

The English Translation and Testing of the Problems after Discharge Questionnaire

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The quality of hospital discharge planning assessments determines whether patients receive the health and social services they need or are sent home with unmet needs and without services. There is a valid and reliable Dutch instrument that measures problems and unmet needs patients encounter after discharge. This article describes the translation and testing of the English version of the Problems after Discharge Questionnaire for use in evaluating hospital discharge planning. Internal consistency reliability of multiple item subscales was assessed with Cronbach's alpha ($>.70$ for four of six subscales where alpha could be computed [two others were single items only]). Subscales were correlated with similar constructs corresponding to the same problem areas in the theoretical model. The goal was to use the questionnaire with English-speaking patients to capture a comprehensive picture of physical, social, and psychological problems and unmet needs that patients encounter after hospital discharge.

KEY WORDS: *care transition; hospital discharge; postacute care; Problems after Discharge Questionnaire; validity and reliability*

Hospital discharge planning is the primary vehicle for managing care transitions from the hospital to the next setting. Discharge planning is a process that includes identifying and anticipating patients' postacute care needs and developing and implementing a plan to address those (Zwicker & Picariello, 2003). People at risk for adverse outcomes after discharge often have multiple health, functional, and social care needs (Coleman, 2003). Adverse outcomes related to hospital discharge planning have also been linked to unidentified and, therefore, unmet continuing care needs (Mistiaen, Francke, & Poot, 2007).

Care needs may be informational (appropriate levels of physical activity, side effects of medications, where and how to get help), functional (showering or bathing, dressing and undressing, preparing meals), physical (pain, unsteadiness, sleeping), emotional (restlessness, sadness, anxiety), or social (isolation, lack of support). A quality discharge plan occurs when the plan identifies all existing and potential continuing care needs, and a quality discharge occurs when the mechanisms for addressing the needs are implemented as planned (Bull & Roberts, 2001; Morrow-Howell, Proctor, & Dore, 1998). Two reviews of the discharge planning literature indicated a focus on the hospital aspect of sending patients to the next setting (Hedges, Grimmer, Moss, & Falco, 1999; Shepperd et al., 2011). Only two instruments

were found that are designed specifically to measure quality of care transitions and discharge planning interventions from the perspective of the patient: the Care Transitions Measure (Coleman et al., 2002) and the Problems after Discharge Questionnaire (Mistiaen, Duijnhouwer, Wijkkel, de Bont, & Veeger, 1997).

The Care Transitions Measure was developed as a patient-centered measure to assess the overall quality of care transitions across health care settings (Coleman et al., 2002). The Three-Item Care Transitions Measure (CTM-3) has recently been endorsed by the National Quality Forum (2006) as a voluntary consensus standard for measuring quality coordination of hospital discharge care. Although the CTM-3 provides an abbreviated understanding of quality of coordination in the discharge planning process from the patient's perspective, it does not address key continuing care needs of recently hospitalized patients found in the discharge planning literature (for example, physical, functional, emotional).

The Problems after Discharge Questionnaire (PADQ) is a Dutch instrument that has been developed, tested, and used in discharge planning research in the Netherlands (Boter, Mistiaen, Duijnhouwer, & Groenewegen, 1998; Boter, Mistiaen, & Groenewegen, 2000; Duijnhouwer & Mistiaen, 1999; Mistiaen et al., 1997). The PADQ is based on a theoretical model derived from an extensive review

of the international discharge planning literature. *Problems* are defined as troubles, worries, limitations, concerns, or difficulties experienced by patients after discharge from the hospital (Duijnhouwer & Mistiaen, 1999). *Unmet needs* are defined as the patient's desire to have more assistance in performing an activity or more support or advice in dealing with physical or emotional complaints (Mistiaen et al., 1997). The PADQ is designed specifically for discharge planning studies of adults residing in the community during the immediate postacute period and measures problems and unmet needs in the main areas of the theoretical model (information needs, functional status, general health, and emotional status). The questionnaire includes eight subscales with a total of 47 items. The key problem areas of the theoretical model and the subscales in the PADQ that address each problem area are presented in Table 1.

