VALIDATION OF THE ARABIC QUESTIONNAIRE ON PARENTS/CAREGIVERS' AWARENESS OF CHILDHOOD DYSFLUENCY

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ABSTRACT:

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Background: Despite the presence of Arabic studies that assess attitudes toward stuttering. These studies used translated versions of the Public Opinion Survey of Human Attributes-Stuttering (POSHA—S) which has limitations in its Arabic translation. The Arabic versions of POSHA—S cannot guarantee exact translations that represent the desired language complexity level. Besides, the inability to generalize to populations without probability sampling. Probability sampling appears to be a superior research strategy to convenience sampling which is not easy to achieve in presence of the world epidemic of Coronavirus (COVID-19).

Aim of the work: This study intended to construct an electronic web-based valid questionnaire in the Arabic language aims to assess the parents/caregivers' awareness of stuttering among the Arabic-speaking population. This questionnaire will be able to be disturbed faster and to a large number of the target population in presence of the world epidemic of Coronavirus (COVID-19).

patients and methods: This study passed into the following three steps: I) Constructing the questionnaire's design, II) application of the questionnaire on a pilot sample, and III) validation of the questionnaire by using expert face validity by presenting a copy of the questionnaire to three phoniatricains with over 20 years of experience in the field of phoniatrics at the Phoniatrics Unit, Faculty of Medicine of Ain shams University. They were asked to answer a questionnaire of seven questions about the ability of the questionnaire to deliver information about the parents/caregivers' awareness of childhood dysfluency. Results: 67% of the experts have a total agreement that this questionnaire is excellent in exploring the parents/caregivers' awareness of dysfluency. None of the three experts wrote down any weakness in this questionnaire.

Conclusions: The Parents/caregivers' awareness survey of childhood dysfluency is a valid questionnaire that explores the parents/caregivers' awareness of childhood dysfluency.

Keywords: Dysfluency – Awareness of Dysfluency – Arabic questionnaire.

INTRODUCTION:

Stuttering is a condition that is often associated with stigma and linked to negative social identity and stereotypes⁽¹⁾.

The stigma associated with stuttering is nearly as serious as that for mental illness and even greater than that for obesity⁽²⁾. Hearing stuttering was likely responsible for

triggering strong internal reactions that automatically translate into beliefs, for example, that stutterers are fearful. The universality of negative public attitudes is important because individuals who stutter are subjected to public beliefs and reactions that, at the least, place them in compromised or stigmatized categories and, at the most, result in their coming to believe that they are compromised or unworthy themselves. This self-stigma then further limits their abilities, choices, and opportunities⁽³⁾.

The calls for public awareness and education campaigns aim to diminish the stigma associated with stuttering(4). The rationale is that the impact of stuttering on the children who stutter (CWS) would become less debilitating, if the social environment of those who stutter could, through a more educated public, face positive or even neutral public reactions. If this could be achieved, the benefits would be immediate and potent and their quality of life would be improved⁽⁵⁾. There is a need for phoniatricains speech-language and pathologists to have information about the extent of the public awareness of dysfluency and its symptoms, and how to deal with dysfluent children. this will help provide the public with the exact information they need and become more understanding and/or empathetic and ultimately behave in less discriminatory ways toward those who manifest undesirable conditions.

Surveys tend to be the most efficient and economical way used to estimate the public and/or parents/caregivers' awareness of any disease. Through the application of surveys, enormous amounts of data could be collected in a brief time and responses can be recorded in ways that are easily entered into data files for analysis⁽⁶⁾. Questionnaires are the main tools for doing surveys.

There are several questionnaires from different countries and in different languages that were used to study public awareness and attitudes towards stuttering such as the Public Opinion Survey of Human Attributes-Stuttering (POSHA-S)⁽⁷⁾ and its translated versions, A Japanese - translated version of⁽⁸⁾ questionnaire and A Saudi Questionnaire to assess societal knowledge of population⁽⁹⁾. stuttering in the Saudi POSHA-S was also translated into Arabic by Jordanian researchers (10&11) and used in an Egyptian study at the Sohag University Hospital that assessed the attitudes toward stuttering of parents and other family members of children who stutter⁽¹²⁾.

Despite the presence of Arabic studies that assess attitudes toward stuttering, these studies used translated versions of POSHA-S, but there are certain limitations to the translated POSHA-S The Arabic versions of POSHA-S cannot guarantee translations that are both exact and representative of the desired language complexity level (e.g., reading level). Besides, sampling⁽¹³⁾ reported that if POSHA-S users intend to generalize to specific geographic areas or specific populations, probability sampling appears to superior research strategy convenience sampling which is not easy to achieve in presence of the world epidemic of Coronavirus (COVID-19).

