A Validity Study of the Wandering Observation Tool: A Behavioral Observation Instrument

by

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CHAPTER 1

INTRODUCTION

Wandering behavior of cognitively impaired adults presents a serious management problem for caregivers. Not only is there a potential threat to the physical safety of clients, but client self-esteem may be affected by excessive limit setting interventions as well. Although only a small percentage (3 to 19% in longterm care facilities) of cognitively impaired elderly clients wander (Robb, 1984), those who do wander may expose themselves to high risk situations that can be life threatening.

The lack of nursing information regarding management of wandering behavior was first identified by Burnside (1980). From a caregiver perspective, wandering presents problems of a) monitoring for patient safety, b) legal liability either by infringing on patient rights to mobility or by not providing adequate restraint measures, and c) providing nursing care based on a scant knowledge base. Caregivers are in search of effective means for managing wandering behavior but research is lacking in this area, in part because of the complexities of studying the problem.

Whereas caregivers face the problem of managing wandering behavior in the absence of research-based

knowledge, nurse researchers face the problem of developing adequate methods to study the behavior. One of the difficulties inherent in studying persons who wander is that cognitive impairment limits their ability to process information or learn new behaviors and, hence, limits their ability to respond to self-report measures.

An alternative approach to studying wandering behavior is through observational methods. An observation instrument, The Wandering Observation Tool (WOT) (See Appendix A), was devised by Hoeffer, Rader and Siemsen for use in a proposed study of the behavior of cognitively-impaired elderly nursing home residents who wander (Personal communication, February, 1987). The tool was constructed as follows. Data were gathered using unstructured observations of three elderly male residents identified as wanderers. All verbal and non-verbal behaviors of the subjects were recorded, including incidents of exit seeking behavior, for an average of two hours over a four week period. Discrete categories of behavior were identified. The WOT was refined based on further observation and then pretested using two observers to establish its validity and reliability. Five mutually exclusive categories of behavior were selected for use in the tool based on the

pretest data: a) location, b) movement, c) exit-seeking, d) social contact, and e) subject/staff interaction. The interaction category had six subcategories: subject verbal, nonverbal, and affective behavior; staff verbal, nonverbal, and affective behavior (See Appendix B).

Whereas the results of interrater reliability have been reported elsewhere (Hoeffer, Rader, and Siemsen, 1987), the validity of the WOT has yet to be determined. The purpose of this methodological study was to determine how accurately the WOT represents the behaviors of wanderers. The long range goal is to refine the instrument for use in a study of cognitively impaired, elderly nursing home residents who wander.

Review of the Literature and Conceptual Framework

The review of the literature pertaining to wandering behavior includes descriptive and intervention studies completed to date. Review of the literature related to observational methods is followed by a discussion of classification theory and the concepts of validity and triangulation. These three components underlie the conceptual framework for the study.

Robb (1985) described the wanderer as a "person who moved, under his or her own volition, into unsafe situations while experiencing impaired cognitive status". This definition includes the key descriptive components of wanderers, namely, impaired cognition, mobility and threats to personal safety. The studies of wandering behavior thus far can be divided into two categories: a) those that describe the behavior and characteristics of the wanderer and b) those that examine intervention strategies for management of the behavior.

Wandering: Descriptive Studies

Snyder, Rupprecht, Pyrek, Brekus, and Moss (1978) used the technique of behavioral mapping for systematic observation of wanderers in order to identify their social and physical behavior and to determine patterns of mobility. The investigators matched a sample of eight wanderers with eight non-wanderers. All subjects were residents of a skilled nursing facility. Wanderers were observed for 10 minutes and the actual frequencies of specific behaviors were tallied. Categories of behavior included location, activity, involvement in conversation, and situational circumstance. The floor plan of the facility was divided into zones so that the number of locations

traveresed could be analysed. Social behavior was also recorded.

Matched pairs t-tests were used to analyze the data. Significant differences were found for the category of time-in-motion, revealing that the wanderers moved about more of the time than non-wanderers. In regards to social behavior, wanderers had significantly greater involvement in non-social behavior than nonwanderers. Additionally, Snyder et al. found significant differences between the two groups on several of psychosocial variables as measured by the Human Development Inventory. Further, these authors reported significant differences between the groups with respect to memory, orientation and ability to respond appropriately in social situations. Significant diffferences on demographic factors were not found.

The investigators identified three categories of wandering behavior labeled as: a) overt, goal-directed, searching behavior characterized by searching for an unattainable object; b) overt, goal-directed, industrious behavior characterized by a drive to remain busy, and c) apparent non-goal-directed behavior characterized by distractability. According to the

authors, possible predisposing factors for wandering may include the following psychosocial factors: a) a lifelong pattern of coping with stress by using activity, b) previous work role, and c) a search for security.