The purpose of this study was to translate into English and test this version of the instrument for use in discharge planning research. The aims of the study were to translate the original Dutch PADQ into English and to investigate content and concurrent criterion-related validity and internal consistency reliability of the English version. The goal was to extend the use of the PADQ to capture a detailed picture of patient problems and unmet needs for evaluating hospital discharge planning.

METHOD

Setting and Samples

Instrument translation and validation requires several samples and procedures. Content validity testing was

completed using a sample of nurses (RNs) and social workers (SWs) with clinical expertise in hospital discharge planning and who were employed in the study setting. For concurrent criterion-related validity and internal consistency reliability testing, we used a convenience sample of 120 recently hospitalized adults. The pilot testing involved another, smaller convenience sample of 10 recently hospitalized adults. The study was conducted at two large, midwestern teaching hospitals staffed exclusively by physicians of one group practice. Prior to any participant identification and recruitment, approval was obtained from the institutional review board.

The PADQ

Problems and unmet needs are reported by adults residing in the community after hospital discharge. Patients report a difficulty (problem) or not in each item. The degree of difficulty is recorded on a response scale ranging from 1 (without any trouble) to 5 (I could not do it at all). Higher scores indicate greater difficulty. For each item a patient reported a difficulty, unmet need was determined by an affirmative response to this question: "Would you have desired (more) help with this?" The PADQ is reliable, whether self-administered or completed by interview (Duijnhouwer & Mistiaen, 1999; Mistiaen et al., 1997).

During the development of the original Dutch PADQ, several efforts were made to confirm validity and reliability. Content validity was supported by deriving categories and items on the basis of a theoretical model (Mistiaen, Duijnhouwer, Prins-Hoekstra, Ros, & Blaylock, 1999). Face and content validity was assessed by a multidisciplinary panel, pilot tested with 12 recently discharged patients (Mistiaen et al., 1997), and validated by qualitative interviews with patients (Duijnhouwer & Mistiaen, 1999). Criterion validity of the instrument was assessed against the Blaylock Risk Assessment Screening Score index (a measure to identify patients who are at risk for prolonged hospitalization and are in need of discharge planning resources) (Blaylock & Cason, 1992) and against other already validated instruments, such as the Nottingham Health Profile (NHP), the World Organization of Family Doctors Classification Committee version of the Dartmouth Primary Care Cooperative Project functional health assessment charts, and the Appraisal of Self-Care Agency Scale (Duijnhouwer & Mistiaen, 1999; Mistiaen et al., 1997; Mistiaen

Table 1: Main Problem Areas in the Theoretical Model and Subscales Addressing Each Area in the Problems after Discharge Questionnaire (PADQ)

Problem Area	PADQ Subscale	Number of Items
Information needs	Information Needs	13
Functional status	Personal Care	5
	Household Activities	7
	Mobility	5
	Using Equipment	1
	Following Instructions	1
General health	Physical Complaints ^a	9
Emotional status	Psychological Complaints ^b	6

^aExamples: pain, shortness of breath, difficulty sleeping, and nausea.

^bExamples: anxiety, worry, restlessness, and insecurity.

& Evers, 1997). Furthermore, results from patients recently discharged were compared with the results of people residing in the community who were not recently hospitalized. All discharged patients scored higher on the PADQ, supporting the discriminatory validity of the PADQ (Oosterhek, Mistiaen, & Duijnhouwer, 2000). Internal consistency (Cronbach's alphas) of the subscales with multiple items ranged from .73 to .91 (Boter et al., 1998; Mistiaen et al., 1997).

Procedural Steps

Although there is no "gold standard" of translation techniques, a multiple-step process is appropriate to produce culturally appropriate versions of instruments while ensuring that the meaning of each item remains the same (Beck, Bernal, & Froman, 2003; Brislin, 1970; Cha, Kim, & Erlen, 2007). The process used in this study is described step by step.

Step 1: Initial Translation. The PADQ was initially translated into English by an experienced bilingual medical interpreter employed in the study setting whose native language was Dutch. Comments highlighting challenging phrases or uncertainties in translation and the rationale for the choices made were recorded by the translator. All issues raised by the translator were addressed by the primary investigator and the PADQ developer (fluent in both Dutch and English) and resolved by discussions among the translator, the developer, and the primary investigator until consensus was reached. The resulting English version of the PADQ was titled the *PADQ-E*.