AIM OF THE STUDY:

From the above, this study intended to construct a valid questionnaire in the Arabic language that aims to assess the parents/caregivers' awareness of stuttering among the Arabic-speaking population. This questionnaire will be an electronic and webbased questionnaire aiming to spread faster and to a large number of the target population in presence of the world epidemic of Coronavirus (COVID-19).

METHODOLOGY:

This study passed into the following three steps: I) Constructing the questionnaire's design, II) application of the

questionnaire on a pilot sample, and III) validation of the questionnaire.

I) Constructing the questionnaire's design (Appendix 1):

The Arabic questionnaire on Parents/caregivers' awareness of childhood dysfluency (P/CACD) was constructed using the Microsoft forms application in the Modern standard Arabic. The questionnaire is composed of six sections as follows:

- Section 1: it involves questions that help the selection of the participating parents/caregivers, about nationality (Egyptian or not) and taking care of a dysfluent child or not.
- Section 2: It includes the participant's consent that shows s/he understood the objectives and benefits of this research well and his/her approval to participate in this study. Upon answering with "I agree to participate in this study", the participant was allowed to continue the questionnaire. The questionnaire was ended if the participants answered with "I do not agree to participate in this study".
- Section 3: It focuses on collecting data on the dysfluent child (child's age, gender, birth order, the place s/he spends his/her day, and the persons that s/he is in daily contact with).
- Section 4: This section aims to collect data the child's dysfluency symptoms including its onset, course, duration, a possible cause of dysfluency, history any of dysfluent disorders, child's handedness, stuttering symptoms comorbidities (diseases, drugs, epilepsy, language delays), and the child's daily duration of exposure to screens (TV, mobiles, computers, tablets).
- <u>Section 5:</u> It includes questions that explore the symptoms of stuttering the

- child had and its frequency of occurrence, and whether the child had received any treatments for these symptoms (drugs, psychological treatment, speech therapy).
- Section 6: It includes questions that explore the child's reaction towards his/her stuttering and the frequency of occurrence of these reactions.
- Section 7: It involves questions that explore the parents'/caregivers' reactions towards the stuttering of their child and the frequency of occurrence of these reactions and the extent of their worries about their child's dysfluency.
- Personal information of the participating parents/caregivers which is needed for analysis of the collected data (age, gender, occupation, residence, and his/her contact information "optional").

II) Application of the questionnaire on a pilot sample:

Arabic questionnaire The Parents/caregivers' awareness of childhood dysfluency (P/CACD) was applied to 23 (22 females and one male) Egyptian Arabicspeaking parents/caregivers who had a dysfluent child. This step was important to ensure that there was no difficulty in understanding the questionnaire's questions and to check the pattern of presentation of the questionnaire items themselves, and their order of presentation. The questionnaire was distributed by sharing the questionnaire's link through different social media and the answers to this questionnaire were collected by Microsoft and saved the forms application. Accordingly, modifications were done regarding the re-arrangement of the questions, and a reformulation of questions to be clearer to the participants, making the response to most questions obligatory as some important questions were not answered in the pilot study.

III) Validation of the questionnaire:

Expert face validity was used to validate the Arabic questionnaire of P/CACD. Copy of the questionnaire was presented to three phoniatricains with over 20 years of experience in the field of phoniatrics at the Phoniatrics Unit, Faculty of Medicine of Ain shams University. They were asked to answer a questionnaire of seven questions about the ability of the questionnaire to deliver information about parents/caregivers' awareness of childhood dysfluency. They were asked to give a score of 1, 2, or 3 signifying weak, good, and excellent.

Ethical Considerations:

At the beginning of the questionnaire, there is a clear and accurate statement of the purpose, objectives, and benefits of this research, and the way the data of this research will be protected. Upon reading this statement, the participated parents/caregivers would be asked to give their

approval to take part in this research. The study protocol has been approved by the Ain Shams Institute's Ethical Committee of Human Research.

RESULTS:

The results of the three expert phoniatricains to the Arabic questionnaire on Parents/caregivers' awareness of childhood dysfluency (P/CACD) were summarized in Table 2. 67% of the experts have a total agreement that this questionnaire is excellent targeting the required population (parents/caregivers of dysfluent children) information and personal of parents/caregivers and dysfluent their children. of dysfluent children. They also agreed that the Arabic questionnaire of P/CACD is effective in collecting the possible precipitating factors of dysfluency and exploring the symptoms of dysfluency, the parents/caregivers, and the child's reactions toward the dysfluency symptoms. None of the three experts reported any weakness in this questionnaire.

Table: Results of the expert face validity on the Arabic questionnaire on Parents/caregivers' awareness of childhood dysfluency (P/CACD).