To gain an understanding of possible predisposing factors contributing to wandering, Monsour and Robb (1982) used an ex-post facto design to retrospectively examine the psychosocial lifestyles of male wanderers in a long term care division of a Veterans Administration Center. Relatives of 22 matched pairs of wanderers and non-wanderers were interviewed to gather information related to the lifestyle of the subject. Interview protocols were derived from numerous scales and included assessment of preferred social and leisure activities, experiences of stressful life events, and responses to stress. Background data was obtained from patient records. The hypotheses were tested using paired t-tests.

The results revealed that: a) wanderers were significantly more likely than non-wanderers to have had a previous pattern of expending physical energy in pursuit of social and leisure activities; b) compared to non-wanderers, wanderers had experienced significantly more stressful life events which involved

a wide range of internal and external changes that necessitated readjustment; c) wanderers responded to stress with more psychomotor activity than non-wanderers who were more emotional in their reactions, and d) wanderers demonstrated more motoric behavioral styles in their earlier years than did non-wanderers. These findings confirmed the speculation of Snyder et al. that wanderers had a history of coping with stress by increasing activity. A limitation of this study is its retrospective nature since data which are based on relatives' recall is subject to distortion. Although the accuracy of the findings may thereby be affected and the generalizability of the findings restricted, they clearly point to the importance of coping history as a predispositional factor contributing to wandering behavior.

Dawson and Reid (1987) studied the behavior of 100 wanderers in an extended care facility through semi-structured interviews, with nurses, regarding each patient in the study. The respondents were asked to describe behaviors demonstrated by the subjects. A wide range of behavioral categories were obtained. Fifty-seven behaviors were identified as characteristic of patients at risk for harm. Ultimately, the

behaviors clustered into three major categories: cognitive deficits, agitation/aggression, and hyperactivity. An analysis of variance procedure was used to analyze the data. Only the factors of cognitive deficits and hyperactivity differentiated the wanderers from non-wanderers. Further study is needed to discern the degrees of cognitive impairment and hyperactivity that differentiate the two groups. Also, demographic data on the subjects (i.e. age, gender, and race) would have been informative by further identifying specific characteristics of wanderers.

The descriptive studies of wanderers have contributed to our understanding of wandering behavior but several factors limit the generalizability of findings from these studies. The definitions of the wanderer vary, and demographic data are inconsistent and yield an apparent bias toward a dominance of male subjects. The institutional settings have provided consistency across many studies but may limit the generalizability to other settings.

Additionally, the practice of using matched pairs for statistical analysis has limitations. The matching technique is beneficial for controlling extraneous variables but the researcher must know the most relevant variables on which to match. In addition,

matching for more than three or four traits is prohibitively complex. The matching technique may be most appropriate for ex-post facto designs as used by Monsour and Robb (1982).

The methods used in the descriptive studies have been primarily interviews of either significant others or caregivers. In only one instance was behavioral observation and categorization employed. It would appear that observation of the actual behaviors of those who wander would yield the most accurate information. Observational data is obtained first hand and is not subject to the bias of a secondary source such as the interviewee or interviewer.

Wandering: Intervention Studies

Cornbleth (1977), in an experimental design, compared 30 wandering and 18 non-wandering male geriatric patients in protected and non-protected ward environments of a Veterans Administration Hospital. Criteria for wanderer status, however, were not described. Preassessments were made in the areas of physical, cognitive, and psychosocial functioning. Reevaluations were conducted at 6 and 12 weeks after moving the clients into the protected ward environment. A physical therapist measured range of motion and the

investigators obtained measurements of mental status, perceptual motor skills and psychosocial factors from the subjects.

A 2 X 2 factorial design of wanderers vs. nonwanderers and on ward vs. off ward comprised the approach to analysis. Analysis revealed that wanderers in the protected ward setting demonstrated significantly greater range of motion than non-wanderers in the unprotected setting. Wanderers also were found to have significantly lower levels of psychosocial functioning than non-wanderers. The investigators did not find differences between the groups with respect to mental status and perceptual motor skills. In this study, the modification of the environment provided the conceptual rationale for approaching management of the behavior.

Hussian (1982) employed behavioral analysis of wandering and a single-case design approach to determine whether wandering was a random activity and was differentially responsive to environmental cues. Using a behavioral observation method, two independent observers observed three patients in a long-term care facility. Apparently an instrument was not used for coding the behavior; rather, information on stops, duration of trip, and the distance covered by the

subject was recorded. Hussian found that wandering behavior was not random and concluded that the behavior could be modified.

Baseline data were collected on three subjects prior to an intervention by which supranormal stimuli (i.e. color coded symbols), to direct subjects' wandering, were introduced. Using this approach, wandering into hazardous areas was reduced between baseline and the initial intervention phases using the color coded symbols. Hazardous wandering was further reduced with reinforcement. Within two months of the termination of training, booster training sessions were required for all three patients to maintain the behavioral changes. The artificial cues needed to be continually in place. Hussian reported that controls for his study were less than stringent and that further behavioral analysis is warranted with better controls.