Step 2: Back Translation. The initial translation was then translated back into Dutch by a second bilingual person whose native language was Dutch. Native English speakers fluent in Dutch were unavailable. Back translation allowed comparison with the original version of the instrument to ascertain the consistency of the translation process—a type of validity checking (Maneesriwongul & Dixon, 2004). The back-translated version was compared with the original Dutch version by the PADQ developer to check for meaning errors.

Step 3: Content Validity. A convenience sample of 20 volunteer discharge planners (10 RNs and 10 SWs) was assembled. An e-mail invitation was sent to all the discharge planners employed by the hospitals inviting them to participate. Enrollment was limited to the first 20 responders. After informed consent was obtained, the participants

were provided with a review of the purpose and development of the original instrument and handed a paper copy of the PADQ-E. They were asked to rate the relevance of each item on the PADQ-E to discharge planning practice using a four-point ordinal scale (1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant). Each of the eight subscales was evaluated for content validity using the Scale Content Validity Index average method (S-CVI/Ave) (Polit, Beck, & Owen, 2007). The item content validity was computed as the number of participants giving a rating of either 3 or 4 divided by the total number of participants (that is, the proportion in agreement about relevance). The S-CVI/Ave was then computed as the average across items in a subscale. An S-CVI/Ave of .75 or greater was predesignated as acceptable content validity. Further face and content validity with a sample of people for whom the theoretical model of problems after discharge was designed (that is, recently hospitalized adults) was designed into a pilot test.

Step 4: Pilot Testing the PADQ-E. The PADQ-E was pilot tested in a sample of people for whom the theoretical model of problems after discharge was designed (that is, recently hospitalized adults) for further content validity and feasibility data. Ten adult patients who met the following inclusion criteria were recruited during their hospital stay: able to read and understand English, cognitively able to give informed consent, and discharged back to the community. Patients were identified through the hospital information system, recruited during their hospital stay, and invited to participate after receiving written and verbal information about the study. The participants were all residents of the county surrounding the study setting. After informed consent was obtained, a questionnaire that included the PADQ-E, the CTM-3, and the NHP was mailed to five of the patients to self-administer approximately seven days after discharge.

During a subsequent phone interview with these five patients, data regarding any difficulties experienced while reading the instructions, questions, or responses were collected using a structured format. The other five patients completed the questionnaire and responded to the questions regarding the format by interview in their home. All participants were asked to explain in their own words the meaning of the instructions, each question, and the response options. Although 10 is a small sample size,

this step provided evidence that the adapted version was feasible and acceptable to potential respondents, and it provided some further indication of face and content validity (Beaton, Bombardier, Guillemin, & Ferraz, 2000; Verra, Angst, Lehmann, & Aeschlimann, 2006). The time required to complete the questionnaire was recorded.

Step 5: Concurrent Criterion-related Validity.

To achieve criterion validity, it is necessary to find alternative indicators of the same attribute and assess the degree to which both sets of data agree (DeVellis, 2003). There is a broad consensus on using instruments measuring similar constructs to assess validity (Litwin, 1995). Because the NHP was used by the PADQ developer in concurrent criterion-related validity testing, we chose to use the same instrument to test the PADQ-E. As mentioned, the NHP was designed to measure general subjective health status in physical, social, and emotional domains.

A convenience sample of 130 hospitalized adults was assembled for both concurrent criterion-related validity and internal consistency reliability testing. Patients were identified through the hospital information system, recruited during their hospital stay, and invited to participate after receiving written and verbal information about the study. The participants were all residents of the county surrounding the study setting. After informed consent was obtained, the PADQ-E, the CTM-3, and the NHP were mailed to participants, who completed them after hospital discharge.

The concurrent criterion-related validity of the Information Needs subscale was determined by analyzing the relationship between the subscale scores and the scores from the CTM-3. Correlations were expected between the other PADQ-E subscales and the NHP subscales corresponding to the same problem areas in the theoretical model (see Table 1). A Spearman rank correlation coefficient stronger than .25 or weaker than .75 (that is, between .25 and .75 in absolute value) was predesignated as reasonable validity (Coleman et al., 2002). Levels .25 and below were felt to indicate that the correlations were not similar enough to be comparable. Levels .75 and above were felt to indicate that the subscales were so similar that the PADQ-E subscale was not necessary.

