The Volitional Questionnaire: Psychometric Development and Practical Use

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Occational therapy seeks to enable clients through motivated, meaningful participation in life occupations (Fidler & Fidler, 1978; Florey, 1969; Reilly, 1962; Yerxa, 1967). Finding those occupations that elicit a motivated response and discovering ways to stimulate motivation are central tasks of occupational therapy (Burke, 1977; Doble, 1988; Mattingly & Fleming, 1994). Additionally, poor motivation can be an impediment to adaptive functioning. Motivational problems may lead persons to perform suboptimally, avoid occupational performance, or make poor choices for engaging in occupations (Burke, 1977; Doble, 1988; Florey, 1969). Data collected on a person's motivation enables the occupational therapist to identify motivational barriers to functioning and to plan appropriate intervention (Burke, 1977; Doble, 1988; Hemphill, 1988; Mosesy, 1986).

A widely used approach to conceptualizing motivation is the concept of volition from the Model of Human Occupation (Kielhofner, Borell, Burke, Helfrich, & Nygaard, 1995; Kielhofner & Burke, 1985). This concept proposes that motivation consists of (a) a stable structure of dispositions and self-awareness and (b) a dynamic process of anticipating, choosing, experiencing, and reflecting on one's actions. Dispositions refer to innate and acquired emotional and cognitive orientations toward the world. Self-knowledge refers to the image of self as an actor that is built up from experience.

Three areas comprise volitional self-knowledge and dispositions (Kielhofner et al., 1995). The first is personal causation, a person's view of his or her capacities and sense of efficacy in effecting desired outcomes. Personal causation dispositions may include, for example, a readiness to engage in action with confidence or a tendency to feel anxious and expect failure in performance situations. The second area, values, refers to one's convictions concerning what is important or what matters in one's own behavior. One's values are uniquely configured and reflect how one sees the world. Value dispositions are the felt obligations
to perform according to one's convictions. Interests, the third area, refer to one's disposition to feel an attraction to certain kinds of occupations or certain ways of performing. Self-awareness of these attractions lead persons to express preferences for certain occupations.

Together, personal causation, values, and interests constitute a collection of dispositions and self-awareness with which persons anticipate, choose, experience, and reflect on their performance. Importantly, these processes are also influenced by the environment in which a person is performing. Thus, understanding a person's motivation for occupations requires simultaneous appreciation of both the person's volitional characteristics and the influence of the environment (Kielhofner et al., 1995).

Approaches to Gathering Data on Volition

Information about volition can readily be gathered from persons able to reflect on and relate their interests, values, and sense of personal causation. The existing formal methods for collecting data on volition rely on such approaches as interviews, paper-and-pencil inventories, and questionnaires. For example, interviews may be used as part of gaining a comprehensive picture of a person's occupational functioning (Kaplan & Kielhofner, 1989; Kielhofner, Henry, & Walens, 1989). Specific checklists also may be used to gather information relevant to a person's volition (Baron & Curtin, 1990; Masutsuyu, 1969; Oakley, Kielhofner, Barris, & Reichler, 1986; Smith, Kielhofner, & Watts, 1986).

However, formal means of gathering information on volition from persons who cannot readily participate in interviews or complete checklists are lacking. It is especially important to have information about such persons' volition because they are often unable to advocate for their volition preferences and concerns (de las Heras, 1993). In this vein, Goode (1994) decried that caregivers often undertake services and programming for persons who have severe impairments without considering what these persons enjoy or what matters to them. Because a formal means of collecting data on volition from persons who cannot readily self-report was needed, work began several years ago to develop the Volitional Questionnaire.

Background and Description of the Volitional Questionnaire

Underlying the Volitional Questionnaire is the assumption that although occupational therapists cannot directly observe volition, they can make inferences about it from observing behaviors. For example, if clients hesitate to undertake an activity or to solve problems, we can reasonably conclude that they may not be confident about their ability to succeed. If clients smile and stay involved with an activity, we can infer that they like doing it, but if they look bored and are easily distracted, we can infer that they are not enjoying it. Consequently, everyday occupations provide a natural context for observing a person's volition. This line of reasoning was used to guide the development of the Volitional Questionnaire. Strictly speaking, the tool is used to gather data on observed behaviors. Those behaviors are interpreted as representing nonobservable volitional structure and processes.

