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Administering and Scoring the CSQ Scales®

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CSQ Scales® Overview
The CSQ Scales® were created in response to the need for a standard instrument to replace idiosyncratic, ad hoc, and/or untested tools. The goal was to develop a standardized measure with strong psychometric properties that could be used to assess general satisfaction across varied health and human services. The CSQ Scales® (CSQ) include a series of brief instruments. The CSQ is documented to have excellent reliability and internal consistency. The CSQ is reported to have high levels of client and staff acceptability when tested in numerous studies involving diverse client samples and a wide range of health and human service programs. In summary, the major strengths of the

CSQ include its utility as a standard measure, excellent reliability and internal consistency, acceptability to clients and service providers, and sensitivity to different levels of program quality, and value to service providers committed to enhancement of quality and impact of services (Attkisson & Greenfield, 1996, 2004; Attkisson & Pascoe, 1983; Attkisson & Zwick, 1982; Greenfield, 1983; Larsen, Attkisson, Hargreaves, & Nguyen, 1979; Nguyen, Attkisson, & Stegner, 1983).

Administering CSQ Scales®
Applicable Populations and Service Types
The measures have been adopted in quality assurance, evaluation research, and services research studies across a wide range of health and human service programs. Service settings studied include outpatient and inpatient mental health facilities, public health center clinics, primary care health clinics, health maintenance organizations, employee assistance programs, police and criminal justice services, legal services, mandatory short term alcohol abuse treatment programs, residential alcoholism treatment programs, community-based residential care, case management for the individuals with severe mental disorder, and with AIDS self-support and psycho-educational groups (Attkisson & Greenfield, 1996, 2004; Greenfield, 1983; Pascoe, 1983)

Applicable Age Groups
- Direct reports are elicited from adolescents and adults.
- Parents and caretakers are often respondents about services provided to children.
- A child version, using expressive faces, is available for use.

CSQ Administration (CSQ-3, CSQ-4, CSQ-8, CSA-18 A & B)
The CSQ Scales® are self-administered, with data collected usually at the end of services. Items are questions inquiring about respondents' opinions and conclusions about services they have received or are currently receiving. Response options differ from item to item, but all are based on a four-point scale. Examples include "*How satisfied are you with the amount of help you have received?*" (for which the response options are 1="*Quite dissatisfied*", 2="*Indifferent or mildly dissatisfied*", 3="*Mostly satisfied*", 4="*Very satisfied*", and "*Have the services you received helped you to deal more effectively with your problems?*" (Which has the responses 4="*Yes, they helped a great deal*", 3="*Yes, they helped somewhat*", 2="*No, they didn't help*", 1= "*No, they seemed to make things worse*". All items are positively worded; however, the directionality of response options span the spectrum from very negative to very positive; and, the numerical anchors for items are reversed randomly (from high to low satisfaction *or* low to high satisfaction within each item) to minimize stereotypic response sets. While addressing several elements that contribute to service satisfaction, the CSQ-8 has no subscales and yields a single score measuring a single dimension of overall satisfaction (Larsen et al., 1979).

Administration Time

Reported tests –3 to 8 minutes; author tests–1.5 minutes.

Scoring CSQ Scales® (CSQ-3, CSQ-4, CSQ-8, CSA-18 A & B)

Scoring CSQ Scales®

An overall score is calculated by summing the respondent's rating (item rating) score for each scale item. For the CSQ-8 version, scores therefore range from 8 to 32, with higher values indicating higher satisfaction. Scoring for other versions is similar after extrapolating for number of items.

Scoring the closed-ended part of the CSQ Scales involves: (a) unweighted summation of the direction-corrected response values (1–4 for all the CSQ scales) for the total scales; and (b) calculation of measures of central tendency (such as mean, standard deviation, median, and mode) of the individual item ratings and for the total scale scores. Scoring is not complicated and involves calculation of total score across all items for each subject and analyzing item and total score distributions across groups of subjects. Because of the scale's single factor structure, interpretation of CSQ Scale data involves a straightforward comparison of results obtained for a given service or client group with external data that constitute an appropriate norm, e.g., the multi-service setting means and standard deviation results presented in Nguyen, Attkisson, & Stegner (1983) or Attkisson & Greenfield (2004).

Administering CSQ Scales®: General Considerations

Data gained from the CSQ Scales® are typically self-completed but aural responses have been collected from individuals with serious disorders in hospital acute care, day treatment, and case management studies (LeVois, Nguyen, & Attkisson, 1981).

Methodology and administrative procedures for using the CSQ Scales® are relatively straightforward. Mail survey methods (either mail-out and prepaid mail-back, or hand-out and mail-back) have sometimes been used for collecting the data. The main disadvantage of these approaches is low reported response rates, 40-50% being the highest typically achieved in instances with one follow-up postcard reminder. The recommended approach is to use point of service or waiting room surveys with a designated scale administrator or a receptionist trained in procedures for systematically soliciting voluntary participation from sampled clients. Various sampling protocols have been used: systematic or random samples of client rosters, samples stratified by duration of services so far received, and census samples of all clients seen during a specific time frame (Attkisson & Greenfield, 1996, 2004). The census sampling approach, provided the time interval is at least two typical service weeks, has the advantage of assuring few clients are omitted (only those missing appointments throughout the whole period, or those declining to participate). Completion rates tend to be above 90% when this more satisfactory approach is used, reducing the risk of unknown non-resource bias. Conversely, such face-to-face methods generally include clients whose treatment is in progress.