Robb (1985) studied the effect of a structured exercise program on day- and night-time wandering of a group of 20 male patients in a Veterans Administration Hospital. In a quasi-experimental design, multiple pre- and posttests with a single group (n=20) were used. Criteria for subject selection were specifically stated and included a cognitive impairment criterion.

Robb employed behavioral observation in order to study the effect of an exercise intervention on daytime and nighttime wandering behavior. Outcomes of interest were divided into two categories: 1) daytime behaviors and 2) nighttime behaviors.

The daytime behaviors consisted of the following categories: 1) location, 2) position/motion, 3) limb/head movement, 4) initiative in limb movement, 5) verbal behavior-type, 6) verbal behavior-partner, and 7) instigator of verbal interaction. Each variable for the daytime observation was measured simultaneously using behavior mapping in which environmental influences were identified. Observation of behavior was made using modified frequency time sampling, in which the trained observers recorded observations every 20-30 seconds for a ten minute segment of time. Six observation sessions occurred daily for a total of six periods throughout the study. For each variable, behaviors were coded under the represented category.

Nighttime outcomes consisted of the following categories: 1) location, 2) bed status, 3) motor activity, 4) sleep status, 5) verbal behavior-type, 6) verbal behavior-partner, and 7) instigator of verbal interaction. For nighttime observation, each subject was observed once per hour throughout the night for two

consecutive weeknights.

Results of the study demonstrated that daytime wandering behavior was not changed by the exercise program. In contrast, nighttime wandering was significantly reduced. Wanderers were more silent at night as a response to the intervention. The program had the additional benefit of promoting subjects' range of motion and tolerance for exercise.

In a clinical description of wandering, Rader, Doan, and Schwab (1985) investigated motivational factors to find clues to effective intervention strategies. Although addressed by Snyder et al. (1978) as the "search for security", Rader et al. (1985) explicated the emotional component in the motive to wander as feelings of loneliness and separation. These authors theorized that needs are unfulfilled because of the clients' inability to accurately express themselves due to impaired verbal and cognitive abilities. Thus, Rader et al. (1985) labeled wandering, a manifestation of unmet needs, as a form of "agenda behavior".

Agenda behavior includes verbal and nonverbal plans and actions that cognitively impaired persons use in an effort to fulfill their felt social, emotional,

and physical needs. The authors found that acknowledging the client's agenda resulted in lessened agitation, diminished feelings of isolation, and ultimately reduced nursing time spent in less successful approaches to managing the wandering behavior. Hoeffer and Rader (1987) plan to evaluate the effect of a nursing intervention for wandering, conceptualized as a form of agenda behavior. They plan to measure pre- and post-intervention behavioral changes in both clients and staff, after staff are provided information about wandering and the behavior of wanderers, and are taught more effective responses to their behavior.

The intervention studies of wanderers provide a base for managing wandering behavior. A protected ward environment benefits the wanderer by providing safe opportunities for activity and by promoting range of motion. Structured exercise programs reduce nighttime wandering and also promote range of motion. Artificial cues in the environment serve to redirect wanderers from unsafe areas. Staff's understanding of the wanderer's agenda and staff's use of a specific protocol in responding to wanderers' behavior may reduce wandering clients' anxiety, the clients' time spent wandering, and nursing time spent ineffectively

managing wandering behavior.

The intervention studies have been quasi-experimental or experimental in design but are characterized by several limitations. First, there is a lack of replication of any of the studies. Second, several of the studies have been conducted in Veterans' Administration Hospital settings which may not be representative of long-term care settings. Further, obtaining sufficiently large samples of randomly selected wanderers has been difficult. Finally, the subjects, in general, have been predominantly male, reflecting the availability of research subjects and not necesarily the wandering population as a whole.

In summary, the strengths of the knowledge accumulated thus far include a) creative approaches to studying the phenomenon, b) attempts to evaluate intervention strategies, and c) identification of specific antecedent and current psychosocial and behavioral factors that can be useful in determining which patients are at risk for wandering. Methodological issues that need to be addressed in subsequent studies include: a) enlarging sample sizes, b) obtaining subjects representative of the wandering population as a whole, and c) the development of

observational instruments that can be used to measure the behavior of wanderers with consistency and accuracy.

Observational methods

Behavioral observation is an excellent method for studying practice-relevant phenomena in nursing. Direct observation provides evidence of nursing effectiveness and may provide clues for improving nursing practice. However, behavioral observation as a research method is subject to several limitations. Since human judgements, reaction times, stimuli responses and discrimination abilities may vary, there are built-in problems of bias in this method that can affect reliability and validity. It is important for researchers to be aware of such limitations and take them into consideration when developing a study design that will incorporate behavioral observation as a data collection procedure.