	1 (Weak)	2 (Good)	3 (Excellent)
From your point of view to what degree does the questionnaire accomplish the following?			
1) It is effective in targeting the required participants	0%	33%	67%
2) It is effective in collecting the personal data dysfluent child	of the 0%	33%	67%
3) It is effective in collecting the needed personal info of the participating parents/ caregivers	ormation 0%	33%	67%
4) It is effective in collecting possible precipitating f dysfluency	actors of 0%	33%	67%
5) It is effective in exploring the symptoms of dysfluo	ency 0%	33%	67%
6) It is effective in exploring the child's reaction his/her dysfluency and the frequency of occur these reactions		33%	67%
7) It is effective in exploring the parents'/caregivers' towards the dysfluency of their child and the freq occurrence of these reactions		33%	67%

DISCUSSION:

Questionnaires are a valuable tool to do surveys. Questionnaires allow for collecting primary data about social and psychological concepts such as beliefs, attitudes, opinions, expectations, knowledge, and satisfaction with health care (Schofield and Knauss, **2010**)⁽¹⁴⁾. Moreover, the questionnaire respondents themselves are considered the best source of accurate information about these questions. The data collected from questionnaires have important roles in decision-making for medical professionals and in providing the public people with missed information about certain diseases. They have important roles in decisionmaking for medical professionals.

This study presented the Parents/caregivers' questionnaire of awareness of childhood dysfluency as a valid questionnaire in the Arabic language that could estimate the Parents/caregivers' awareness of childhood dysfluency. It could explore the parents/caregivers' awareness of dysfluency symptoms, their reaction towards these symptoms, and the parents/caregivers treat their dysfluent child with. Besides, the Arabic questionnaire of P/CACD could help in exploring the most symptoms of dysfluency children, the possible precipitating factors of dysfluency, and the child's awareness and reaction towards his/her dysfluency symptoms.

Performance measures of accuracy, precision, and validity are the standards by which questionnaire scales are judged like any medical device or instrument. The only difference is that in most cases there is no gold standard for this type of measurement. The absence of the gold standard is not a technical problem that could be overcome with greater technical resources; rather, it is because the construct being measured is, in fact, the gold standard itself. For constructs

such as satisfaction, symptom distress, health perceptions, and quality of life, each respondent has his or her intrinsic gold standard. There is no external way that an investigator can evaluate the scale scores against external standards (**Testa and Simonson**, **2017**)⁽¹⁵⁾.

Validation of the Arabic questionnaire of P/CACD was done using the expert face validity. Face validity is used to evaluate the appearance of the questionnaire in terms of feasibility, readability, consistency of style and formatting, and the clarity of the **2016**)⁽¹⁶⁾. used (Taherdoost, language Moreover, it evaluates the presentation and relevance of the measuring instrument to assess its goals before its application to the desired population. Also, expert face validity is the primary method used to validate a test/tool before applying other types of validity such as content, construct, or criterion validity (Roopa and Rani, **2012**)⁽¹⁷⁾.

As the questionnaire forms backbone of any survey and its success of it is in designing questionnaires (Roopa and **2012**)⁽¹⁸⁾. The Menta Satva, questionnaire of P/CACD was constructed specifically using the Arabic language from the start to avoid translation errors from other questionnaires e.g. (POSHA-S). The fact that The Arabic questionnaire of P/CACD is constructed in Arabic makes. and this makes it suitable for use in Arabic countries not only in Egypt. In addition to translation errors, the inability to generalize to populations without probability sampling is another limitation of the previous surveys.

Regarding the design of the Arabic questionnaire of P/CACD, unlike other questionnaires that measure awareness of dysfluency, the Arabic questionnaire of Parents/caregivers' awareness of childhood dysfluency is designed to be an electronic web-based questionnaire. It could be

disturbed online through emails or any social media. Paper and pen questionnaires could not spread faster and to more people like the electronic and web-based questionnaires.

main parts of the questionnaire on P/CACD are focused only on gathering information about dysfluency, its symptoms, the child's awareness of these symptoms and his/her reactions to it, as well parents/caregivers' awareness reaction towards these symptoms and their reactions towards their dysfluent children. This is to some extent like the Adapted Arabic Version of Public Opinion Survey of Human Attributes-Stuttering (POSHA-S) which have a detailed stuttering section with 35 items that ask about stuttering's causes, traits, or personality of people who stutter, and who should help them, and their life potential (e.g., People who stutter can lead normal lives). Items also relate to one's knowledge and source of knowledge on stuttering and what the respondent might do in a conversation (e.g., Tell the person to slow down or relax) (St. Louis, 2005, 2011; St. Louis et al., 2008)(19)(20)(21). The adapted Arabic Version of POSHA-S have also a general section comparing stuttering to four other human attributes (intelligence, lefthandedness, obesity, and mental illness), which makes the POSHA-S a long-time consuming questionnaire. Respondents could get bored easily and try to finish it rapidly and give inaccurate answers.