Several months of observations of persons in organized activities yielded the observational items, each designed to capture behavior that reflected positive volitional involvement in the activity. Pilot tests of the instrument over a 2-year period resulted in the first version of the Volitional Questionnaire (de las Heras, 1990).

The current Volitional Questionnaire contains 14 observational items (see Appendix). This assessment is administered by observing a client in an occupation (e.g., work, leisure, daily living task), which can be done during treatment sessions. Each item is scored with a 4-point scale (see Table 1) that indicates whether the person is passive, hesitant, involved, or spontaneous in exhibiting the behavior described by the item. The scores on the items can be summed to yield a measure of the amount of positive volitionally related behavior observed. An earlier version of the Volitional Questionnaire used a scoring system based on the frequency with which persons exhibited the behavior indexed by each item. As will be discussed later, analysis of data collected with this version of the scale identified problems that led to the current revised version.

The Volitional Questionnaire can be scored in approximately 5 min after observation of a client involved in occupations. Generally, these observations are made during occupational therapy sessions in which the therapist provides opportunities for the occupation and intervenes in a normal therapeutic fashion (i.e., facilitating the person's involvement in the occupation as needed). By observing and rating a client in a number of different situations, the therapist can gain an understanding of how variations in the environmental context result in increases or decreases in scores. Variation of scores across contexts gives a picture of how variable a client's motivation is and of which contexts and occupations elicit the most motivation. Additionally, an understanding of volitional strengths and weaknesses can be gained by examining whether the client achieves consistently low or high scores on particular items.

In addition to the rating scale, the Volitional Questionnaire includes a form for summarizing qualitative

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information gained from observations of the environment as well as the client's volition. The form can also be used to make treatment recommendations or plans concerning the client's motivation. Both the rating scale and the form are described in a manual that provides detailed guidelines for their use.

When the Volitional Questionnaire is used to observe a person in different occupations, noting variations in motivation levels and gathering qualitative data about personal and environmental factors that influence his or her motivation, the instrument functions as an assessment of occupational behavior (Short-DeGraff & Fisher, 1993). The use of a rating scale in the Volitional Questionnaire, however, implies the notion of a measure (Short-DeGraff & Fisher, 1993); that is, the scores are assumed to represent different amounts of volition. As a measure of volition, it is important that the Volitional Questionnaire be scrutinized for its ability to conform to psychometric standards of measurement. The purpose of this article, therefore, is to investigate the measurement properties of the Volitional Questionnaire.

**Instrument Development Studies**

de las Heras (1993) explored the Volitional Questionnaire's validity and reliability. With 30 experienced occupational therapists having working knowledge of the Model of Human Occupation, she found support for the content validity of the questionnaire; that is, these therapists consistently agreed that the items captured the volitional content for which they were designed. The occupational therapists each rated three videotapes of persons engaged in an occupation; intraclass correlation coefficients for all 14 items exceeded .75, and 10 items exceeded .90, indicating high interrater reliability.

To further develop and validate the Volitional Questionnaire, we conducted a two-phased investigation. First, we completed a secondary analysis of data originally collected by de las Heras (1993). Next, we revised the Volitional Questionnaire on the basis of this analysis and reexamined the revised instrument's measurement properties with new data. In both these analyses, the Rasch measurement model (Wright & Linacre, 1989) was used to answer the following research questions: (a) Does the Volitional Questionnaire measure a single underlying construct of volition? (b) Does the Volitional Questionnaire adequately measure the volition of the persons for whom it was designed?

**Measurement and Rasch Analysis**

To exhibit the properties of a measure, the items of the Volitional Questionnaire must define a single underlying construct of volition. A basic concept in the Rasch measurement model is to test whether the items of any instrument coalesce to form a single dominant construct or underlying dimension; this property is referred to as unidimensionality (Haley, McHorney, & Ware, 1994; Hashway, 1978; Wright & Stone, 1979). To be a true measure, the Volitional Questionnaire must also constitute an interval scale in which each item represents an amount of volition. The problem, however, is that the data obtained with the questionnaire's 4-point scale are only ordinal. Rasch analysis converts these ordinal ratings into interval measures, allowing them to take on the properties of a true measure (Merbitz, Morris, & Grip, 1989; Wright & Linacre, 1989).

