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Translating the Strengths and Difficulties Questionnaire into American Sign Language:

A pilot study

by

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Abstract

Very few culturally and linguistically appropriate psychological assessment tools exist for children and adolescents who are Deaf or hard of hearing (D/HH). Without appropriate assessment tools, this population is difficult to serve. The present study translated the self-rated Strengths and Difficulties Questionnaire (SDQ) from printed English to American Sign Language (ASL) to be used as a mental health assessment tool with D/HH young people. This was done by following the lead of Roberts et al., (2015) who translated the SDQ into British Sign Language. The translation was completed by following a strict forward/ back-translation methodology that was overseen by an ASL interpreter and reviewed by a panel of experts. Once all translated items were approved, a video was recorded of a culturally Deaf individual signing the questionnaire. Once the ASL-SDQ was finalized, pilot sample data was collected from a mental health clinic for D/HH youth (PAH!). Participants included 20 D/HH youth aged 11-18 years (M_{age}=15.25, SD=2) with an equal number of males and females. The parallel English informant version of the SDQ was also collected from participant's parents and teachers. In total 19 self-rated ASL-SDQs, 14 parent-ratings, and 8 teacher-ratings were collected. A significant difference was found between parent ratings and self-ratings. Results from this study indicate the importance of having a self-rated mental health assessment tool for D/HH youth. The methodology used resulted in an accessible questionnaire for D/HH young people and this study set a foundation for future sign language translation efforts and research of the D/HH population.

Translating the Strengths and Difficulties Questionnaire into American Sign Language: A pilot study

Deaf and hard of hearing (D/HH) children around the world often suffer from mental health issues in silence (du Feu & Chovaz, 2014). At this time, very few psychologically valid mental health assessment tools exist that are culturally and linguistically appropriate for the D/HH population. Many factors that are sometimes associated with deafness, such as abusive experiences (Kvma, 2003), negative educational experiences (Powers, 2003), poor parent-child communication (Eldik, Treffers, Veerman & Verhulst, 2004), poor language acquisition (Gentili & Holwell, 2011) and additional physical problems (Roberts et al., 2015) may make this population more likely to suffer from mental illnesses (du Feu & Chovaz, 2014; Gentili & Holwell, 2011; Hindley, 2005; Roberts et al., 2015). Additionally, the etiology of deafness may have associated risks for mental health difficulties (Gentili & Holwell, 2011; Hindley, 2005; Roberts et al., 2015). However, without appropriate assessment and screening tools, the D/HH child and adolescent population is difficult to study and serve. The goal of the present study was to modify an existing questionnaire for this population— specifically for those children and adolescents whose preferred language is American Sign Language (ASL). The expectation was that this will help generate an accurate understanding of D/HH children and adolescents.

Studies generally tend to find higher prevalence of mental health concerns in the deaf population than in the hearing population (Brown & Cornes 2015; du Feu & Chovaz, 2014; Niclasen & Dammeyer 2016; Wallis, Musselman & MacKay, 2004). However, the literature shows inconsistent findings as to exactly how much greater the prevalence rate is. What's more, some studies have failed to find any relationship between deafness and mental health. A review by Wallis, et al. (2004) revealed that estimates of the prevalence of mental health problems for deaf children and adolescence have been reported between 8-61%. This large variance reflects a gap in epidemiology. Many researchers attribute this gap to differences in the methodology and use of inappropriate tools for assessment (Brown & Cornes 2015; Roberts et al., 2015; Wallis, et al., 2004).

Clinical assessment must take place in the client's preferred language; this is a crucial component to any clinical interview (du Feu & Chovaz, 2014). Currently the gold standard for the assessment of people who are D/HH is a clinical interview. However, most clinicians are not skilled in sign language communication. If a child's preferred language is a sign language, which the clinician is not fluent in, the clinician must utilize a sign language interpreter to bridge the gap in communication. Although this style of interview is considered best practice (du Feu & Chovaz, 2014), a full clinical interview with a hired sign language interpreter may be expensive and time consuming. Furthermore, a full clinical interview may not be necessary for every D/HH child. Ideally, each child's mental health functioning would be evaluated using reasonably accurate, fast and inexpensive means. Such an evaluation would enable identification of children in need of further evaluation (i.e., a full clinical interview). Currently, no reliable screening tool exists in American Sign Language (ASL).

Signs and symptoms of childhood and adolescent mental health dysfunction are typically recognized first by someone who is frequently around the child, such as a parent/guardian or teacher. For the population of D/HH children and adolescents, the signs and symptoms may be less clear. Often the signs and symptoms are either missed or misattributed to being a part of the deafness itself (du Feu & Chovaz, 2014). Because of this, many D/HH individuals may not receive treatment until the disorder has progressed to a significantly debilitating level (Roberts et al., 2015), and this may explain some of the difference in prevalence of disorder between the hearing and the D/HH population.

Having an appropriate assessment tool would allow for a better understanding of the D/HH population. It would also allow for a screening process to capture difficulties early, which might otherwise be missed. Earlier intervention of mental health difficulties is believed to be essential for preventing adverse psychosocial outcomes and mental disorder (Newman, 2012). An approach that involves early intervention has been shown to be the most cost effective solution to addressing mental health concenrs (Mihalopoulos, Harris, Henry, Harrigan & McGorry, 2009). Despite the evidence supporting early intervention, without appropriate tools it is difficult to know with whom treatment intervention is necessary.

Past Efforts to Establish an Appropriate Questionnaire

There are several problems with an approach that uses a sign language interpreter to administer a questionnaire to a D/HH child by translating each question in real time. First, signs can be ambiguous; thus, different translators may use different signs to mean the same thing. Having a sign language interpreter translate each item on a questionnaire in real time would result in variability due to personal choice and sign expression (Jones, Mallinson, Phillips & Kang, 2006). The ambiguity of sign languages may also affect the semantic integrity due to unintended figurative meanings. This method of administering a questionnaire may result in inconsistencies that would make research difficult to interpret. In addition, this method could have negative implications for clinical practice. For example, it could increase false negatives which would result in children with mental health concerns being missed and not attended to with necessary intervention. The need for a formalized translated versions of mental health questionnaires is recognized and attempts have been made to make assessment tools more accessible for the D/HH population (Cornes 2006; Cornes & Brown, 2012; Wallie et al., 2004; Roberts et al., 2015).