Step 6: Internal Consistency Reliability. Internal consistency reliability (ICR) testing used the same sample of patients as for step 4. Two of the subscales

(Using Equipment and Following Instructions) had only one item. The ICRs for the multiple-item subscales were assessed with Cronbach's alpha, a statistic used to calculate the strength of the association between individual items within a scale and, therefore, a scale's homogeneity (Litwin, 1995). Although the Physical Complaints subscale was not reported to be internally consistent by factor analysis of the original Dutch PADQ (Mistiaen et al., 1997), we chose to test this PADQ-E subscale for internal consistency along with the other multiple-item subscales. A coefficient exceeding .70 is considered acceptable for group comparisons (Nunnally & Bernstein, 1994). All data were analyzed with SPSS 10.0 for Windows.

RESULTS

Steps 1 and 2: Translation and Back Translation

Translation and back translation of the PADQ proceeded without major difficulties. Consensus for the prefinal version was easily obtained. Only minor corrections were necessary, such as changing "WC" to "toilet" and using "cane" instead of "walking stick." "Speciale WC-bril" was modified to read "special toilet seat." "Tillift" was originally translated as "elevator to lift things"; this was changed to "mechanical lift" after discussion with the PADQ developer.

Step 3: Content Validity

Of the 10 RN discharge planners and 10 hospital SWs in the sample, all but one (an RN) were female. Experience in the role was an average of eight years (range: one to 30). Each S-CVI/Ave subscale score and the scores from the two subgroups (RN or SW), are presented in Table 2. Overall, S-CVI/Ave scores for all the subscales exceeded the predesignated threshold for acceptability (.75) except for Household Activities (.52) and Psychological Complaints (.59). When the scores from the RNs and SWs were analyzed separately, both groups rated these two subscales as having low relevance to their discharge planning practice. The hospital SWs consistently rated every subscale as less relevant to discharge planning practice than the RN discharge planners. Only two subscale scores in the SW group (Information Needs and Following Instructions) met or exceeded the predesignated threshold, although many of the confidence intervals contained .75.

Table 2: Content Validity: S-CVI/Ave Scores for the English Version of the Problems after Discharge Questionnaire (PADQ-E) Subscales

PADQ-E Subscale	Number of Items	Overall (n = 20)		RNs (n = 10)		SWs (n = 10)	
		S-CVI/Ave	95% CI	S-CVI/Ave	95% CI	S-CVI/Ave	95% CI
Information Needs	13	.82	.72–.92	.89	.76–1.00	.75	.59–.92
Personal Care	5	.78	.64–.92	.84	.63–1.00	.72	.51–.93
Household Activities	7	.52	.34–.70	.70	.45–.95	.43	.11–.58
Mobility	5	.79	.66–.91	.94	.84–1.00	.64	.43–.85
Using Equipment	1	.90	.85–1.00	1.00		.80	.50–1.00
Following Instructions	1	.95	.76–1.00	1.00		.90	.67–1.00
Physical Complaints	9	.76	.62–.91	.80	.54–1.00	.72	.52–.93
Psychological Complaints	7	.59	.38–.79	.63	.29–.97	.55	.24–.85

Notes: Item response set: 1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, and 4 = highly relevant. RN = registered nurse; SW = social worker; S-CVI/Ave. = Scale Content Validity Index average method (the proportion of respondents who rated a subscale items as 3 or 4; the predesignated threshold for acceptability was .75); CI = confidence interval.

Step 4: Pilot Testing

Pilot testing the PADQ-E, as it was designed to be administered in discharge planning studies, was the final step of the process. Six women and four men participated. The average age was 68 years (range: 38 to 85). Two participants had an eighth-grade education or less; two were high school graduates. The remaining six participants had at least some college education. The average length of time taken to complete the PADQ-E was 37 minutes if completed by interview process (range: 28 to 45) and 30 minutes when self-administered (range: 20 to 40). Participants reported that they felt the length of time it took to complete the PADQ-E was acceptable. A minor correction was made to this Following Instructions question: "Which instructions for the past week were given to you?" Only one of the respondents had received instructions *during* the past week. After discussion with the PADQ developer, the question was changed to this: "Which instructions were you supposed to follow for the past week?"