The literature has identified problems inherent in observational research. Kazdin (1977) described reactivity, observer drift, and complexity as influences that may contribute to observer bias. Reid (1970), Romanczyk, Kent, Diament, and O'Leary, (1973), and Mash and McElwee (1974) confirmed the occurrence of observer reactivity, which is the change in responses that

occurs when research observers realize they are being monitored. Observer drift (Kazdin, 1977) refers to the tendency of observers to change the way in which they apply definitions of behavior which may result in faulty categorization of observed behaviors. In addition, complexity of observation (Mash & McElwee, 1974; Kazdin, 1977) may influence accuracy and agreement of observations. Generally, the greater the number of different behaviors, the lower the interobserver agreement.

With structured observations, that is, observations that yield data that can be quantified, reliability can be better controlled, but there may be limitations to the kinds of phenomena observed. Unstructured observations may be more difficult to assess for reliability and validity due to the qualitative nature of the data obtained. However, this data may provide information in greater depth and accuracy.

Observational tools need to be assessed for both reliability (consistency of agreement) and validity (accuracy of observations). Since nursing frequently relies on observational methods to study behavior, nurse researchers must pursue methodologies to develop

credible research instruments. Prescott (1971) states "the development of reliable and valid measures is a prerequisite to the solution of methodological problems."

Classification

Classification is a basic human conceptual activity and a fundamental step in the analytical process. In order to classify, one moves from a level of conceptual abstraction to a level of measurement. Measurement allows one to quantify and subsequently discern relationships between phenomena. Ultimately classification promotes linkage between the world of theory and the world of observation. Science begins with description and classification, and empirical research derives from classification.

In his discussion, Sokol (1974) identifies three purposes of classification within the field of natural science. First, "a correct classification aims to describe objects, or events, in such a way that their true relationships are displayed" (Sokol, 1974, p. 1116). Underlying this conceptualization is a view that classification reflects natural processes. By gaining an understanding of the natural order, one may then progress to further understanding of natural laws

governing the behavior of the objects. Second, classification "aims to achieve an economy of memory" (Sokol, 1974, p.1116). Communication is enhanced by summarizing information into categories, or groups, of related data and attaching a label to the category. Third, classification provides for ease of manipulation. By arranging objects in groups, the relationships may be more readily recognized. Information retrieval, therefore, is simplified.

Classification describes the structure and relationship of the constituent objects to each other and to similar objects. The relationships are simplified in such a way that general statements can be made about classes of objects. For example, nurses use classification theory when generating observation tools for assessment purpose.

Validity

The issue of validity is the most important aspect of any assessment device. The value of an instrument is based upon the accuracy with which it represents the attribute which it claims to represent. It is a difficult aspect to objectively confirm. Validity is not directly established by measurement but is derived from judgements made about data. A measurement procedure is said to have instrumental validity if it

can be shown that observations match those generated by an alternative procedure that is itself accepted as valid. (Kirk & Miller, 1986)

There are several ways to examine the issue of validity. Content validity is concerned with the adequacy with which an instrument represents the domain of concern (Messick, 1980, Polit & Hungler, 1987, Weiner & Stewart, 1984). The content validity of an instrument may be based on judgement obtained from a panel of experts who evaluate the accuracy and completeness of the definition of the identified domain.

Another way of establishing validity is by criterion-related validity (Weiner & Stewart, 1984; Polit & Hungler, 1987). This type of validity is less concerned with reflecting a particular domain of content than it is with establishing a relationship between an instrument and some other criterion. The results of criterion validity are useful in prediction. The two types of criterion validity, predictive validity and concurrent validity, differ in the timing for obtaining measurements of a criterion. Predictive validity in concerned with performances on a future criterion whereas concurrent validity refers to the

present status on a criterion.

Construct validity is concerned with the underlying attribute being measured (Weiner & Stewart, 1984; Polit & Hungler, 1987). The question of the instrument as an adequate measure of the concept being investigated is the primary concern.

One indicator of the quality of an instrument is its established validity, that is, to what degree the instrument measures what it is supposed to measure. Observational instruments categorize behaviors. The extent to which the actual client behaviors correspond to the categories is a reflection of the instrument's accuracy. A valid instrument accurately categorizes behaviors into discrete categories which reflect the true behaviors as they occurred.

Triangulation

One way of determining the accuracy or validity of an observational instrument is through a triangulated approach to data collection. Mitchell (1986) states "a triangulated study combines different theoretical perspectives, different data sources, different investigators, or different methods within a single study." The purpose of this approach is to overcome biases that stem from any single method and thereby achieve results that reflect the trait being measured

rather than the method being used.