Rasch analysis (Linacre & Wright, 1992) yields item calibrations that estimate the position of each test item along a unidimensional continuum, which represents the construct the Volitional Questionnaire items were designed to measure. For example, items calibrated at the high end of the continuum would require the person to have greater volition to get a higher rating. Item goodness-of-fit statistics, mean square (MnSq) standardized residuals, and standardized mean-square-fit statistics (t value) generated by Rasch analysis show the extent to which each item fits the volition construct or continuum. The desired value of MnSq is 1.0. Acceptable criteria for unidimensionality depends on both the intended purpose of the measure and the degree of rigor desired. Wright and Linacre (1994) have suggested that a reasonable MnSq fit value is 1 ± .3, with associated t value between ± 2. A MnSq value that is too high (i.e., > 1.3) indicates that scores of an item were too variant or erratic, suggesting either that the item does not belong with the other items on the same continuum or that there are problems in the item's definition. A MnSq value that is too low (i.e., < .7) suggests that the item does not discriminate among per-
sons with different amounts of volition (e.g., persons with different levels of volition getting the same scores on the item) or that the item overlaps with other items that measure a similar amount of volition.

Items that receive higher MnSq values, which suggest erratic scoring, represent a greater threat to validity. Therefore, we considered Volitional Questionnaire items that had a MnSq ≥ 1.3 associated with a t ≥ 2 to misfit. Moreover, we considered the Volitional Questionnaire to be valid or to meet criteria for unidimensionality if no more than one item (5%) did not meet criteria for goodness of fit. Although items with low MnSq values were not considered to misfit, we examined the score patterns to explore reasons why scores were too invariant.

Rasch analysis also provides a person measure, which estimates the position of persons on the same continuum of more to high volition. Because items and persons are calibrated on the same continuum, we could determine whether Volitional Questionnaire items were adequately measuring the subjects' levels of volition.

Secondary Analysis of de las Heras' Data

de las Heras (1993) gathered data from 43 persons (30 women, 13 men) in long-term psychiatric settings in New England. Their ages ranged from 27 to 64 years (M = 41 years). They had psychiatric illnesses, mental retardation, or both and were judged by their occupational therapists to have considerable difficulty in self-reporting. Seventeen occupational therapists from various facilities used the earlier version of the Volitional Questionnaire (i.e., with a 4-point rating based on the frequency of observed behavior) to rate the subjects' volition. All had received training in the use of the Volitional Questionnaire, although their familiarity with it varied. Some only attended a 1-day workshop, whereas others had received periodic training and substantial experience with the questionnaire. The observations took place during routine occupational therapy sessions. The subjects were observed as little as one time and as many as five times. One hundred twenty-four ratings were thus obtained and submitted to Rasch analysis.

BIGSTEPS (Linacre & Wright, 1992, a Rasch analysis computer program, was used to analyze the data. The results of Rasch analysis (see Table 2) indicated that only item 13 (indicates/pursues simple goals) did not meet criteria for goodness of fit. Therefore, the Volitional Questionnaire is considered valid because the items meet the requirement of unidimensionality.

Table 2 also shows the items as they are distributed on the continuum from high to low volition. Each item's position on the continuum is given in log-linear standard units of measurement referred to as logits. Thus, for example, item 8, which had the highest calibration (1.69), represents the most volition, whereas item 11, which had the lowest calibration (−.96), represents the least amount of volition. The measurement error indicates how much confidence we can have with the item calibration. The error ranged from .13 to .15, which was within acceptable range.