Early self-report questionnaires designed to detect mental health issues in the D/HH population were created by simplifying written items of existing mental health questionnaires to a level that was believed to be understandable by a D/HH person (Wallis et al., 2004). The theory behind this approach originated from evidence that people who are D/HH may have lower literacy levels than hearing people of the same age (Barnett, 1999). A major concern with this approach is that written items on health-related questionnaires may be easily misinterpreted by native sign language users and thus using written questionnaires with this population might negatively affect validity and reliability of results (Jones et al., 2006; Mallinson, 2004). Studies that have used simplified versions of written questionnaires found little difference in prevalence rates reported when compared to results from use of the original versions (Cornes & Brown, 2015). However, there is evidence that using signed versions of existing mental health questionnaires with D/HH individuals yields considerably higher prevalence rates of mental difficulties than written questionnaires (Cornes 2006; Cornes & Brown 2012; Cornes & Brown, 2015). A study by Cornes (2006) compared scores on a written English version and an Auslan Sign Language (Auslan) version of the Youth Self-Report. Cornes reported that deaf adolescents reported higher scores in the ‘clinical range’ for all areas of Internalizing and Externalizing problems as well as Social and Thought problems when reporting with the Auslan version compared to scores with the original version. Using an Auslan version of the Strengths and Difficulties Questionnaire (SDQ) with D/HH children and adolescents Cornes and Brown (2012) found an average Total Difficulties score that was nearly double the average score reported with the original written English version of the questionnaire. This indicates that using a signed version of a questionnaire with a D/HH population may capture signs of mental disorder that written versions of the same questionnaire might miss.

Recognizing these concerns, a group of researchers in the United Kingdom (UK) (Roberts et al., 2015) recently worked to create an appropriate translation of a popular mental health assessment tool to be used as a mental health screener with D/HH children and adolescents. To do this, Roberts et al. (2015) followed the rigorous standards for cross-cultural translation outlined by Beaton Bombardier, Guillemin, and Ferraz (2000). The questionnaire that they chose to translate was the Strengths and Difficulties Questionnaire (SDQ). Currently this is the first signed version of this questionnaire that is supported and recognized by its copyright holder Youthinmind Ltd. (YIM). An Auslan version of the SDQ was created by Cornes and Brown (2012) but it is not currently published on the official website of the questionnaire (Youthinmind, 2015). The reason for this sign language questionnaire not being published may be because the methodology used for translation was not considered an accepted standard (Roberts et al., 2015). At the time of writing this paper, a Norwegian Sign Language translation is under review and is expected to be published on the website in the future (Youthinmind, 2015). Prior to this study, no ASL version of the SDQ has been proposed to YIM but having such a questionnaire would be useful for sign language users in North America.

The Strengths and Difficulties Questionnaire (SDQ)

The SDQ is a short screening tool used to understand the mental health functioning of children and adolescents. An informant version for parents and teachers exists for children between the ages of 4 -17 years and a self-rated version exists for children between ages 11-17 years. Questionnaires can be completed by both informants and the child to reflect the child’s functioning from multiple perspectives. By rating agreement on a 3-point Likert scale, the 25-

item questionnaire can be used to provide feedback about a child/adolescent's mental health functioning.

The SDQ is particularly useful for several reasons. First the SDQ has been translated into more than 80 different languages (Youthinmind, 2015). This makes the measure highly accessible and a useful tool for cross-cultural comparison. Secondly, the SDQ is a very brief questionnaire that can be completed very quickly, making it one that is user friendly (Goodman 1997). For each assessment, a large collection of data is possible because of the existence of self-rated and parallel informant forms. It can also be used to evaluate the efficacy of treatment plans by comparing scores at intake and to scores post-treatment (Mathai, Anderson, & Bourne, 2003). Finally, the SDQ is freely available online (Youthinmind, 2015), making it a financially economical means of screening.

Psychometric Properties of the SDQ

Validity. Studies have reported that the SDQ meets acceptable validity standards as a screening tool. In a large study by Goodman (2001), children who scored in the abnormal range of difficulty (vs. normal or borderline), on either the parent- or teacher- rated versions, were 15 times more likely to be diagnosed with a DSM-IV disorder. It has also been suggested by Goodman that combining the versions of the questionnaire will yield more accurate results. Together, the three SDQs show good sensitivity (63.3%) and specificity (94.6%) in community samples (Goodman, Ford, Simmons, Gatward & Meltzer, 2000). When used with a clinical sample, the SDQ appears to be particularly sensitive (>80%) Goodman, Renfrew, & Mullick (2000). Some studies have criticized the SDQ because of sensitivity scores below the cut off of 70% set by an international outcomes measurement group (Kersten, Vandal, Elder, Tauroa, & McPherson, 2017). According to Goodman the main priority in a screening tool is decreasing false negatives even at the cost of increasing false positives. Therefore, this "overinclusiveness" (Goodman, 2001) is considered acceptable as it allows clinicians to identify any potential difficulties that might be present.

Internal consistency. Aitken, Martinussen, Wolfe & Tannock (2015) completed a review of internal consistency of the SDQ and found satisfactory results. In their review, they discussed previous studies that used nationally representative samples of children in Great Britain. These studies found internal consistency within subscales for parent versions with Cronbach's alpha ranging from .52 to .77 for parent versions and .69 to .88 for teacher versions (Goodman 2001; Goodman, Lamping & Ploubidis, 2010; Mccrory & Lyte, 2012). Some subscales did not meet the recommended cut-off of $\alpha \geq .70$ (Cohen, 1988), but these values may be underestimating reliability because of the small number of items in each subscale (Graham, 2006). It has been suggested that composite reliability might better represent internal consistency for subscales (Niclasen, Skovgaard, Nybo-Andersen, Somhovb & Obel, 2013). Aitken et al. (2015) used composite reliability with a Canadian sample and found higher scores of internal consistencies compared to Cronbach's alpha, with no score less than .70. Therefore, Aitken et al. concluded that composite reliability may be a more appropriate assessment of reliability for the SDQ due to the small number of items in each subscale.

Inter-rater agreement. A nationally representative sample of Scotland, Wales, and England (Goodman et al. 2010) reported correlations between parent and teacher ratings ranging from .24 to .48 for different subscales. Other studies report similar findings (see Stone, Otten, Engels, Vermulst, & Janssens, 2010 for review). Although the correlations are modest, Stone et al. (2010) highlights that this is a well-known phenomenon in psychometric testing and compared to other measures of child psychopathology, agreement between parents and teachers was better for the SDQ.

Factor structure. Studies have investigated the SDQs factor structure using both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Given that the SDQ is based on theoretical constructs of child psychopathology (Goodman, 1997), it has been suggested that CFA is the best suited model for investigating the SDQs factor structure and should be the first method of choice (Stone et al., 2010). Most studies find support for the originally proposed five-factor model (Goodman, 2001; see Stone et al., 2010 for review). Other studies have proposed a three-factor model that combines *Hyperactivity* and *Conduct scales* into *Externalizing Problems*; and *Peer problems* and *Emotional problems* into *Internalizing Problems*; along with *Prosocial scale* (Goodman et al. 2010). Goodman et al. (2010) found support for the two- factor solution when being used with low risk samples but states that the five-factor model should be retained with high risk samples. Niclasen and Dammer (2016) investigated the factor structure of the parent and teacher SDQ with D/HH children. They concluded that from a CFA perspective, the five-factor model was superior and should be applied with samples of children who are D/HH. Niclasen and Dammer further discourage the use of the broader Internalizing/Externalizing and Total Difficulties scales with children who are Deaf or hard of hearing.