Four specific types of triangulation may be carried out: data, investigator, theoretical, and methodological. Data triangulation is accomplished by including multiple sources of data within the same study, with each source focused upon the phenomena of interest. The sources may differ by person, place, or time. Investigator triangulation involves multiple observers using the same raw data. This type of study design helps reduce potential bias that may occur with a single observer and results in greater reliability for data collection and analysis. With theoretical triangulation, multiple hypotheses are included within the same study. Explanations that are theoretically different but related are tested within the same body of data. Methodological triangulation can be defined as existing within-method or across-method. In across-method triangulation, dissimilar but complementary methods are used to measure the same subject and the same phenomenon in order to achieve convergent validity.

In this study, classification theory and the concepts of validity and triangulation underlie the design (See Figure 1). Data gathering utilizes both

the investigator and methodological forms of triangulation (see Figure 2). Two investigators observe the same subject during the same observation period to provide investigator triangulation. For methodological triangulation, structured and unstructured data gathering procedures yield both quantitative and qualitative data. The unstructured data serves as a proxie variable for actual behavior and provides the standard, or criterion, to which the structured data will be matched. The degree to which the behaviors can be accurately matched will provide a measure of the tool's accuracy in representing the actual behavior, thus providing a measure of validity. This model will be used to determine the accuracy and consistency with which an observational tool, the WOT, developed by Hoeffer, Rader and Siemsen (1987), can be used to classify the behavior of wanderers.

Figure 1. Conceptual framework for determining the validity of the WOT, a behavioral observation instrument.

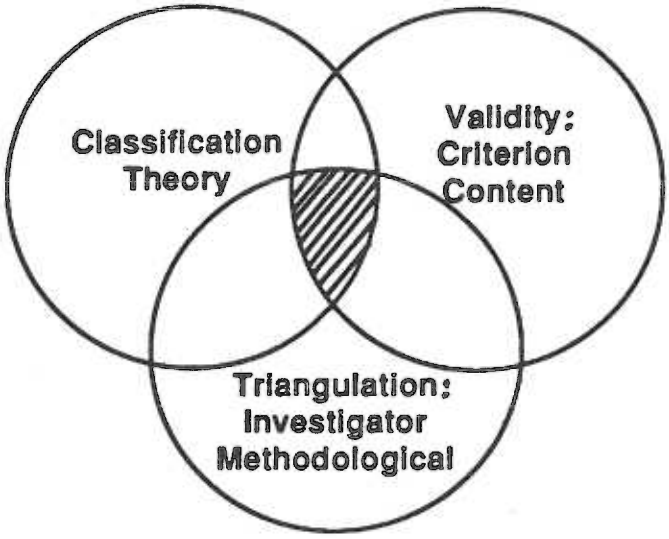
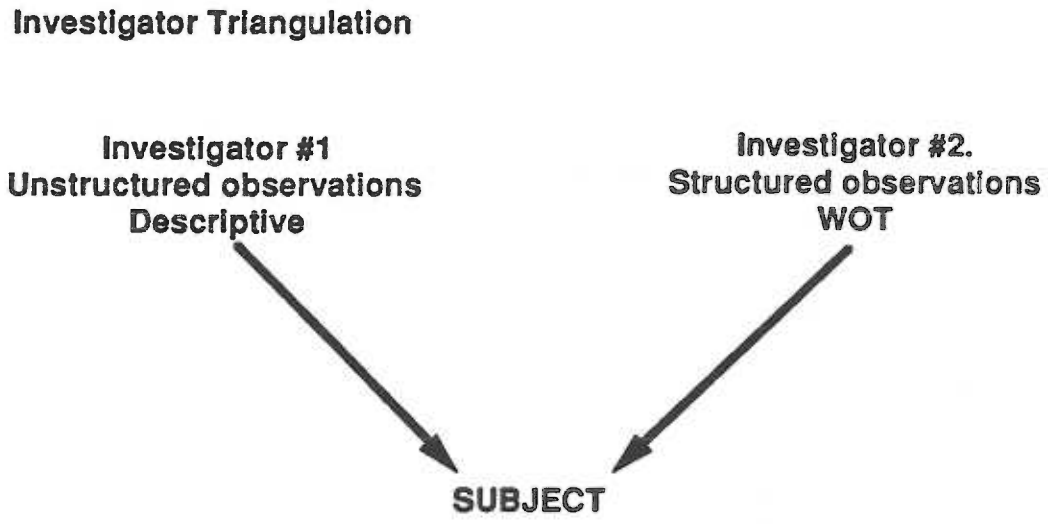


Figure 2. Methodological Design



Research Questions

1. To what extent does an observer's classification of the behavior of elderly nursing home residents who wander, using the WOT, accurately reflect the behavior that is occurring?

2. To what extent do the categories of behavior in the WOT adequately represent the content of behaviors of elderly nursing home residents who wander?