Figure 1 shows the distribution of subjects and items on the continuum. The numbers on the left are the logit units, and they represent volition as a continuum of equal intervals. The number signs (#) represent the subjects distributed on this continuum according to their volitional scores. On the right, xs represent the distribution of items in the Volitional Questionnaire according to the three increments on the 4-point scale (i.e., from score 1–2, 2–3, 3–4). In this way, the spread of items along the con-

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Table 2
Item Calibrations and Fit Statistics From Secondary Analysis of de las Heras's (1993) Data

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Item</th>
<th>Calibration</th>
<th>Error</th>
<th>MnSq</th>
<th>t</th>
<th>MnSq</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>High volition</td>
<td>8—attempts to influence others positively</td>
<td>1.69</td>
<td>.15</td>
<td>1.11</td>
<td>0.7</td>
<td>1.18</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>7—tries to solve problems</td>
<td>.48</td>
<td>.14</td>
<td>1.28</td>
<td>1.5</td>
<td>1.17</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>12—is lively/energetic in particular activities</td>
<td>.46</td>
<td>.13</td>
<td>1.01</td>
<td>0.1</td>
<td>1.01</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>4—indicates pride verbally or nonverbally</td>
<td>.24</td>
<td>.13</td>
<td>1.01</td>
<td>0.1</td>
<td>0.93</td>
<td>−0.5</td>
</tr>
<tr>
<td></td>
<td>6—tries to fix own mistakes</td>
<td>.14</td>
<td>.15</td>
<td>1.33</td>
<td>1.5</td>
<td>1.16</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>10—shows enjoyment</td>
<td>.09</td>
<td>.13</td>
<td>0.83</td>
<td>−0.9</td>
<td>0.96</td>
<td>−0.2</td>
</tr>
<tr>
<td></td>
<td>14—shows an activity is special or significant</td>
<td>−.04</td>
<td>.13</td>
<td>0.75</td>
<td>−1.4</td>
<td>0.91</td>
<td>−0.7</td>
</tr>
<tr>
<td></td>
<td>1—demonstrates interests/curiosity in environment</td>
<td>−.08</td>
<td>.13</td>
<td>0.66</td>
<td>−1.9</td>
<td>0.71</td>
<td>−2.3</td>
</tr>
<tr>
<td></td>
<td>5—shows satisfaction when complimented</td>
<td>−.12</td>
<td>.13</td>
<td>1.13</td>
<td>0.7</td>
<td>1.05</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>3—tries new things</td>
<td>−.15</td>
<td>.13</td>
<td>1.29</td>
<td>1.4</td>
<td>1.21</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>2—shows initiative</td>
<td>−.24</td>
<td>.15</td>
<td>0.81</td>
<td>−1.0</td>
<td>0.86</td>
<td>−1.0</td>
</tr>
<tr>
<td></td>
<td>13—indicates/pursues simple goals</td>
<td>−.68</td>
<td>.15</td>
<td>1.21</td>
<td>0.9</td>
<td>1.47</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>9—shares/demonstrates preferences for activity</td>
<td>−.83</td>
<td>.15</td>
<td>0.54</td>
<td>−2.1</td>
<td>0.71</td>
<td>−2.0</td>
</tr>
<tr>
<td>Low volition</td>
<td>11—stays with an activity</td>
<td>−.96</td>
<td>.15</td>
<td>0.99</td>
<td>0.0</td>
<td>3.10</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Note. MnSq = mean square

*Item did not meet criteria for goodness of fit.
Figure 1. Distribution of person measures and items in secondary analysis of de las Heras’s (1993) data. Note. Each number sign (#) represents one observation of a subject. Each x represents one item. Calibration is in logit units. Items are spread in three steps representing the increments of the 4-point scale (i.e., from score 1–2, 2–3, 3–4).

Distribution of Person measures | Distribution of Items as Spread by the 4-point Scale
---|---
High Volition 4.0 | 4.0 High Volition
3.0 | x
2.0 | xx
1.0 | xx
.0 | xxx
-1.0 | xx
-2.0 | xx
Low Volition -3.0 | -3.0 Low Volition

Figure 1 indicates the range of volition they covered. By examining where subjects and items fall on this continuum, we could determine whether the items adequately covered the levels of volition of the 43 subjects.