Participants felt the question response sets were easily understood. They identified no other issues relevant to their postacute care experiences. There were no suggestions to drop any of the questions. The Flesch-Kincaid readability score for the final PADQ-E is 5.1 (RFP Evaluation Centers, 2011). The Flesch-Kincaid scoring formula includes the average number of words in a sentence and the average number of syllables per word. The reading level is grade 7 by the SMOG Readability Formula (McLaughlin, 1969). The SMOG reading grade level is based on the number of words with three or more syllables.

Step 5: Concurrent Criterion-related Validity

Twelve of the 130 hospitalized adults in the sample were placed from the hospital into facility care, rendering them ineligible for the study. Eighteen patients did not return surveys. The PADQ-E, CTM-3, and NHP were completed by 100 participants. The average age of participants was 62.6 (± 15.9) years (range: 18 to 89). Sixty-one participants were female, and a majority (97.0%) was white; only one participant was Asian, and one was black. Most (71%) had attended at least some college. Eighty-six percent went home without formal community services; 31 lived by themselves. Forty-nine were hospitalized for medical reasons; 51 were admitted for surgical procedures. The only statistically significant difference in demographic characteristics between responders and nonresponders was ethnic status. More people of color did not return a survey ($p = .024$). Mean scores and item-total correlations are presented in Table 3.

A correlation coefficient between .25 and .75 in absolute value was predesignated as acceptable (see Table 4). As expected, the CTM-3 scores negatively correlated with the Information Needs subscale scores (Spearman correlation coefficient = $-.29$). Patients who rated the quality of their transition out of the hospital higher reported fewer information needs after discharge. The other subscales of the PADQ-E tested with the NHP subscales representing similar constructs had correlations as expected (between .25 and .75 in absolute value). One exception was a lower than expected correlation between the PADQ-E Personal Care subscale and the NHP Energy subscale (.17).

**Table 3: English Version of the Problems after Discharge
Questionnaire Item Mean Scores and Item-Total Correlations**

Subscale and Range	Abbreviated Item Content	<i>M</i> (<i>±SD</i>)	Item-Total Correlation
Information Needs: 0–1 ^a	How much activity was appropriate	.15 (.36)	.41
	What insurance would pay for	.33 (.47)	.48
	How to reduce pain	.15 (.36)	.46
	When to ask doctor for advice	.17 (.38)	.48
	How to take medications	.09 (.28)	.55
	How to determine a normal recovery	.29 (.46)	.55
	What could and could not be eaten	.16 (.37)	.56
	How much rest was appropriate	.27 (.45)	.66
	Where and how to get help at home	.23 (.42)	.59
	Side effects of medications	.28 (.45)	.53
	When you would be completely recovered	.39 (.49)	.51
	Where and how to get nursing care at home	.35 (.48)	.60
	Schedule of next doctor appointment	.13 (.34)	.45
Personal Care: 1–5 ^b	Wash hands	1.01 (00.10)	.54
	Take a shower/bath	1.52 (0.99)	.83
	Dress and undress	1.33 (0.68)	.84
	Take care of hair	1.25 (0.75)	.83
	Eat and drink	1.03 (0.18)	.31
Household Activities: 1–5 ^b	Prepare food	1.60 (1.00)	.72
	Grocery shop	2.97 (1.80)	.78
	Clean house	2.78 (1.70)	.82
	Laundry	2.25 (1.60)	.83
	Change bed linen	2.75 (1.70)	.83
	Wash dishes	1.80 (1.30)	.72
	Tidy living area	1.57 (1.20)	.74
	Get out of bed	1.20 (0.60)	.47
Mobility: 1–5 ^b	Toilet	1.09 (0.38)	.31
	Climb stairs	1.69 (1.20)	.65
	Walk outside	2.20 (1.50)	.80
	Travel	2.91 (1.80)	.76
Using Equipment: 1–5 ^b	Able to operate equipment	1.15 (0.51)	
Following Instructions: 1–5 ^b	Able to follow instructions	1.16 (0.45)	
Physical Complaints: 1–5 ^b	Pain	2.17 (1.10)	.62
	Difficulty sleeping	1.89 (1.20)	.64
	Shortness of breath	1.38 (0.81)	.41
	Unsteadiness	1.50 (0.80)	.49
	Hands trembling	1.15 (0.44)	.43
	Diarrhea	1.31 (0.69)	.32
	Getting tired quickly	2.29 (1.10)	.66
	Nausea and/or throwing up	1.21 (0.62)	.52
	Uncontrolled loss of urine	1.16 (0.59)	.31
Psychological Complaints: 1–5 ^b	Lonely	1.06 (0.32)	.36
	Restless	1.37 (0.73)	.72
	Sad	1.37 (0.79)	.79
	Anxious	1.37 (0.73)	.65
	Insecure	1.18 (0.55)	.59
	Worry	1.63 (0.93)	.83