CHAPTER II

METHODS

Design

This methodological study is nonexperimental and, therefore, no hypothesis is stated. The methodology is based on the triangulation approach. As an example of across method triangulation, two observers used different methods to record the same raw data. The purpose of the observations was to provide data to be used in determining the validity of the WOT.

Setting

The setting is a unit at the Benedictine Nursing Center (BNC), Mt. Angel, Oregon. BNC is a 130 bed, long-term care nursing facility located in rural Oregon. The setting is appropriate for observing behaviors of residents as they occur naturally on the unit. The facility is a one-story building with a single corridor. Patient care wings branch out to either side of the central administration area. Few patients remain in their rooms. Many freely move about through all three wings of the facility either in wheelchairs or on foot. There are frequent scheduled activities which create an atmosphere of business and activity as patients, staff, and visitors move about the facility.

Subjects

A convenience sample of three residents of the BNC was used for this methodological study. Each subject met the following criteria: male or female, 65 years of age or older, and current status as a wanderer as determined by the clinical nurse specialist. For the purpose of this study, a wanderer is described as one who a) moves around the unit, leaves the unit, or exhibits exit-seeking behavior; b) shows evidence of cognitive impairment; and c) is mobile by own volition either by ambulation or by wheelchair. Verbal consent from each subject's family or guardian was obtained prior to observations. The subjects were two males and one female. All subjects a) were mobile, two by wheel chair and one male by ambulation, b) were caucasian, c) were aged 83 to 89, d) had evidence of severe cognitive impairment as measured by the Mental Status Questionaire, and e) resided in the facility for one and a half to four years.

Instrument

The WOT is a behavioral observation tool which had been developed specifically for a study of cognitively impaired elderly nursing home residents who wander. (Hoeffer and Rader, 1987). A summary of the process

used in developing the WOT is found in Appendix B. Five mutually exclusive categories of behavior were listed on the version of the WOT used in this pretest: Location, Movement, Exit Seeking, Social Involvement, Mutual Subject/Staff Interaction. The final category is further subdivided into 6 subcategories to describe the following characteristics: subject verbal, nonverbal, and affective behavior, and staff verbal, nonverbal, and affective behavior. The instrument provides nominal data for analysis. A copy of the version of the instrument used in the pretest, including the definitions of categories and codes for the behaviors/events within the categories, are found in Appendix C.

Procedures

The study consisted of across-methods triangulation in which two investigators viewed the same subject. The investigators were two graduate students from the Oregon Health Sciences University School of Nursing, Department of Mental Health Nursing. One of the investigators had no training in the use of the instrument whereas the other investigator had extensive prior training. The trained investigator instructed the untrained investigator to maintain a running description of the client's behavior for the

entire twenty minute period. The untrained investigator used a descriptive (unstructured) approach to record observations of the behavior of clients identified as wanderers. This process yielded qualitative data in a narrative format.

The trained investigator employed the WOT to simultaneously record structured observations of the behavior of the same client. The behaviors were recorded every thirty seconds. A small timing device, inconspicuously located in her pocket with wires leading to an earpiece, cued the investigator to the correct observation interval. The observed behaviors for each category of the WOT were then coded. This process yielded the quantitative data.

The investigators were visible on the unit in which the subjects resided, but were located in unobtrusive locations. Three different subjects were each observed for a 20 minute observation session.

Analysis

Analysis of the data occurred in two parts. In Part 1, criterion validity was determined in response to research question one: To what extent does an observer's classification of the behavior of elderly nursing home residents who wander, using the WOT,

accurately reflect the behavior that is occurring? For criterion validity, the relationship between the instrument and a criterion is established. In this study, the criterion was the descriptive narrative data obtained through unstructured observations of the three subjects. This qualitative data served as a proxie variable for actual behavior of subjects. Each narrative was comprised of a 20-minute running log of the subject's behavior as viewed by an observer. Each of the three narrative records was be split into two ten-minute segments yielding six segments of qualitative data. The quantitative data, which was simultaneously collected by the second observer using the WOT, was divided into two ten-minute segments also yielding six segments of data.

A panel of three judges, nursing graduate students in geriatric and mental health nursing, was convened. While none of the judges had prior exposure to any portion of the study, all had work experience with cognitively impaired adults in long term care settings. The three met together with the investigator and received verbal instructions as well as identical instruction sheets, answer sheets, and data forms. (See Appendix D) The investigator decided to meet with the group as a whole in order to assure uniformity of

instruction and eliminate a potential source of bias. The evaluation time took an hour and forty minutes. Three hours had been estimated. The judges received no compensation for their time.