Next Step in Translating the SDQ

The SDQ developed by Roberts et al. (2015) opens many doors for the study, treatment evaluation, and screening of the mental health of D/HH children and adolescents in the UK. However, ASL is semantically and syntactically different from BSL. Creating an ASL version of the SDQ would enable the same advantages in North America and other parts of the world where people use ASL. According to Moores as well as Marschark, Lang, and Albertini, most deaf children (approximately 90%) are born to hearing parents (as cited in Wallis et al., 2004). Therefore, it is expected that most parents will be able to complete the written English informant version but there is evidence that only using the informant versions of the SDQ would result in missed information. Cornes et al. (2006) found that in a sample of D/HH children, informants tended to report lower rates of difficulties than youth self-reported using an Auslan version of the same questionnaire. Roberts et al. (2015) did not report this trend, however, in their study, they compared self-rated scores from deaf children to informant-rated scores from *deaf* parents specifically. Differences between child-ratings and parent-ratings may be affected by the parent-child communication. That is, D/HH parents of D/HH children might be more aware of their children's mental health functioning than hearing parents of D/HH children. Therefore, a self-rated SDQ available in ASL would be especially beneficial to D/HH youth who have hearing parents.

The objective of the present study was to translate the self-rated SDQ into ASL to degree that is accessible to children and adolescents whose preferred language is ASL. The ASL-SDQ will be translated from written English following the strict guidelines for cross-cultural translation outlined by Beaton et al. (2000). This forward/back translation methodology will follow the lead of Roberts et al. (2015). Additionally, unique adaptation to this methodology will be made based on the discretion of researchers involved in the present translation. Once the new questionnaire was created, it was administered to new clients of PAH! mental health services in Milton Ontario. PAH! provides mental health services to D/HH children and youth, and their families. It is a mental health care agency established as a partnership between Bob Rumball Canadian Centre of Excellence for the Deaf (BRCCED) and Reach Out Centre for Kids

(ROCK). Parents and teachers also to completed parallel written forms. The data from this clinical convenience sample was used to assess emerging trends and explore differences between self-rated and informant-rated forms.

In summary, there is clear need for a linguistically and culturally accessible form of the self-rated SDQ for D/HH young. This study describes the complex translation and administration of the ASL-SDQ to D/HH clients at PAH!. In addition, apparent trends will be reported and discussed.

Methods Part 1: The Translation Process

The process that was utilized in the present study to translate the SDQ from English to ASL is an adaption to the model constructed by Beaton et al. (2015), as outlined by Roberts et al. (2000), with some variation. The model provided by Beaton et al. was designed for cross-cultural translation of one written language to another but as pointed out by Roberts et al., moving from a written language to a signed language presents additional problems. The problems are not a result of the sign languages themselves, but rather that sign languages have their own unique syntax, morphology, and prosodic features which differ from written languages (Roberts et al., 2015). An example of a difference between written and signed languages is seen in the way meaning is expressed. Written and oral languages use single morphemes to denote individual units of meaning, in sign languages the use of three-dimensional space allows for multiple morphemes to be expressed at the same time (Roberts et al., 2015). Other ways in which the languages differ will be highlighted later in the discussion section of this study.
Due to these linguistic differences, Roberts et al. modified the model provided by Beaton et al.. These changes were considered in the present study which aimed to establish an ASL translation of the self-rated SDQ.

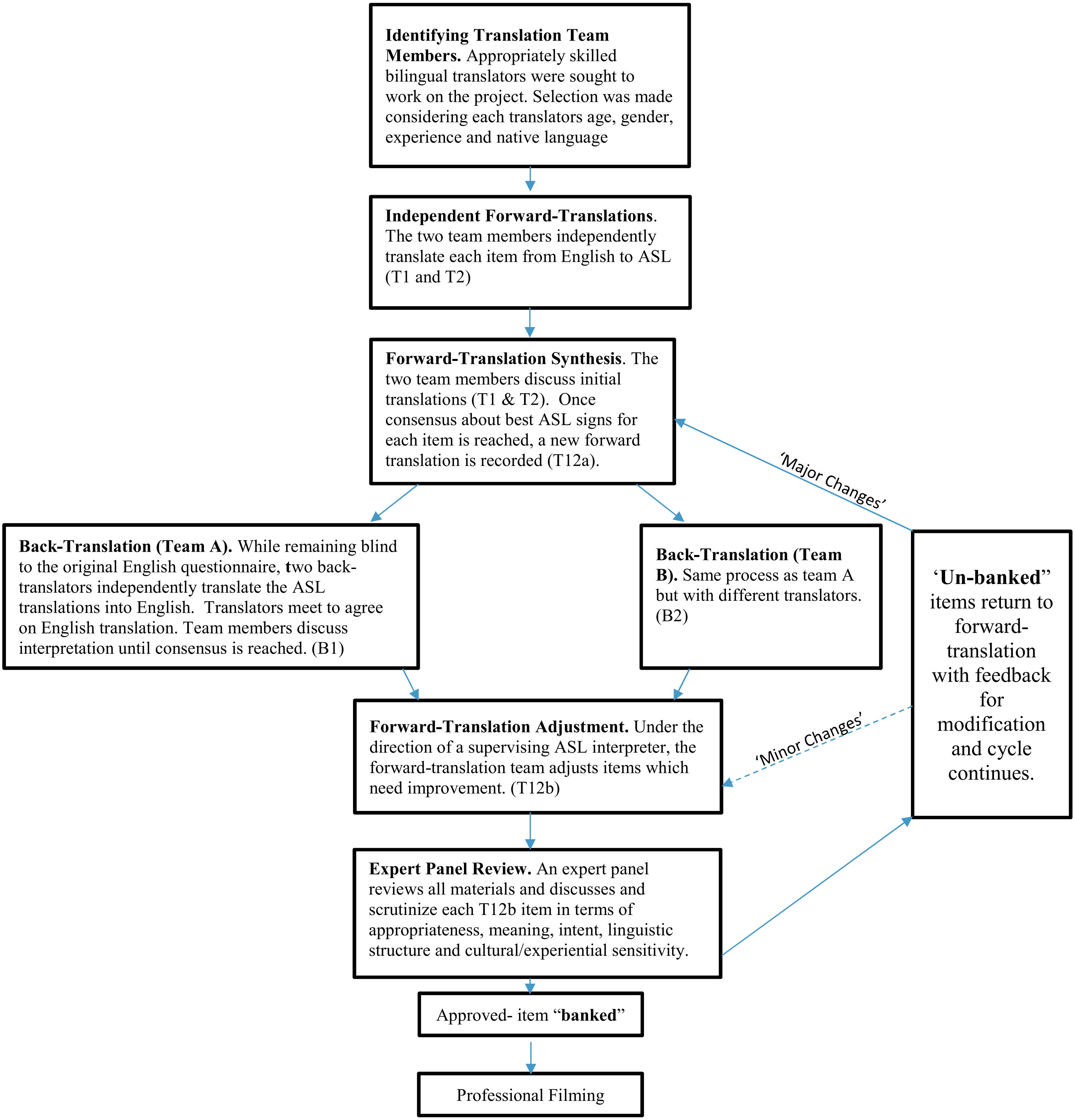
The translation process used in the present study involved a forward-translation team, two back-translation teams, and a quality check by an expert panel. A separate ASL interpreter with a designation from the Association of Visual Language Interpreters (AVLIC) oversaw the logistics of this process.

