

**Evaluating the Reliability and Validity of the
Questionnaire for Situational Information:**

Concurrent Validity

Final Report

Submitted By:

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December 10, 2008

Introduction

The Agency for Persons with Disabilities (APD) is the Florida program tasked with serving the needs of Floridians with developmental disabilities. Prior to 2004, APD existed as the Developmental Disabilities Program within the Department of Children and Families. APD works in partnership with local communities and private providers to assist people who have developmental disabilities and their families. APD also provides assistance in identifying the needs of people with developmental disabilities for supports and services. An instrument, the Questionnaire for Situational Information (QSI), was developed for use in the needs assessment process. The QSI collects information on need across multiple domains as well as demographics and situational information such as where the person lives. The intent of the QSI is to gather information to be used to plan supports. APD is also exploring the use of the QSI among other pieces of data to develop individual budgets for people receiving developmental disability services. Like Florida, states across the nation have developed needs assessment procedures to help allocate resources to better meet the needs of individuals and make costs more predictable.

As recommended by the Standards for Educational and Psychological Testing (Joint Committee on Standards for Educational and Psychological Testing, 1999), APD commissioned a series of studies to evaluate the psychometric properties of this new instrument before using the QSI to make important decisions about individual services and budgets. The series includes the following reports: item analyses, inter-interviewer reliability, test-retest reliability, content validity, and concurrent validity. This report presents the results for the testing of concurrent validity between the Supports Intensity Scale and the QSI. Concurrent validity measures the extent to which the test correlates with some alternative variable that measures a similar construct. A common approach is to measure the correlation between two tests that are administered to the same people at the same approximate time. We report the correlation between the QSI and the Supports Intensity Scale (SIS), a well-validated instrument measuring support needs. The purpose of this report is to compare the total scores of the

SIS and the QSI, along with the subscales that are similar in scope. Table 1 lists the subscales for both instruments and examples to show how the QSI subscales correspond to the SIS.

Table 1. QSI and SIS Subscale Correspondence

QSI Subscales	QSI Subscale Examples	SIS Subscales	SIS Subscale Examples
Functional	Eating Dressing Toileting Self-protection Communications	Section 1: Support Needs A: Home Living Activities B: Community Living Activities C: Lifelong Learning Activities D: Employment Activities E: Health and Safety Activities F: Social Activities	Eating food; Using the toilet; Dressing Going to visit friends and family Learning self-management strategies Learning and using specific job skills Avoiding health and safety hazards Communicating with others about personal needs
Physical	Assistance in meeting Chronic Healthcare Needs Gastrointestinal Conditions (includes vomiting, reflux, heartburn, or ulcer) Anti-Epileptic Medication use	Section 3a: Medical Supports Needed	Seizure Management Dialysis
Behavior	Has the individual engaged in a behavior that resulted in frequent or substantial property damage? Has the individuals engaged in sexual behaviors that considered inappropriate by others? Has the individual run away or intentionally left the home, work area or recreation setting?	Section 3b: Behavior Supports Needed	Prevention of property destruction Prevention of sexual aggression Prevention of wandering
No comparable scale on the QSI		Section 2: Supplemental Protection and Advocacy	Advocating for self Making choices and decisions

Methods

Measures

The Questionnaire for Situational Information (QSI) was developed by Florida’s Agency for Persons with Disabilities (APD), with the assistance of a private contractor, Human Systems and Outcomes,

Inc. The QSI combined several instruments that have been used and refined by APD over the course of the past 10 years. In every administration of the Questionnaire for Situational Information personal information is gathered by an observation of and a face-to-face interview with the individual with a developmental disability, the individual's guardian, and the individual's family (if the individual is a child or has given permission). In addition, interviews are conducted with the individual's caregivers, health care personnel, behavior analyst, counselors, and other persons as appropriate. Finally, individual records are reviewed including recent assessments and progress notes from medical records, school records, previous support plans, and relevant information from other collateral sources, as appropriate. The QSI focuses on the support needs in 3 domains: functional status, behavioral status, and physical status. The QSI contributes one source of information to the individual's support plan. Other considerations made in developing the support plan include the person's preferences and the extent to which certain personal outcomes and basic assurances are being met.