As Figure 1 illustrates, the instrument did not sufficiently measure persons with volition higher than 2.0 logits; only one item fell in the high range, whereas 34 (27%) of the 124 observations were higher than 2.0 logits. Another problem was the gaps in item distribution (indicated by arrows). Observations that fell in the gaps were not adequately measured. Fifty-one (41%) observations were distributed where there were no corresponding items. Consequently, the relationship between item and person-measure distribution suggests that the Voli-
Anecdotal data from de las Heras' (1993) study suggested that items 6 through 9 needed additional clarification, so their descriptions were slightly rewored, and the meaning of the items was clarified in the Volitional Questionnaire manual.

Our main concern for this secondary analysis of de las Heras' (1993) data was the significant ceiling effect (i.e., subjects with higher volition were not adequately measured by the scale). After careful consideration of this finding, we concluded that the problem may have been due to how the rating was defined. As noted before, the rating was made on the basis of frequency of observed behavior. Consequently, a person could be scored as high on an item, even though a great amount of support or intervention was required to elicit the observed behavior. Therefore, a subject with more volitional spontaneity could receive similar scores to another subject who needed and received more external support but nonetheless exhibited behaviors indexed by the items with the same frequency. Additionally, we observed that raters used the highest rating of 4 disproportionately, that is, more than 45% of the time, while using the lowest rating of 1 only 12% of the time. The criterion of frequency appeared to contribute to this maldistribution of ratings because therapists routinely intervened with subjects during observations to stimulate their motivation. Thus, with frequency of behavior as the criterion, subjects were scored higher than they might have been if consideration was given to how much support, encouragement, or structure they needed.

Therefore, we revised the scoring criteria to reflect the amount of spontaneity and inner-directed volition demonstrated by the person observed (see Table 1). Importantly, this revision altered how the scale measures volitionally relevant behavior. Instead of measuring volition through frequency of item behaviors, the revised Volitional Questionnaire measures volition through the degree of autonomy and spontaneity a person shows in volitionally related behaviors.

Examination of the Revised Questionnaire

Our next step was to ask whether the Volitional Questionnaire with the revised scoring system would retain its unidimensionality while being useful over a larger range of volitional status. The data used for this analysis were based on observations of 18 persons (11 women, 7 men) with psychiatric illness, developmental disability, or both who were hospitalized in psychiatric units in Boston and Chicago. Their ages ranged from 22 to 69 years (M = 33 years). As with the subjects of the de las Heras (1993) study, these subjects were selected on the basis of their difficulty in self-reporting. Each subject was observed between one and three times. Eight occupational therapists from a variety of facilities received training in the use of the Volitional Questionnaire with the revised scoring system. Five of these raters had already received 1 day of training in the use of the Volitional Questionnaire with the original scoring system and were trained in a 2-hour session to rate with the revised scoring system; new raters received 1 day of training. Fifty-two ratings (obtained from a combination of direct and videotaped observations) were submitted to Rasch analysis.

Item calibration, measurement error, and item goodness-of-fit statistics for each item are shown in Table 3. Items met criteria for unidimensionality except for item 5 (shows satisfaction when complimented). The high MnSq and t value for item 5 suggest that it did not fit the volition construct. Because only one item misfit, the questionnaire was again considered to be a valid measure of volition.

The goodness-of-fit statistics for item 13 were too low, suggesting that the ratings for this item were too invariant or predictable. The fact that the score patterns for item 13 changed from erratic in the first analysis to too consistent in the second indicates that the changes in the rating criteria had an impact on this item and that it may need further revision. In this analysis, the calibration of items across the continuum of volition changed somewhat, which may be due to the changes in the scoring system. As expected, the error for each item calibration was increased over the first analysis because of the smaller sample size.

With the revised scoring system, the items targeted mainly to subjects whose measure was between 3.0 logits and −3.5 logits, and there were no major gaps in item distribution (see Figure 2). However, 9 (17%) of the 52 observations representing three (17%) subjects remained inadequately measured. Although, the actual percentage of subjects who were not measured decreased dramatically from 42% in the first analysis to 17% in the second, the instrument still does not measure higher levels of volition.

