوبة البلع لديك

	أبدا	أحيانا	دائما
الجزء الأول			
1. أتجنب بعض الأطعمة بسبب مشكلة البلع لدي			
2. قمت بتغيير طريقة بلعي ليسهل علي تناول الطعام			
3. أصبحت المدة التي استغرقها لتناول وجبة أطول من المعتاد			
4. في كثير من الأحيان أتناول وجبات أصغر بسبب مشكلة البلع لدي			
5. أتجنب المناسبات الإجتماعية قدر الإمكان بسبب مشكلة البلع لدي			
6. أتجنب الأكل بسبب مشكلة البلع لدي			
7. قللت تناولي للطعام بسبب مشكلة البلع لدي			
8. يتوجب علي تناول الطعام بطريقة بديلة (مثل "أنبوب التغذية") بسبب مشكلة البلع لدي			
9. غيرت نظامي الغذائي بسبب مشكلة البلع لدي			
الجزء الثاني			
1. أكح عندما أشرب السوائل			
2. أكح عندما أكل طعاما صلبا			
3. فمي جاف			
4. احتاج لشرب السوائل لانزال الطعام			
5. خسرت بعض الوزن بسبب مشكلة البلع لدي			
6. اضطر للبلع مرة أخرى قبل أن ينزل الطعام			
7. أشرق (أغص) عندما أتناول دوائي			
8. أشعر باحساس خانق عندما أبلع			
9. أكح طعام بعدما أبلع			
الجزء الثالث			
1. احرج عندما أتناول الطعام أمام الجميع			
2. أشعر بالاكتئاب لعدم تناولي الطعام الذي أريد			
3. لا استمتع بالأكل كما اعتدت			
4. أنا عصبي بسبب مشكلة البلع لدي			
5. أشعر بالإعاقة (العجز) بسبب مشكلة البلع لدي			
6. أغضب من نفسي بسبب مشكلة البلع لدي			
7. أخاف من أنني سأشرق (سأغص) وأتوقف عن التنفس بسبب مشكلة البلع لدي			

ضع دائرة حول الرقم الذي يتماشى مع صعوبة البلع لديك حيث:

١= لا توجد صعوبة ٤= صعوبة بلع متوسطة ٧= صعوبة بلع شديدة

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