Each judge was asked to match the qualitative segment to the corresponding quantitative segment. They were then asked to evaluate, using a Likert-type scale, how well, on the whole, the two sets of data matched. The investigator subsequently evaluated the results for the following: a) Were the judges able to match the different sources of data accurately? and b) With what degree of accuracy did the judges think the data sets match? First, the percentage of accurate matches was calculated by counting the number of accurate matches between the six narrative and six WOT data segments per judge (N=18). To answer the second question the judges used a Likert-type scale with a six point response range from 6 (very well) to 1 (not at all) to rate how well the data sets match. An average rating across the six narratives for the three judges was computed (n=18). The results from this analysis provided information about the instrument's degree of accuracy in reflecting the observed behavior.

In Part 2 of the analysis, the issue of content

validity was addressed in response to the second research question: To what extent do the categories of behavior in the WOT adequately represent the content of behaviors of elderly nursing home residents who wander? Content validity is concerned with the extent to which an empirical measurement (the tool) reflects a specific domain of content. In other words, do the categories in the WOT and the behaviors/events, as defined within the categories (i.e. codes), sufficiently represent the behaviors as recorded in the narrative log?

In order to answer this question, the panel of judges again examined the six sets of qualitative data segments and evaluated the extent to which the content of behavior in the segments could be adequately described using the definitions of behaviors/events (i.e. codes) provided within each category. For each category, the judges again used a 6-point scale to evaluate each narrative segment for the extent to which the codes, as defined, adequately describe the behavior/events that actually occurred. Each category was evaluated in this way. For example, for the category LOCATION the judges reviewed each narrative segment and rated how well the definitions of the codes actually represented what occurred in terms of where the resident was located.

The following computation was made for each of the ten categories. Across each narrative, an average of the judges' ratings was computed (N=18). A summation of these means was averaged to yield an overall score for the category.

The judges were asked to make a simple represented/not represented designation for each category. A designation of "represented" was given a numerical value equal to 1 and "not represented" was assigned 0. This overall score was averaged to yield another evaluation of the adequacy of representativeness for each category (N=30). For example, for the category LOCATION, each judge circled either 1 or 0 for the category. The three scores were averaged to determine an overall score for the category.

CHAPTER III

RESULTS AND DISCUSSION

Research Question 1.

To what extent does an observer's classification of the behavior of elderly nursing home residents who wander, using the WOT, accurately reflect the behavior that is occurring? The panel members matched the two sets of data with a high degree of accuracy. (see Table 1).

Table 1.

Results of Matched Narrative and WOT Data Sets

Narrative	Judge 1	Judge 2	Judge 3	%Accurate[a]
1	b	c	b	66
2	f	f	f	100
3	d	d	d	100
4	a	a	a	100
5	c	b	c	66
6	e	e	e	100

[a] $\bar{x}=89$

Two of the judges were 100% accurate in their matches; the third judge made two inaccurate matches achieving 66% accuracy. Hence, the overall agreement was 89% for all three judges.

Using the Likert-type scale, the judges then

evaluated each matched set for the accuracy of the match (see Table 2). These averaged scores ranged from a low of 4.3 for narrative 1 to a high of 6.0 for narrative 2. The judges were unanimous in their rating of how well the data sets matched on the whole; all rated the match as 5 (i.e. "well"). From Table 2 it can be seen that, although the judges varied in their ratings of the individual matched sets, the average (5.1) was very close to the 'on the whole' rating (5.0).

Table 2.

Likert Rating of Accuracy of Match

Narrative	Judge 1	Judge 2	Judge 3	Average[a]
1	5	5	3	4.3
2	6	6	6	6.0
3	4	5	5	4.7
4	5	5	4	4.7
5	5	5	5	5.0
6	5	6	6	5.7

[a] $\bar{x}=5.1$

The high degree of accurate matches of data sets was suprising. The judges had the difficult task of determing the content, integrating the definitions and finding the match for two sets of very different data.

Only two inaccurate matches is less than what would have been expected. Since one mismatch necessarily means that at least one other mismatch must occur, the results are excellent.

Examination of revealed that the two inaccurate matches both data sets were subsets of an original, continuous observation session for the same client. That is, the judge did not mix one client with another; rather, she had the sequence switched for the observation period. The ten-minute narrative segment was matched with its subsequent WOT segment rather than the corresponding segment. The WOT data for this client was nearly identical for both segments. Interestingly, this judge rated her incorrect matches as matching extremely well (i.e. a score of 6).

In summary, criterion validity appears to be more than adequate based on the high percentage of accurate matches and the judges' rating of their accuracy.

Research Question 2.

To what extent do the categories of behavior in the WOT adequately represent the content of behaviors of elderly nursing home residents who wander? The judges used a Likert-type scale to evaluate how well the codes within the categories adequately described the behaviors and events that actually occurred for each narrative segment (see Table 3). Likert ratings were averaged for each data set in the category and category means were calculated. Results have been summarized in Table 4.

Table 3.