The Supports Intensity Scale was developed in conjunction with AAIDD over a 5-year period in response to changes in how society views and relates to people with disabilities. These changes generated the need to create a tool that measures the intensity of a person's support needs. The SIS is widely used for support planning and budget allocation and has well-established reliability and validity. (Thompson, 2004). As of October 2008, the SIS had been adopted by 14 North American States and Provinces in allocating scarce resources to individuals with intellectual disabilities. SIS scores are based on interviews with at least two respondents who know the consumer well. Respondents must have known the person being rated for at least 3 months and have had recent opportunities to observe the person in one or more environments for substantial periods of time.

Moderate correlations between the QSI and SIS on corresponding subscales will indicate the validity of the QSI as a measure of support needs. To be accepted as evidence of validity, the correlation coefficient between the two instruments must reach or exceed the minimum of $r = .35$

(Hamill, Brown, and Bryant, 1992). However, the coefficient needs to be sufficient to make good decisions and differentiate between individuals to the extent necessary (Cohen, Swerdlik, & Phillips; 1996). A general guide to interpreting correlation coefficients follows (Williams, 1968, p.134): $r < .20$ is slight, almost negligible; $.20-.40$ is low, definite but small relationship; $.40-.70$ is moderate, substantial relationship; $.70-.90$ is high, marked relationship; $.90-1.0$ is very high, very dependable correlation.

Participants

A total of 100 individuals participated in this study. Because the data from two individuals were not available at the time of this report, these results are based on a sample of 98 individuals.

Participants were recruited from area seven, which consists of Orange, Seminole, Osceola and Brevard counties. Participants ranged in age from 16-81, with a mean of 41.3 years and a standard deviation of 15.6. Participants were primarily white (81.6%), with the remaining 18.4% black. Ethnicity was reported as follows: 92.9% from U.S.A., 2 reported Viet Nam, 1 reported Puerto Rico, 1 reported Mexico, 1 reported other Hispanic, and 2 were reported unknown. Mental retardation was listed as the primary diagnosis for 95.9% and 4.1% reported autism as the primary diagnosis. Reported place of residence was 54% large group home, 44% small group home, 2% Family Home.

Procedure

Individuals were identified who lived either in residential care settings or in their own homes with support and who had completed a QSI recently. Efforts were made to recruit participants from specific zip codes or zip code clusters to minimize travel burden on interviewers and respondents.

The SIS interviews were conducted a few weeks after the QSI had been completed. We excluded participants who experienced a major life change or crisis between the QSI and SIS assessments because of the likelihood that such a change would affect support needs. A brief instrument, called the *Recent Life Experiences of Person with Disability*, was completed over the telephone

when scheduling the SIS interview. If the individual had experienced a major life change or crisis in the time since the QSI was completed, the individual was excluded from the study. A total of 5 individuals were excluded on that basis and were replaced by other individuals who met inclusion criteria for this study.

Sources of Information

An effort was made to interview the same informants for both the QSI and SIS. However, this was not always possible. Slightly less than half (48%) of the time, at least one informant, in addition to the individual, provided information for both the QSI and SIS assessment. The individual receiving services him or herself participated in every QSI and SIS assessment with one exception when the parents requested that the individual not be interviewed for the SIS. Individuals varied in their ability and willingness to respond during these interviews. Paid support staff participated in nearly every assessment (97% of QSI and 97% of SIS). A second paid support person was often interviewed as well (66% SIS, 79% QSI). A family member or guardian was present for 79% of the SIS interviews, but only 11% of the QSI interviews. The disproportionate use of family members or guardians reflects a difference in the administration procedures of the two instruments. It is possible, though not certain, that family members and guardians contributed different information that could affect the scoring of the instruments. If that were the case, then including more family members and guardians in the SIS interview than in the QSI interviews could have lowered the correlation between the two instruments. Consistent with the Users Manuals for the two instruments, records were reviewed as part of the QSI assessment, but not for the SIS.

Data analysis

The results were analyzed using SPSS version 16.0 software. QSI subscale scores were computed according to the scoring procedure by adding the weighted ratings of items on each subscale.