Comparing the Arabic questionnaire of P/CACD to a Japanese - translated version of **Van Borsel et al.'s (1999)**⁽²²⁾ questionnaire, it was found that both questionnaires shared the same goal which is the assessment of public awareness. a Japanese - translated version of **Van Borsel et al.'s (1999)**⁽²²⁾ questionnaire is composed of thirteen questions: 10 were closed questions with a forced-choice answer format, and 3 were open questions in which respondents filled in their answers by free description. But there are limitations to this

questionnaire first, its findings cannot be generalized to other cities or regions in the country as they are based on individuals from only three cities in Japan. Furthermore, this sets this study apart from earlier studies that considered both gender and age distributions. Thus, overall results should be viewed with caution (**Iimura et al., 2018**)⁽²³⁾.

Another Arabic questionnaire is the Saudi Ouestionnaire to assess societal knowledge of stuttering among the Saudi population (Almudhi, et al., 2021)⁽²⁴⁾. It is a large questionnaire having forty-four items that have been used to assess public awareness of stuttering in the Saudi population. The items consisted of (one open-ended question and forced-choice questions.). The items exploring knowledge of stuttering and PWS were selected for use from pre-existing surveys (Gabel et al., $2013)^{(25)(26)}$, 2004; Boyle, and questions related to media influences, were added to it.

Conclusions:

The Parents/caregivers' awareness survey of childhood dysfluency is a valid questionnaire that explores the parents/caregivers' awareness of childhood dysfluency.

Recommendations:

The Parents/caregivers' awareness survey of childhood dysfluency needs to be valid by another type of validity method to ensure its effectiveness in predicting the outcomes of what it measures.

Conflict of interest:

The authors declare that they have no conflict of interest.

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التحقق من صحة الاستبيان العربي حول وعي الآباء / مقدمي الرعاية بضعف طلاقة الأطفال إيمان عصام السيد عبيد 1 و منى عبد الفتاح حجازي 2 و منى صالح خضير 2 وحدة التخاطب بمستشفى شبين الكوم التعليمي بالمنوفية وحدة التخاطب بقسم الأنف والأذن والحنجرة بكلية الطب جامعة عين شمس 2

مقدمه: على الرغم من وجود دراسات عربية تقيم المواقف تجاه التأتأة. استخدمت هذه الدراسات نسخًا مترجمة من (استطلاع الرأي العام حول المواقف المجتمعيه تجاه التأتأة) و الذي له قيود في ترجمته العربية. حيث لا يمكن ان تضمن النسخ العربيه من هذا الاستطلاع دقة الترجمه المطلوبه إلى جانب ذلك ، لديها مشاكل في تعميمها على مناطق جغرافية محددة أو مجموعات سكانية محددة باستخدام أخذ العينات الاحتمالية استراتيجية بحثية متفوقة لأخذ العينات الدقيقه والتي من الصعب تحقيقها في وجود وباء فيروس كورونا العالمي.

الهدف من العمل: تهدف هذه الدراسة إلى إنشاء استبيان إلكتروني صالح على شبكة الإنترنت باللغة العربية يهدف إلى تقييم وعي الآباء / مقدمي الرعاية بالتلعثم بين السكان الناطقين باللغة العربية. سيكون بالامكان نشر هذا الاستبيان بشكل أسرع وعلى عدد كبير من السكان المستهدفين في وجود وباء فيروس كورونا العالمي.

المرضى والطرق: مرت هذه الدراسة بالخطوات الثلاث التالية: ١) تصميم الاستبيان ، ٢) تطبيق الاستبيان على عينة تجريبية ، و ٣) التحقق من صحة الاستبيان باستخدام صلاحية الوجه الخبير من خلال تقديم نسخة من الاستبيان إلى ثلاثة أساتذه متخصصين في اضطرابات الكلام بخبرة تزيد عن ٢٠ عامًا في مجال التخاطب بوحدة التخاطب بكلية الطب جامعة عين شمس. طُلب منهم الإجابة على استبيان من سبعة أسئلة حول قدرة الاستبيان على تقديم معلومات حول وعي الوالدين / مقدمي الرعاية بخلل طلاقة الأطفال.

النتائج: ٦٧٪ من الخبراء لديهم اتفاق كامل على أن هذا الاستبيان ممتاز في استكشاف وعي الوالدين / مقدمي الرعاية بضعف الطلاقة. لم يذكر أي من الخبراء الثلاثة أي ضعف في هذا الاستبيان.

الاستنتاجات: مسح و عي الوالدين / مقدمي الرعاية لخلل طلاقة الطفولة هو استبيان صالح يستكشف و عي الوالدين / مقدمي الرعاية بخلل طلاقة الطفولة.