^aLower scores indicate fewer information needs.

^bLower scores indicate less difficulty.

Table 4: Concurrent Criterion-related Validity: Correlations between the English Version of the Problems after Discharge Questionnaire (PADQ-E) Subscales, the Three-Item Care Transitions Measure (CTM-3), and Nottingham Health Profile (NHP) Subscales with Similar Constructs

PADQ-E Subscale	CTM-3	NHP Subscale				Emotional Reactions
		Physical Abilities	Sleep	Pain	Energy	
Information Needs	-.29					
Personal Care		.49			.17	
Household Activities		.62			.28	
Mobility		.63			.32	
Physical Complaints		.45	.54	.52	.51	
Psychological Complaints						.54

Note: A Spearman correlation coefficient greater than .25 and less than .75 (absolute value) was predesignated as acceptable.

Step 6: Internal Consistency Reliability

A coefficient exceeding .70 was considered acceptable for an instrument designed for group comparisons in research. Cronbach's alpha coefficients corresponding to the subscales of the PADQ-E are listed in Table 5. The alphas for multiple-item subscales ranged from .72 to .89 except for the Mobility and Physical Complaints subscales.

DISCUSSION

In this study, we translated the original Dutch PADQ into English and investigated the validity and reliability of the English version. Clinicians in hospital discharge planning roles rated all but two of the eight subscales as relevant to their discharge planning practice. They reported that problems with

household activities and psychological complaints were not as relevant as other items. Substandard S-CVI/Ave scores demand further scrutiny of items for revision, replacement, or further validity testing. We were reluctant to delete items from the original Dutch PADQ, which would complicate its use in international comparisons of discharge planning outcomes. After discussions with the clinicians who participated in the validity testing, no item revisions were suggested. The clinicians expressed that the low scores reflected a prioritization of discharge planning attention to issues related to physical functioning and safety. Because of shorter lengths of hospital stays and access to home health services for Medicare beneficiaries being limited by their homebound status, physical functional status overrides considerations of household maintenance needs and psychological concerns. Further testing is warranted with larger samples and with expert participants from different health care systems.

Testing the PADQ-E on adults recently hospitalized on general medical or surgical units demonstrated reliability with the exceptions of the Mobility and Physical Complaints subscales, which had limiting internal validity. There may be a number of reasons for these results. First, the five items in the Mobility subscale encompass mobility both within and outside of the home. Although few people reported any problems with getting out of bed independently, many reported that they were not able to travel independently. Some had been placed on driving restrictions postdischarge, necessitating dependence in traveling. Driving restrictions were not captured in the original PADQ as a postacute care directive,

Table 5: Internal Consistency Reliability: Standardized Item Cronbach's Alpha Coefficients for the English Version of the Problems after Discharge Questionnaire (PADQ-E) Subscales

PADQ-E Subscale	Number of Items	α
Information Needs	13	.78
Personal Care	5	.74
Household Activity	7	.89
Mobility	5	.61
Physical Complaints	9	.62
Psychological Complaints	7	.74
Using Equipment	1	
Following Instructions	1	

Note: A coefficient exceeding .70 was considered acceptable.