Summary of Translation Methodology

A visual representation of the translation process is depicted in Figure 1. The following summarizes the steps of the overall translation process:

1. Members of the forward translation team independently filmed their translation of the SDQ from printed English to ASL (T1 & T2).
2. The forward translation team compared their versions and discussed linguistic and cultural features.
3. Once forward-translation team members came to a consensus on which ASL signs were most appropriate, the Deaf member (native ASL user) filmed new versions of each item (T12).
4. The back-translation teams received the synthesized ASL forward-translation (T12) and each member of the back-translation team independently translated the ASL-SDQ into printed English.
5. Members of the first back-translation team (Team A) met to compare their translations and discuss adjustments they believed to necessary and appropriate. They also synthesized their translations (B1). If consensus was not met between back-translator's interpretations it was noted along with feedback for re-production. Additional feedback was documented where they believed items could be improved.
6. Back translation Team B followed the same process as Team A (B2).
7. The ASL interpreter supervising the translation process conducted comparison of the two back-translations. The Forward-Translation team was then requested to re-film incorporating the suggested agreed upon changes.
8. The expert team scrutinized T12 items by comparing them to the original English SDQ and the back-translations. Their scrutiny considered meaning, intent, linguistic structure, and cultural/experiential sensitivity. Once agreement was reached on all items, the final filming was conducted.

Figure 1: *Visual Representation of Translation Process*



Identifying Translation Team Members. Appropriately skilled bilingual translators were sought to work on the project. Selection was made considering each translators age, gender, experience and native language

Independent Forward-Translations. The two team members independently translate each item from English to ASL (T1 and T2)

Forward-Translation Synthesis. The two team members discuss initial translations (T1 & T2). Once consensus about best ASL signs for each item is reached, a new forward translation is recorded (T12a).

Back-Translation (Team A). While remaining blind to the original English questionnaire, **t**wo back-translators independently translate the ASL translations into English. Translators meet to agree on English translation. Team members discuss interpretation until consensus is reached. (B1)

Back-Translation (Team B). Same process as team A but with different translators. (B2)

Forward-Translation Adjustment. Under the direction of a supervising ASL interpreter, the forward-translation team adjusts items which need improvement. (T12b)

Expert Panel Review. An expert panel reviews all materials and discusses and scrutinize each T12b item in terms of appropriateness, meaning, intent, linguistic structure and cultural/experiential sensitivity.

Approved- item “**banked**”

Professional Filming

‘Un-banked” items return to forward-translation with feedback for modification and cycle continues.

Detailed Account of Translation Methodology

The following is a detailed account of the construction of each translation team and the procedure they followed:

Roberts et al. (2015) applied a three-person team schema instead of the two-person schema recommended by Beaton et al. (2000). This additional team member was added because there is a high degree of lexical variation by region in BSL (Roberts et al., 2015). Dialectical variation is seen in BSL for relatively common signs such as numbers, colours, and signs for family members (Roberts et al., 2015). For this reason, a BSL signer may have difficulty interpreting signs that are not commonly used in their native region. The addition of a third team member added diversity which was intended to result in a questionnaire that consisted of the most universally used signs understood by the majority of BSL signers. ASL is a unique language from BSL and lexical variation by region is somewhat less common in ASL (Valli & Lucas, 2000). For this reason, the present study chose to deviate from the structure of Roberts et. al's translation and instead follow the recommendations from Beaton et al. by including two members on each team.

Although lexical variation is not as much of a concern in ASL, other factors such as age, gender, ethnicity, and family history of deafness may still affect variations of the signs an individual is familiar with (Lucas, Bayley, 2011). For this reason, translation team members were selected with the intention of representing the diversity of ASL. Thus, the members that were chosen on each team have varying degrees of experiences and expertise with ASL and the Deaf community. To ensure semantic/stylistic sign variations were considered, we also made sure that translation team members had extensive experience working with D/HH children and youth.

Forward-translation team. Our forward-translation team consisted of two bilingual individuals. The first was a culturally Deaf person raised by Deaf parents. This person is a Child and Youth worker employed at a mental health clinic for D/HH children. He has been working with D/HH children and adolescents with mental health concerns for 5 years and prior to that was employed as an Educational Assistant for many years in one of the provincial Deaf schools. Because of his experience, this person has a thorough understanding of the linguistic abilities of our target demographic. The second team member was hearing person raised by hearing parents. She is a professional ASL interpreter with an extensive background of interpreting in a D/HH children's mental health agency. She has professional designation with the AVLIC.

The forward-translation team was presented with the original printed English version of the self-rated SDQ (see Appendix A for original self-rated SDQ). Team members independently translated each item of the English questionnaire into ASL at a level that they believed would be linguistically and culturally appropriate for the target demographic while still maintaining the original meaning of each item. Following this step, the two members of the forward-translation team reviewed the English questionnaire as well as the first translator's (T1) and the second translator's (T2) versions and discussed which ASL signs they believed best fit the translation criteria. The signs used in each of their initial translations as well as alternative signs were considered. Once the two team members agreed which ASL signs best met the criteria, the Deaf (native ASL user) member of the forward-translation team recorded a synthesized version of each item (T-12). The final version of each item was then sent to the back-translation teams.

Back-translation teams. Our first back-translation team consisted of two individuals. The first is a hearing person trained as a professional ASL interpreter. She is the child of Deaf parents. This is designated in the literature as a CODA (Child of Deaf Adult). She has professional designation with the AVLIC. The second individual was a Deaf individual raised by Deaf parents. He has extensive experience as a Teacher of the Deaf at one of the provincial Deaf schools.

The second back-translation team consisted of two bilingual individuals. The first individual was a culturally Deaf person who works as a Deaf Interpreter (DI). A DI in Canada is a Deaf individual who works in tandem with a hearing ASL interpreter providing additional cultural and linguistic expertise – often based on shared life experiences (Canadian Hearing Society, n.d.). He is also a professor in the ASL-English and ASL-Deaf studies program at a local university. The second individual was a professional trained ASL interpreter with extensive experience with community interpreting. She has professional designation with the AVLIC. Together these two individuals are parents of a Deaf child.