Examination of the frequency distributions of scores
Table 3
Item Calibrations and Fit Statistics From Examination of the Revised Questionnaire

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Item</th>
<th>Calibraton</th>
<th>Error</th>
<th>Outfit MnSq</th>
<th>Infit MnSq</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>High volition</td>
<td>4—indicates pride verbally or nonverbally</td>
<td>.92</td>
<td>.23</td>
<td>0.83</td>
<td>-0.7</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>7—is willing to try to solve problem</td>
<td>.72</td>
<td>.23</td>
<td>1.22</td>
<td>1.0</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>3—tries new things</td>
<td>.51</td>
<td>.23</td>
<td>1.20</td>
<td>0.9</td>
<td>1.26</td>
</tr>
<tr>
<td></td>
<td>8—attempts to support others positively</td>
<td>.44</td>
<td>.25</td>
<td>0.86</td>
<td>-0.5</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>1—demonstrates interest/courtesy in environment</td>
<td>.39</td>
<td>.25</td>
<td>1.81</td>
<td>2.6</td>
<td>2.02</td>
</tr>
<tr>
<td></td>
<td>5—shows satisfaction when complimented</td>
<td>.24</td>
<td>.25</td>
<td>0.72</td>
<td>-1.2</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>2—shows initiative</td>
<td>.10</td>
<td>.23</td>
<td>0.95</td>
<td>0.1</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>6—is willing to try to fix own mistakes</td>
<td>.09</td>
<td>.25</td>
<td>0.97</td>
<td>0.0</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>10—shows enjoyment in a particular activity</td>
<td>-.22</td>
<td>.23</td>
<td>1.05</td>
<td>0.3</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>9—states/demonstrates preference for activity</td>
<td>-.29</td>
<td>.25</td>
<td>0.96</td>
<td>0.0</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>12—is lively/energetic in particular activity</td>
<td>-.33</td>
<td>.24</td>
<td>.76</td>
<td>-0.8</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td>14—shows an activity is special or significant</td>
<td>-.41</td>
<td>.24</td>
<td>.83</td>
<td>-0.5</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>11—stays with an activity</td>
<td>-.79</td>
<td>.24</td>
<td>0.51</td>
<td>-1.4</td>
<td>0.43</td>
</tr>
</tbody>
</table>

Low volition     | 13—indicates/pursues simple goals | -1.35 | .25 | 1.05 | 0.3 | 1.10 | 0.5 |

Note: MnSq = mean square
* Item did not meet criteria for goodness of fit.

indicates that ratings of 1, 2, and 3 were used more frequently with the revised scoring criteria than those of the earlier version. That raters’ use of a wider range of ratings suggests that the revised scoring system is more sensitive to differences in subjects’ volition.

Discussion

Overall, the two analyses suggested that the items on the Volitional Questionnaire worked reasonably well together to define a unidimensional construct of volition. This is important because unidimensionality translates into validity, and the intention of the Volitional Questionnaire rating scale is to provide a valid measure of volition. Revision of the scoring system improved the ability of the questionnaire to measure different levels of volition. Although the results of the second analysis found that the scoring system worked better, there were still subjects with higher volition who were not adequately measured by the instrument. When we changed the rating criteria, we altered the way items are viewed and rated. This change likely accounted for changes in the calibration of many items from the first to the second analysis. Two different items (item 13 on the first analysis and item 5 on the second analysis) did not meet criteria for goodness of fit. Problems with item 5 might be due to chance; however, the idiosyncratic behavior of item 13 suggests that this item should be carefully reviewed and monitored in future investigations.

In future research, it will be important to see whether the items that currently do not meet criteria for goodness of fit will present better fit and whether the item calibrations remain stable. Moreover, if the instrument is to target persons with higher volition, new items measuring higher levels of volition would need to be added.

Although de las Heras’ (1993) study provided preliminary evidence of acceptable interrater reliability, further studies are needed to examine it. Currently, training of raters in these two studies took place under somewhat different conditions; therefore, it needs to be determined whether training is necessary and, if so, what training is optimal. The training consists of review of information in the manual and of practice using the Volitional Questionnaire. Thus, it is conceivable that occupational therapists could learn to use the instrument effectively from the manual and practice alone, but this remains to be demonstrated.