but they have been added to the English version. Second, the patients may not have driven or traveled independently prior to their hospitalization. This prompted the addition of the question "Was this a change from before you were hospitalized?" for each item to ascertain whether the problem was new since hospital discharge. Finally, data collection occurred during December 2007 through February 2008 in the upper Midwest. It is possible that cold weather and icy conditions influenced responses to the "walking outside" item. Nevertheless, the Mobility subscale correlated well with subscales of similar constructs from the NHP. The items in the PADQ may represent a basic set of items identified for cross-cultural use. There may be additional items relevant for other cultures. Although the PADQ-E captures important areas in which a patient might encounter problems after discharge, aggregating the responses to the Mobility items as a subscale should be done with caution until further testing occurs.

The Physical Complaints subscale also had a less than satisfactory ICR score in this sample—similar to the internal consistency testing results of the original Dutch PADQ subscale (Mistiaen et al., 1997). Per discussions with the PADQ developer, the Physical Complaints items represent a diverse listing of symptoms important to recovery and well-being after hospital discharge (that is, pain, shortness of breath, nausea, and urinary incontinence). These individual complaint items figured prominently in the international discharge planning literature underpinning the PADQ theoretical model (Duijnhouwer & Mistiaen, 1999). Although important to the measurement of physical complaints in the population for which the instrument was designed (that is, adults hospitalized for any medical or surgical reason), these items should not be considered a unidimensional subscale until confirmed by further testing. This would also allow for the consideration of additional symptoms of interest (for example, constipation).

If the PADQ-E was to be used for purposes other than international discharge planning study comparisons, it is possible that item-deleted alphas would suggest that some or all of the multiple-item subscales could be shortened. For example, in a preliminary item-deleted analysis of the Personal Care subscale, deleting the two items "Were you able to wash your hands by yourself?" and "Were you able to eat and drink by yourself?" increased the subscale alpha from .74 to .77 and reduced the overall length

of the questionnaire. Item-deleted analysis work with a larger sample is planned to increase the utility of the PADQ-E in studies that do not involve international data comparisons.

Criterion-related validity of the Information Needs subscale was not previously tested with the original Dutch PADQ. The CTM-3 was developed to measure overall quality of care transitions and may very well represent a construct other than information needs. Further criterion-related validity testing of the Information Needs subscale is required.

There are limitations to this study. First, external validity is limited by the fact that patient samples were nonrandom, derived from a single medical center, relatively well-educated, and ethnically similar, although the county population is noted to mirror characteristics of white people throughout the United States (Melton, 1996). The RN and SW participants assembled for content validity testing were all employed at the study site and may not be representative of other practitioners in institutions with different models of discharge planning. Second, "gold standards" for criterion validity of the subscales could not be found. Further testing is warranted in this case. Third, a confirmatory factor analysis (CFA) exploring the convergence between the theoretical underpinning of the instrument and the empirical data could not be performed due to the sample size. Future studies should include CFA using a larger sample size. Using a larger sample size would also increase generalizability. Last, reliability of the subscales will need to be assessed in other samples. Although the amount of time for study participants to complete the PADQ-E may be considered lengthy, the participants in the pilot test reported the length of time as acceptable.

CONCLUSIONS

Discharge planning is a frequently occurring and expensive hospital care process. Despite the high volume of continuing care assessments conducted annually by hospital clinicians and the critical importance of accurate identification of needs, there are few empirically derived measurement instruments to assist social workers and other clinicians in assessing outcomes of discharge planning interventions from the patient perspective. It is in the transition across settings of care and between providers that the identification of incongruence between an individual's needs and his or her environment's resources is profoundly critical to successful recovery

and well-being. The PADQ-E represents a promising tool to measure patient-reported problems and unmet needs after discharge.

Every time a questionnaire is translated, used in a new context, or used with a new group of people, reestablishment of its psychometric properties is necessary (Streiner & Norman, 2008). Further testing is warranted on the PADQ-E. The goal is to be able to use the PADQ-E to capture a detailed picture of physical, social, and psychological problems and unmet needs for evaluating hospital discharge planning with English-speaking patients and, eventually, making international comparisons in discharge planning research. **SWR**

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