The two members of the first back-translation (Team A), who were blind to the English questionnaire, independently translated the initial ASL forward-translation of each item back into English. Following independent back-translation, the two team members met to compare their translations and discuss appropriate adjustments and recommendations for changes of signs.

To ensure that any unanticipated alternative interpretations were highlighted, a second back-translation team was incorporated to ensure a more complete analysis of how different people might interpret the same signs. Back-translation Team B followed the same process as Team A.

Feedback about concerns and issues they encountered were noted and sent to the ASL interpreter who supervised the entire translation process. The supervising interpreter then sent the forward-translation team comments and instructions for re-production of items based on feedback from back-translation teams. The forward-translation team re-produced forward-translations in a way that addressed the concerns and feedback provided by the back-translation teams and approved by the supervising interpreter.

Expert-panel. The role of the expert panel was to serve as a quality check. Members of the expert panel were selected for their ability to comment on psychological, linguistic and cultural aspects of the translation. Our expert panel consisted of three bilingual individuals. The first was a Deaf professor at a local university in Ontario. She has a Ph.D. in clinical psychology with an international expertise in the mental health assessment and treatment of D/HH children and adolescents. The second individual was a professional ASL interpreter with AVLIC designation and extensive interpreting experience. The third was a Deaf professor at a university in a different province. She has a Ph.D. in linguistics and her research explores linguistic structures across signed languages focusing on modality specific properties.

The expert panel reviewed the forward-translation and two sets of back-translations for each item. They scrutinized the translations in terms of meaning, linguistic structure and cultural sensitivity (Beaton et al., 2000; Goldstein et al., 2004). Items that were believed to be reliable, semantically equivalent to the English version, and appropriate for the target demographic were accepted (or ‘banked’). Items that were not accepted (or ‘un-banked’) were assessed by the supervising interpreter who determined whether *major* or *minor* changes were necessary. Changes that: affected meaning; required complete replacement, addition, or removal of a sign; and changes that required syntactic reorganization, were considered *major changes*. All other requested changes were considered *minor changes*. Un-banked items that required major changes were sent to T12a where forward translators considered the feedback from the expert panel and made necessary adaptations. These items then went through the translation/ back-translation and expert review cycle again. Un-banked items that required minor changes were sent to T12b where forward translators made the necessary adaptations as indicated by the expert panel. Following minor changes, the expert panel reviewed the items again. This process continued until all items were marked banked, at which time a final version was filmed in a controlled environment with a high-quality camera.

Robert's et al. (2015) speculated that the signer in the video questionnaire may have a transference effect on participants. To test this, they utilized a focus group of BSL users and had them view different versions of the questionnaire with a different signer in each version. They reported that signer characteristics did not seem to matter. Participants in the focus groups reported that the signer being comfortable and clear were the only relevant factors. For this reason and because of the strict timeline of this study, a focus group was not utilized. We selected a native ASL user with experience interacting with D/HH children to film the final version of the ASL-SDQ.

Methods Part 2: Pilot study

Participants

The present study had 20 D/HH participants aged 11-18 years (M_{age}=15.25, SD=2) with 10 females and 10 males. All participants indicated that their preferred language was ASL. All participants were new or returning clients of PAH! – a mental health clinic for D/HH young people. Majority of these children were referred by clinical personnel at one of the provincial schools for the Deaf in Ontario, however, some children were refereed from the general community including, parents, mainstream school settings, and other mental health agencies. After receiving informed consent from the parents of new clients and additional verbal consent from children over the age of 12 years, the ASL-SDQ was administered during intake. In addition, 14 parents and 8 teachers completed the parallel written informant forms of the SDQ. Children and parents were given the opportunity to opt-out of research if they wished. No compensation was provided to clients.

Materials

Demographic form. Clinicians working at PAH! completed a demographic form for all children and adolescents assessed in this study. The form was used to collect information on variables including: *age*, *gender*, *cochlear implant* (unilateral, bilateral, none), *hearing aid* (unilateral, bilateral, none), *frequency of hearing aid* use (very rarely, somewhat rarely, somewhat often, very often), preferred *language of child* (ASL only, ASL and spoken), *preferred language of parent* (spoken only, ASL only, ASL and spoken), *parental hearing status* (hard of hearing, Deaf, hearing), *cause of deafness* (genetic, illness/accident, unknown), and *additionally disability* (yes, no). A copy of the demographic form used is available in Appendix B.

ASL-SDQ (youth self-rated version). Following the translation process, the self-rated ASL-SDQ was used with children ages 11-18 years. The questionnaire is comprised of 25 items divided into 5 subscales with 5 items in each. Items are rated by respondents using a 3-point Likert scale (“not true”, “somewhat true”, or “certainly true”). The subscales are designed to measure *Emotional problems*, *Conduct problems*, *Peer problems*, *Hyperactivity/Inattention*, and *Prosocial behaviour*. The prosocial behaviour scale measures strengths while the remaining four scales measure difficulties. A score ranging from 0 to 10 can be reported for each category, and a total difficulties score ranging from 0 to 40 can be calculated by summing the scores for each category (except for the prosocial behaviour). Higher scores indicate more difficulties except on the prosocial behaviour subscale where higher scores indicate more strengths.

English-SDQ (Informant version). The Informant version of the SDQ was used with parents and teachers of some of the children in this study. The construction of this version of the SDQ is identical to the self-rated version with 25 items divided into 5 subscales of 5 items each with the same 3-point Likert scale. The subscales are identical to those found in the self-rated version. Items in this version of the questionnaire are worded differently to reflect the parent's understanding of the child's experience as opposed to asking the child about their experience directly. For example, the third item on the self-rated questionnaire is written, "I get a lot of headaches, stomach-aches or sickness" whereas on the informant version this same item is stated as "Often complains of headaches, stomach-aches or sickness". A copy of the informant rated SDQ for 4-17 year olds is available in Appendix C.

Procedure

Ethics approval was granted by the King's University College research ethics board. Informed consent was obtained from a parent by PAH! clinicians. Additionally, standard practice was followed where request was made for signed consent from children who are older than 12 years of age and considered able to understand the nature of what they are consenting to. Consent was for the child to access mental health services at PAH!, for the inclusion of non-identifying data from the ASL-SDQ, and for parallel parent/teacher forms to be used for this research study and ongoing data collection at PAH!. After receiving informed consent, clinicians showed the videotape of the ASL-SDQ to D/HH children ages 11-18 years and provided the English printed parallel version to the client's parents and teachers. Completion took approximately 20 minutes for each questionnaire.

Results (Part 1): ASL-SDQ

The rigorous translation process used in this study resulted in an ASL translation of the self-rated SDQ appropriate for D/HH children and adolescents. The final recorded video of the ASL-SDQ, along with a detailed explanation of the translation methodology was sent to YIM for publication. Additionally, back-translations (B1 & B2) were submitted. The translation methodology was approved by YIM. However, a requests were made for changes on aspects of certain items in order to maintain a “unitary” SDQ (see Table 1 for examples).