Development of a useful assessment is a long process requiring careful piloting, empirical scrutiny, and judicious revision. Although the Volitional Questionnaire has been under development for several years, it will benefit from further development and research. In its current state, we believe that the Volitional Questionnaire is a valuable data collection tool. Therefore, we note some recommendations and cautions for its use.

As an assessment, the Volitional Questionnaire provides a structured method of observation. Both the ratings and the qualitative information that result from structured observation of clients’ behavior can provide valuable insights into their volition when they are unable to self-report. The Volitional Questionnaire is intended to be used across a number of observations, which is clinically feasible because it is quickly scored and can be administered during therapy. The information that accrues from careful observation of clients across time, occupations, and environments gives a rich picture of their volition as expressed through their behavior.

As a measure, the rating scale has important limita-
<table>
<thead>
<tr>
<th>Distribution of Person Measures</th>
<th>Distribution of Items as Spread by the 4-point Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Volition</strong></td>
<td>5.0</td>
</tr>
<tr>
<td>4.0</td>
<td>#</td>
</tr>
<tr>
<td>3.0</td>
<td>###</td>
</tr>
<tr>
<td>2.0</td>
<td>###</td>
</tr>
<tr>
<td>1.0</td>
<td>#</td>
</tr>
<tr>
<td>0.0</td>
<td>#</td>
</tr>
<tr>
<td>-1.0</td>
<td>#</td>
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<tr>
<td>-2.0</td>
<td>#</td>
</tr>
<tr>
<td>-3.0</td>
<td>#</td>
</tr>
<tr>
<td><strong>Low Volition</strong></td>
<td>-4.0</td>
</tr>
</tbody>
</table>

Figure 2. Distribution of person measures and items from examination of the revised Volitional Questionnaire. Note. Each number sign (#) represents one observation of a subject. Each x represents one item. Calibration is in logit units. Items are spread in three steps representing the increments of the 4-point scale (i.e., from score 1–2, 2–3, 3–4).

New users are likely to learn the assessment through study of the manual; it is not known yet whether adequate reliability can be achieved through this method. Minimally, occupational therapists who use the manual should study it carefully and refer back to it as they gain initial experience in using the Volitional Questionnaire. The current version of the scale still has a ceiling effect for clients with higher volition. Therefore, it is likely to be most useful for clients who have considerable volitional problems. Occupational therapists should be aware of their own scoring patterns; if the highest rating is routinely issued disproportionately, the scale may not be capturing volitional differences adequately.

Finally, it is important to recognize that the focus of
the investigations reported in this article was on the quantitative measurement data provided by the rating scale. Although we have not emphasized the qualitative data and the kinds of evaluative judgments that can be made from multiple observations and through combined use of the scale and form, the clinical use of the assessment relies on all these elements. The manual explains and illustrates the qualitative aspect of the Volitional Questionnaire.

Conclusion

The Volitional Questionnaire is best recognized as an assessment under development. With judicious use, it may be an important resource for occupational therapists who wish to know more about the motivation of clients who cannot readily self-report. Limitations notwithstanding, the Volitional Questionnaire is a unique tool that provides a structural means of gathering information on volition through observation of behavior. ▲

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The Volitional Questionnaire manual can be obtained through the Model of Human Occupation Clearinghouse, Center of Research, Department of Occupational Therapy, University of Illinois at Chicago. To request an order form, please mail or fax to: Coordinator, Model of Human Occupation Clearinghouse, Department of Occupational Therapy (M/C 811), University of Illinois at Chicago, 1919 West Taylor Street, Chicago, Illinois 60612 USA, 312-413-0256 (fax).

Appendix

Volitional Questionnaire Items

1. Demonstrates interest/curiosity in environment
2. Shows initiative
3. Tries new things
4. Indicates pride verbally or nonverbally
5. Shows satisfaction when complimented
6. Tries to fix own mistakes
7. Tries to solve problems
8. Attempts to influence others positively
9. States/demonstrates preferences for activity
10. Shows enjoyment
11. Stays with an activity
12. Is lively/energetic in particular activities
13. Indications/pursues simple goals
14. Shows an activity is special or significant

References


Smith, N. P., Kielhofner, G., & Watts, J. H. (1986). The rela-