The practical problem with surveying satisfaction at increasing time intervals after termination or completion of a service program is the expected attenuation in response rate — a problem likely to confound interpretation of results. Most studies have used anonymous methods though some have not, and have included code numbers allowing linkage to service data. One methodological study with the CSQ found optionally identified (name written in at the option of the recipient) forms did not result in lower response rate or higher reported satisfaction (Greenfield, 1983). Despite the range of alternative approaches, the standard waiting room method meets well the simplicity and uniformity of implementation criterion.

Using sampling and time-series methods, satisfaction levels can be compared across different service modalities, duration of service, types of clients, providers, or specific facilities. The CSQ is used in all levels of primary care, mental health care, and other human services. In using any consumer satisfaction measure, perhaps the most important validity consideration is designing procedures to obtain high response rates to minimize biases attributable to non-response.

Reading Level

The reading level of the CSQ Scales® has consistently been found to be at a level that is accessible to individuals reading at the 5th grade level or higher. Several reported results are presented below:

Flesch-Kincaid grade level is 4.7 (reported by independent evaluator)
Flesch-Kincaid grade level found by publisher is 5.3
Flesch Reading Ease Index is 69.4

Norms

Means, modes, medians, and standard deviations are available from a series of studies involving approximately 8,000 clients (Nguyen et al., 1983). Most of the studies also report information on the demographics of sample members. The diverse subject populations enrolled in baseline studies include a broad spectrum of demographic characteristics, a wide range of service types, and variability in amount of services received (Attkisson & Greenfield, 1996, 2004; Attkisson & Zwick, 1982).

Scoring the Service Satisfaction Scale (SSS)
(content forthcoming)

Managing Missing Data in Service Satisfaction Data Sets

This coverage of the "missing data" topic will not be technical as it must be necessarily general in nature pending more specific information about the design of your current study and one cannot presume to make more technical suggestions without that knowledge. First, and foremost, in the future, as you move to new projects, you will want to establish a set of "a priori" rules about how you will manage missing data and

ambiguous responses. This will be important so that your study methodology will not be biased by your choice of methods for handling one of the most frequently occurring challenges to data analysis (regardless of scale used or method of administration). More technical approaches are known and can be conveyed to you, upon request for consultation, in advance of planning future investigations — especially those involving larger numbers of patients (subjects) and control conditions or comparison analyses. Tamalpais Matrix Systems, LLC can link you with an expert in this field, one who has analyzed CSQ data extensively, who can provide additional consultation (**Bruce Stegner, PhD**). For now, for a current or completed project, you may want to consider the following: (a) Include patients who answer 4 or more items on the CSQ-8 (or a similar ratio on more lengthy versions). You will need to enumerate and report the number of subjects meeting this criterion and estimate the effect on overall results that are reported. (b) For patients meeting criteria # 1, for the missing items assign the average score for the items that are scored. (This procedure is questioned by some but will allow you to proceed with your initial project and include these patients. If there are only a few such patients (subjects), the impact on the results may not be profound and can be measured). (c) For patients circling or checking two answers to the same item: select the least satisfied score checked. Remember, the **CSQ Scales** typically yields negatively skewed distributions of scores (not a normal distribution but one where responses tend to cluster at the positive end of the scale — hence, a negatively skewed distribution). So by choosing the least satisfied response, when multiple responses are selected by the patient (or subject), the scores in general are more normalized. You could, alternatively: assign the mid-point between the two responses selected, e.g., if responses "1" and "2" are selected, assign a score of "1.5". This, however, biases the overall results slightly to the positive end of the score range. You can see why "a priori" rules are important. You may also want to consult a statistician who can advise you about alternative or more technical approaches. As noted in the first paragraph above, Tamalpais Matrix Systems, LLC can also refer you to additional resources for consultation on data collection, preparation of data for analysis, and statistical analysis. Tamalpais Matrix Systems, LLC hopes that you find this response to be helpful in your work. The response is provided as a courtesy, cannot be warrantied as the most optimal approach to your specific challenge(s), and with the understanding that you may want to seek additional consultation from TMS or others.

Transforming CSQ-8 Data: Displaying Scores as a Distribution of 25 to 100

It is possible to use a variety of data transform methods to enhance the presentation and understanding of CSQ data. One linear procedure is to compute the total score, for example with the CSQ-8, by adding up the individual scores from the 8 items and the multiplying by 3.125 to obtain a distribution from 25 to 100. (A similar approach can be used with the other CSQ or SSS versions.) I suggested this linear transform of the raw CSQ-8 scores to a colleague as a mechanism for displaying the scores in the generally familiar zero to one hundred "school room" format. I further suggested that my colleague might consider converting the transformed scores into percentiles and then treating each quartile as a level of relative satisfaction. If you implement this approach, please let me

know how this works out. With repeated use of the CSQ Scales over time you can use your own setting as its own control. Then recruit a sister setting to do the same and make comparisons. Please keep in touch as you proceed. You may find that your score distribution is negatively skewed with the proportion of satisfied clients being greater than the less satisfied clients. In this case, the percentile quartiles will assist in segmenting levels of relative satisfaction and dissatisfaction.

Following a time series methodology (repeated administration of the CSQ Scales® over time), service agencies can study trends in service satisfaction results internally or in comparison with CSQ data from peer settings. CSQ score distributions may be negatively skewed (with the proportion of satisfied clients being greater than the proportion of satisfied clients). In this case, the percentile analysis will assist in segmenting levels of relative satisfaction and dissatisfaction. This approach will work best with large numbers of respondents and where comparisons can be made between comparable service settings. Consult your local statistician for additional ideas about linear and non-linear data tranform possibilities.

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