Table 1

Back-translations and YIM correspondence

Original SDQ	B1	B2	YIM initial feedback	ASL supervisor's response	YIM second feedback
Item #3 "I get a lot of headaches, stomach-aches or sickness"	Do you often get pounding headache and feel sick or nauseous?	Do you frequently feel sick? (for ex. Headaches, nausea)	Please take out "pounding" since this is not in the original. It is "a lot of headaches" or sickness.	Agreed. Pounding will be removed.	
Item #4 "I usually share with others, for ex. CD's, games food"	Do you mind sharing things like games or movies or food with other people?	Do you like to share with others when you have the opportunity? (For example games, movies, food?	Please take out "movies" since it is not in the original	Replacing CD's with movies allowed us to be more culturally sensitive.	Sorry to be rigid, but it is part of keeping a "unitary" SDQ that is used by everyone (thereby enabling valid comparisons, e.g. with national norms, and valid data combination (e.g. for meta-analyses).
Item #12 "I fight a lot. I can make other people do what I want"	Do you often persuade others to do things for you?	Do you persuade people to do things for you?	This is not correct. The item is about fighting. "I fight a lot. I can make other people do what I want"	Clarification is needed on the tern "fight" physically or verbally as these are two different signs. Current translation refers to arguing.	It is "physical fight, not arguing

Results (Part 2): Pilot study

Frequency data was collected using demographic forms and are presented in Table 2. YIM provides cut-off criteria for categorizing scores based on a large UK normative sample where 80% scored “Close to Average”, 10% “Slightly Raised”, 5% ”High”, and 5% “Very High” (Youthinmind, 2016). Frequencies under each category for self-ratings, parent-ratings, and teacher-ratings, are reported in Table 3. Nine out of 19 children who completed the self-rated ASL-SDQ, reported total difficulty scores which fell into the categories “high” and “very high”. Only three out of 14 parents rated their children in the ‘high” to “very high” range of total difficulties. Total difficulty scores were reported at *M*=16.26 *SD*=6.34 for self-rated (*n*=19), *M*=12.86, *SD*= 6.11 for parent-rated (*n*=14), and *M*=14.88, *SD*=7.92 for teacher-rated (*n*=8).

The apparent discrepancy between parent-rated and self-rated scores was investigated using paired-samples *t*-tests. It was found that the difference between the total difficulty scores reported by youth and their parents was significant, *t*(13)=2.31, *p*=0.038. Total difficulty scores from the self-rated ASL-SDQ (*M*=17.21, *SD*=6.72) were significantly higher than total difficulty scores reported from the parent-rated SDQ (*M*=12.86, *SD*=6.11).

To investigate this difference further, additional paired-sample *t*-tests were run on the difficulty subscales that are used to calculate the total difficulties score. It was found that on the emotional subscale a significant difference existed between self-rated ASL-SDQ scores and parent-rated SDQ scores, *t*(13)=3.49, *p*=.004. Specifically, emotional difficulty scores from the self-rated ASL-SDQ (*M*=5.86, *SD*=2.77) were significantly higher than the emotional difficulty scores reported from the parent-rated SDQ (*M*=3.50, *SD*=2.50). In addition, paired-sample *t*-tests were conducted on the remaining four subscales but no other significant differences were found between scores reported from self-reports and parent forms.

Table 2

Demographic information about the sample (N= 20) Variable Characteristic N %

Variable	Characteristic	N	%
Cochlear implant	None	15	75
	Unilateral	4	20
	Bilateral	1	5
Hearing aid	None	10	50
	Unilateral	1	5
	Bilateral	9	45
Frequency of hearing air use	Very rarely	0	55
	Somewhat rarely	3	15
	Somewhat often	2	15
	Very often	5	25
Child's preferred language	Sign only	16	80
	Sign and spoken	4	20
Parent's preferred language	Spoken only	10	50
	Sign only	4	20
	Sign and spoken	6	30
Parent's hearing status	Hard of hearing	0	0
	Deaf	2	10
	Hearing	18	90
Additional disability	Yes	8	40
	No	12	60
Cause of deafness	Genetic	2	10
	Illness/accident	8	40
	Unknown	8	40
	Missing data	2	10

[a] *Additional disability* appeared as *Additional handicap* on the demographic form used for data collection. Disability is believed to be a more sensitive term.

Table 3

Cutoff band frequencies for students, parents, and teachers using the SDQ

Self-completed SDQ (*n=19*)				
	Close to Average	Slightly Raised	High	Very High
Total Difficulties	8	2	3	6
Emotional Problems	4	3	4	8
Conduct Problems	12	4	2	1
Hyperactivity/ Inattention	16	2	0	1
Peer Problems	3	2	4	10
Prosocial Behaviour	17	0	1	1
Parent-completed SDQ (*n*=14)				
	Close to Average	Slightly Raised	High	Very High
Total Difficulties	9	2	1	2
Emotional Problems	7	2	2	3
Conduct Problems	10	2	0	2
Hyperactivity/ Inattention	12	2	0	0
Peer Problems	5	0	4	5
Prosocial Behaviour	14	0	0	0
Teacher-completed SDQ (*n*=8)				
	Close to Average	Slightly Raised	High	Very High
Total Difficulties	3	2	0	3
Emotional Problems	4	1	1	2
Conduct Problems	6	0	1	1
Hyperactivity/ Inattention	4	1	2	1
Peer Problems	4	2	1	1
Prosocial Behaviour	6	1	0	1

Notes. Cuttoff bands as defined by Youthinmind (2016).

Discussion (Part 1): ASL-SDQ

If published, the newly translated ASL-SDQ will serve as a beneficial tool for the D/HH child and adolescent population. Currently, the written version is being used in the following ways within hearing populations (Youthinmind, 2012):

1. **Clinical assessment.** The questionnaire can be used on intake to inform clinical assessment and intervention
2. **Evaluating outcome.** Administering the questionnaire before and after treatment, can allow for feedback to be provided on a treatment's efficacy.
3. **Screening.** The SDQ can be used for efficient and accurate screening of mental health issues for D/HH children and adolescents.
4. **Research/Epidemiology.** It can be used for data collection, which would enable a greater understanding of this population. As well, meaningful comparisons to other groups can be made because the SDQ is available in over 80 languages.

Thus, the ASL-SDQ has the potential to be applied in several ways and if published it will enable greater mental health service for D/HH children and adolescents. Increasing mental health services for this population is essential seeing as the population is currently underserved and poorly understood (du Feu & Chovaz, 2014; Wallis, Musselman, & MacKay, 2004).

Translation Challenges

The following is a discussion of the unique challenges that were faced in the process of translating a written questionnaire into a sign language.