The QSI total score was computed by adding the three subscale scores. Because the QSI does not use standard scores, the SIS raw scores were used when available. The SIS does not provide a raw total score (only a total standard score) so a raw total was computed by summing the raw scores of the six Section 1 subscales. Pearson product moment correlations were computed between the QSI subscale scores and corresponding SIS subscale raw scores.

Results

Table 2. shows the correlation coefficients between the QSI and SIS subscale and total scores. The bolded and shaded figures show the expected areas of strong correlation described previously: A moderately high correlation was found between the total scores of the two instruments ($r = .59$). Similar correlations were found between the behavior scales ($r = .63$) and between the QSI Physical scale and the SIS medical scale ($r = .59$). The QSI Functional subscale showed a moderately high correlation with the SIS total score ($r = .66$) and a strong correlation with the SIS Home Living subscale ($r = .74$). **Table 2 presents the subscale correlations with expected strong correlations in Bold typeface and with shading.** Other correlations presented in this table were not predicted to be strong and have no bearing on the concurrent validity.

By comparison, the concurrent validity of the Service Needs Assessment Profile (SNAP; Gould, 1998) with the SIS total score was higher ($r = .78$; Guscia, 2006). The SNAP was developed in Australia to measure support needs and to guide the funding for individuals with different types of disabilities at all levels of severity (Gould, 1998). The SNAP measures 29 areas of functioning within 5 domains: *Personal Care* (e.g., bathing, dressing, eating, meal preparation, household tasks, self-protection), *Physical Health* (e.g., ambulation, health issues, incontinence, pressure care, epilepsy), *Behavior Support* (e.g., type of behavior, support requirements, behavior risk, mental health issues), *Night Support* (e.g., sleeping patterns, physical support needs, health monitoring, behavior issues), *Social Support* (e.g., communication, social, leisure and money skills, day support requirements, travel needs).

Table 2. Pearson product moment correlations between the SIS and QSI.¹

	SIS Home	SIS Community	SIS Learning	SIS Employment	SIS Health Safety	SIS Social	SIS Section 1 Total	SIS Medical	SIS Behavior
QSI Functional	0.74	0.48	0.50	0.54	0.65	0.52	0.66	0.60	0.02
QSI Behavior	0.13	0.25	0.07	0.14	0.16	0.32	0.21	0.08	0.63
QSI Physical	0.52	0.26	0.28	0.36	0.53	0.37	0.46	0.59	0.15
QSI Total	0.61	0.45	0.38	0.46	0.59	0.55	0.59	0.54	0.39

¹ Expected strong correlations appear in Bold typeface and are shaded. Other correlations were not predicted to be strong and have no bearing on the concurrent validity.

Level Validity

One important use for the SIS and eventually the QSI is to guide equitable allocation of resources according to support needs. Toward this end, the QSI provides a scoring scheme into five categories, where Level 5 is for persons with intensive support needs. The comparison of levels generated by the QSI and the SIS is important as it speaks directly to the validity of using the QSI for budget allocation. The SIS manual provides guidance to develop a similar level scheme using SIS scores; however, the suggested SIS level procedure does not take exceptional medical or behavioral support needs (sections 3a and 3b) into account. Because of exceptional medical and behavioral needs are not considered, a direct comparison of levels to the QSI is not appropriate. After consulting with AAIDD (the publisher of the SIS) and other SIS experts, it is apparent that the SIS has not been used to generate funding levels directly. Instead, SIS subscale scores are combined with other pieces of information in a model to predict costs. APD is currently consulting with Human Services Research Institute to develop a budget allocation model for the state of Florida.

Conclusion

The QSI was developed for use in the needs assessment process for the purpose of planning supports and possibly in budget allocation. This study examined concurrent validity of the QSI with the SIS. We examined the concurrent validity coefficient for the QSI Functional subscale, the QSI Behavior subscale, the QSI Physical subscale, and the QSI total score. We found these concurrent validity coefficients to range from .59 to .66. These coefficients demonstrated concurrent validity of the QSI with the SIS, in that these values were all above the .35 threshold and within the moderate range of correlation indicating a substantial relationship.

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