Translation vs. Interpretation. ASL interpretation is based not only on what is literally said, but also on contextual cues such as body language, eye contact, facial expressions, etc. (Jones et al., 2006). In their typical work with D/HH individuals, interpreters do not provide a one-to-one translation from each spoken word to a sign (Vernon & Miller, 2001). For this reason, ASL interpreters often prefer to avoid the word “translation” when describing their work. To preserve the psychometric properties of the original questionnaire, the goal of this study was to create as close to a one-to-one translation for each item as possible. Although the need for one-to-translation was expressed clearly, conveying this idea to translation team members who work as ASL interpreters represented a challenge. Having an ASL-interpreter who was aware of this objective oversee the entire procedure, allowed for any misunderstandings in this regard to be identified and corrected early in the translation process.

Non-manual features. Roberts et al. (2015) described the challenge of trying to produce neutral signs that do not lead the respondent in any way. Non-manual features (such as facial expressions) may convey meaning that is not intended. This unintentionally conveyed meaning, has the potential to imply connotations regarding which responses are perceived as socially desirable and which are not. In order to avoid this influence and retain the integrity of the questionnaire, Roberts et al. stated that paralinguistic features should be avoided as much as possible— except in cases where they are required to convey meaning. This is done to prevent the possibility of respondents being influenced by the signer in the recorded questionnaire. This recommendation was followed, however, some paralinguistic features such as facial expressions are sometimes necessary to convey certain meaning in ASL (Jones et al., 2006). Therefore, some paralinguistic features were retained in circumstances where omission could have compromised the integrity of the questionnaire. Having two back-translation teams, consisting of members from various backgrounds, helped tease out any differences in meaning that could have manifested from the inclusion of paralinguistic features. Back-translators, as well as members of the expert panel were instructed to carefully consider unintended meanings that might be conveyed. These steps helped minimize the possibility of expressing unintended meaning.

The position of a sign in physical space is another non-manual feature that is able to affect semantics. In ASL the physical height of signs used to represent proper nouns may imply meaning about power and status (Ashton et al., 2013). Certain items were marked un-banked by the expert panel after it was noticed that the signs used to represent the respondent where physically lower than signs used for other people (e.g., friends). One example where this was seen was for item number six “I would rather be alone than with people my age”. In this example the sign for “I” was physically lower than the signs used for “people my age”. To resolve this issue, these items were sent back to the forward-translation team who modified the signs to be equivalent in height, thus removing any implications of inequality.

Statements as questions. The need to change the structure of items from first-person statements that the respondent can agree or disagree with to questions directed to the respondent, was identified by Roberts et al. (2015). This change is required so that the possibility of a respondent misunderstanding the question, as being in regards to the signer in the video, is reduced. To clarify that questions are directed to the respondent, each question was ended with an index finger pointed outward and a head tilt. Although Roberts et al. used a different technique, translation team members involved in the present study, felt that this technique fit well with the natural structure of ASL.

Limitations

The D/HH population is an extremely heterogeneous group with different family backgrounds, educational experiences, cultural identities, and various causes of deafness (du Feu & Chovaz, 2014; Roberts et al., 2015). These differences may affect the language level of these individuals and the signs they are familiar with. A diverse group of translators was selected to represent the teams in the translation model. As well, translators were instructed to use the most widely used and simplest version of signs for each item. Despite these efforts, clinicians who administered the questionnaire to the pilot sample reported that some youth who displayed lower ASL fluency, had trouble understanding some items in the questionnaire. This may reflect a limitation in the possibility of ever having a questionnaire that is truly universal to all D/HH individuals due to the nature of this population.

Another key point of consideration that was described by Roberts et al. (2015), is the difference in terms of accessibility of instructions stated on a written questionnaire compared to those described on a questionnaire delivered through video. On a written questionnaire instructions are typically always visible, making it easy for respondents to receive a reminder if necessary. In the ASL-SDQ, instructions are clearly stated once at the beginning of the questionnaire but they are not repeated throughout the questionnaire. One of the clinicians involved in administering the ASL-SDQ at PAH! expressed concern that some youth in the pilot sample had to be reminded several times of the instructions that were given at the beginning of assessment. A second child who had a diagnosis of ADHD required the video to be replayed several times to understand each item in the context of the instructions given. If this questionnaire is administered without someone who can offer support during the questionnaire process, respondents may get lost and may not be able to complete the questionnaire. This is a limitation of the standard video format of the questionnaire that future research may aim to address.

Future Research

This study, along with Roberts et al. (2015), serves as a useful template for the translation of mental health assessment tools from a written/oral to a sign language modality. A few culturally Deaf parents indicated that they would appreciate an ASL version of the parent-rated SDQ. ASL translations of both informant versions of the SDQ would ensure a completely accessible questionnaire. The impact supplement can also be translated in the future to further expand the potential of the ASL-SDQ. Additionally, translations of SDQ forms for adults would serve to benefit D/HH individuals who are 18 years of age and older.

Future research may aim to address the concern regarding diminished ability to receive instructional cues on video questionnaires. One solution might be to simply repeat the instructions provided at the beginning of the questionnaire before each item. However, this solution may be undesirable seeing as repeating the instructions prior to the display of every item would considerably increase the length of time needed to complete the questionnaire. Even if these instructions were significantly shortened, respondents may see consistent repetition of instructions as unnecessary and annoying—which could potentially reduce respondents' motivation to provide thoughtful responses. An alternative solution might be to incorporate a technical feature (either built into the video or with third-party software) that allows the participant to easily cycle between items and instructions. This would give respondents the opportunity to refresh their memory without losing their place in the questionnaire. Additionally, this feature would allow respondents to go back and review questions at their own discretion.

Discussion (Part 2): Pilot study

Although some participants had some difficulties with the self-rated questionnaire, majority of children and adolescents in this pilot sample were successfully able to complete the ASL-SDQ. Furthermore, many respondents expressed appreciation for the questionnaire being in ASL, rather than in written English. Based on these observations, the ASL-SDQ shows potential as a useful tool for evaluating the mental health of D/HH children and adolescents.

The mean total difficulty scores reported in this sample are higher than what has been reported from community samples with hearing children and adolescents (Meltzer, Gatward, Goodman & Ford, 2000; NHIS, 2003). However, this the present study used a clinical sample of D/HH children and adolescents. Similar results to those found in the present study, were reported by Roberts et al (2015) who used the BSL-SDQ with a clinical sample of deaf children and adolescents in the UK.

Significant findings indicate a trend of youth self-identifying with issues that parents and teachers appear to either miss or overlook. Previous literature has proposed that language barriers and false expectations may result in parents not recognizing the signs and symptoms of mental health problems in their D/HH young people (du Feu & Chovaz, 2014). As a consequence of this, D/HH youth are less likely to be referred to mental health facilities for treatment (Roberts et al. 2015). This highlights the importance of having a self-rated questionnaire that is linguistically and culturally accessible to D/HH youth instead of relying on exclusively on parent and teacher reports for feedback to assess the mental health of this population. The ASL-SDQ can provide D/HH youth the ability express mental health problems that might otherwise go unnoticed. Thus, children and adolescents may be exposed to early intervention and treatment, which could reduce the severity and prevalence of mental health problems overtime in the D/HH population.

The difference between self-ratings and parent-ratings seen in the present study was not reported by Roberts et al (2015). In fact, the hyperactivity subscale was the only subscale were a significant difference between raters was found; with parents reporting significantly higher scores. This may be because Roberts et al. was assessing BSL translations of informant forms in addition to self-rated forms, therefore, all parent forms collected were completed by *deaf* parents who were BSL users. In the present study, only two out of 14 parents who completed the parent-rated SDQ identified as Deaf. Deaf parents may be more accurate in their assessment of their D/HH children's mental health.

Limitations

While the trends that were found in this study are interesting, it is important to acknowledge the limitations. Firstly, a clinical sample was used for this study, therefore, scores may be higher than what would normally be seen in the general D/HH population of North America. It is expected that clinical samples will report significantly higher rates of mental health issues than community samples. This was found by Roberts et al. (2015) who reported that self-rated total difficulty scores, emotional symptom scores, and conduct problem scores were significantly higher in their clinical subsample than in their community sample. The small sample used the present study is another limitation which prevents the ability to generalize about the D/HH population.

Furthermore, this study was part of an Honours Thesis and therefore time and money were limited. As a consequence of this, the ASL-SDQ's psychometric properties could not be evaluated. Without evaluation of validity, inter-rater reliability, factor analysis, and internal consistency, there is no way of knowing how the questionnaires psychometric properties compare to other published versions of the SDQ.

Many of the students in this sample attend high schools where they see multiple teachers for equal lengths of time each day. For this reason, teachers may not feel they know the student well enough to complete a questionnaire about the student's mental health. As a result, teachers sometimes pass the responsibility of completing the questionnaire to the student's other teachers – who may respond in the same way. This may account for why so few teacher-rated forms were collected. Although there appears to be differences between teacher ratings and ratings from the other forms, the small number of teacher forms collected makes trend assessment difficult.

Future Research

A study that collects data from a larger sample of D/HH children and adolescents could help clarify the trends seen in this study. Furthermore, a larger sample may reveal statistically significant findings beyond what was reported in the present study. Additionally, a study with a larger sample and more resources could assess the psychometric properties of the ASL-SDQ. This would allow for meaningful comparisons to be made between the scores reported by youth in the D/HH population and the hearing population.

Future research may choose to investigate demographic variables different from those assessed in the present study. After careful reflection, it was determined that the "Parent's Preferred Language" demographic variable is somewhat ambiguous and difficult to interpret. A parent might respond that they prefer English but this does not indicate whether they are able to communicate with their child in ASL. A more interpretable variable might include "Language Used Between Parent and Child". In addition, there is merit to exploring the parent's proficiency/fluency in ASL as this might affect how easily they are able to communicate with their child. In addition, parent-child communication may explain the difference found between parent-rated scores and child-rated scores. The assessment of these demographic variable would also enable further investigation of how parent-child communication affects the mental health of D/HH individuals. Whether parent-child communication affects parents' ability to accurately recognize and report their children's mental health functioning could also be explored in future studies.

Final Conclusion

This study used a rigorous translation process to produce a self-rated version of the SDQ that is not only linguistically appropriate but is also culturally sensitive to D/HH youth. Correspondence with YIM indicates that publication of the newly translated ASL-SDQ in the future is likely. The ASL-SDQ can be used for a number of purposes that would benefit the underserved population of D/HH individuals. The apparent trend of youth self-reporting more mental health difficulties than parents, highlights the value of having an accessible self-rated questionnaire instead of relying only on feedback from informants. Future research should use the ASL-SDQ with a larger sample of D/HH children to access trends further. Additionally, future research should examine the psychometric properties of the ASL-SDQ to enable meaningful interpretations of data collected with the questionnaire. The ASL-SDQ has the potential to enable more accessible mental health services for D/HH youth; this represents considerable progress in the field of mental health and deafness.

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Appendix A

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of how things have been for you over the last six months.

Your Name .... Male/Female

Date of Birth..

	Not True	**Somewhat True**	**Certainly True**
I try to be nice to other people. I care about their feelings	☐	☐	☐
I am restless, I cannot stay still for long	☐	☐	☐
I get a lot of headaches, stomach-aches or sickness	☐	☐	☐
I usually share with others (food, games, pens etc.)	☐	☐	☐
I get very angry and often lose my temper	☐	☐	☐
I am usually on my own. I generally play alone or keep to myself	☐	☐	☐
I usually do as I am told	☐	☐	☐
I worry a lot	☐	☐	☐
I am helpful if someone is hurt, upset or feeling ill	☐	☐	☐
I am constantly fidgeting or squirming	☐	☐	☐
I have one good friend or more	☐	☐	☐
I fight a lot. I can make other people do what I want	☐	☐	☐
I am often unhappy, down-hearted or tearful	☐	☐	☐
Other people my age generally like me	☐	☐	☐
I am easily distracted, I find it difficult to concentrate	☐	☐	☐
I am nervous in new situations. I easily lose confidence	☐	☐	☐
I am kind to younger children	☐	☐	☐
I am often accused of lying or cheating	☐	☐	☐
Other children or young people pick on me or bully me	☐	☐	☐
I often volunteer to help others (parents, teachers, children)	☐	☐	☐
I think before I do things	☐	☐	☐
I take things that are not mine from home, school or elsewhere	☐	☐	☐
I get on better with adults than with people my own age	☐	☐	☐
I have many fears, I am easily scared	☐	☐	☐
I finish the work I'm doing. My attention is good	☐	☐	☐

Your signature .... Today's date ....

Thank you very much for your help

Appendix B

PAH!

Client Demographic Information

Child's Initials	
Age	
Gender	

(Circle One)

Cochlear Implantation	Unilateral	Bilateral	None	
Hearing Aid Use	Unilateral	Bilateral	None	
Frequency of Hearing Aid Use (if applicable)	Very Often	Somewhat Often	Somewhat Rarely	Very Rarely
Most Preferred Language by the Child	Sign language only	Sign language and Spoken		
Most Preferred Language of Parent	Sign language only	Sign language and Spoken	Spoken Only	
Parental Hearing Status	Hard of Hearing	Deaf	Hearing	
Additional Handicap	Yes	No		
Cause of Deafness	Genetic	Illness/accident	Unknown	Missing data

Appendix C

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's Name .... Male/Female

Date of Birth..

	Not True	**Somewhat True**	**Certainly True**
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

Signature .... Date ....

Parent/Teacher/Other (please specify:)

Thank you very much for your help