Ratings for each matched data set per category

Category	Likert Rating			
Location	Judge 1	Judge 2	Judge 3	Average[a]
1	6	6	2	4.7
2	6	6	1	4.3
3	6	6	6	6.0
4	4	5	4	4.3
5	5	2	1	2.7
6	6	6	6	6.0
[a] $\bar{x}$=4.7				
Movement				
1	6	6	6	6.0
2	6	6	1	4.3
3	5	5	6	5.3
4	6	6	6	6.0
5	6	5	6	5.3
6	6	6	5	5.6
[a] $\bar{x}$=5.4				
Exit-Seeking				
1	6	6	6	6.0
2	6	6	1	4.3
3	6	6	2	4.7
4	6	4	6	5.3
5	6	6	6	6.0
6	6	2	6	4.7
[a] $\bar{x}$=5.2				

Table 3. continued

Category	Likert Rating			
Social Contact	Judge 1	Judge 2	Judge 3	Average[a]
1	6	3	6	5.0
2	6	6	1	4.3
3	2	4	6	4.0
4	6	5	6	5.7
5	6	5	6	5.7
6	6	5	6	5.7
[a] $\bar{x}$=5.1				
Subject:Verbal				
1	6	6	6	6.0
2	6	2	1	3.0
3	6	2	6	4.6
4	6	5	6	5.7
5	6	6	6	6.0
6	6	6	6	6.0
[a] $\bar{x}$=5.2				
Subject: Nonverbal				
1	6	4	6	5.3
2	6	6	1	4.3
3	2	1	6	3.0
4	6	5	6	5.7
5	6	5	6	5.7
6	6	6	6	6.0
[a] $\bar{x}$=5.0				
Subject: Affect				
1	6	1	6	4.3
2	6	6	1	4.3
3	6	1	6	4.3
4	6	1	6	4.3
5	6	1	6	4.3
6	6	1	6	4.3
[a] $\bar{x}$=4.3				

Table 3. continued

Category	Likert Rating			
Staff: Verbal	Judge 1	Judge 2	Judge 3	Average[a]
1	6	6	6	6.0
2	6	6	1	4.3
3	6	1	6	4.3
4	6	6	6	6.0
5	6	6	6	6.0
6	6	6	6	6.0
[a] $\bar{x}$=5.4				
Staff:Nonverbal				
1	6	6	6	6.0
2	6	6	1	4.3
3	6	1	6	4.3
4	6	6	6	6.0
5	6	6	6	6.0
6	6	6	6	6.0
[a] $\bar{x}$=5.4				
Staff: Affect				
1	6	1	6	4.3
2	6	6	1	4.3
3	6	1	6	4.3
4	6	6	6	6.0
5	6	6	6	6.0
6	6	6	6	6.0
[a] $\bar{x}$=5.2				

Table 4.

Averaged ratings for each category

WOT Category	Averaged score
Location	= 4.7
Movement	= 5.4
Exit seeking	= 5.2
Social Contact	= 5.1
Subject:Verbal	= 5.2
Subject:Nonverbal	= 5.0
Subject:Affect	= 4.3
Staff:Verbal	= 5.4
Staff:Nonverbal	= 5.4
Staff:Affect	= 5.2

There was a greater variation in the judges' evaluations of the categories than there was in any other portion of the results. One judge in particular had a response-set bias across all categories with very little deviation from a rating of 6. This bias tends to skew the results favorably. The other judges showed more variation in their scores. One judge rated one narrative segment (with minimal narrative information) consistently as 'not at all' (i.e. a score of 1). This particular data segment was obtained when the subject entered the chapel for mass. The door to the chapel was subsequently closed and the observers remained outside the chapel for the duration of the observation period. There was, therefore, minimal narrative data while the WOT data consisted of "0"s (unobserved). The other judges seemingly did not perceive the lack of information in the narrative segment. However, it should be noted that the judges were to evaluate the WOT segment, not the narrative piece.

The judges had the widest range of responses when evaluating the extent to which the category Location adequately represented the content of behaviors related to Location in the narrative. This was also the first category to be rated and not affected by a fatigue factor. The rating for this category ($\bar{x}$=4.7) was

substantially influenced by one judge rating 'not at all' or 'poorly' for 3 segments. The other judges were less extreme in their ratings but likewise made lower ratings for the segments identified. Two judges rated the representativeness of the content as 'extremely well' for the data sets in this category. The former judge consistently used a wide range of responses while the other two judges were in very close agreement for most of the categories.

The lowest mean score was obtained for the category Subject:Affect ($\bar{x}$=4.3). In this category two of the judges made nearly identical ratings of 'extremely well' (i.e. a score of 6) while the other judge rated 'not at all' (i.e. a score of 1) for all but one of the narratives. This wide variation in the ratings is difficult to explain. While two of the judges apparently had no difficulty with the category and data one judge clearly viewed the data differently. This finding suggests that Subject:Affect may be a difficult component to evaluate. On the whole, the judges found that the categories adequately represented the content in the narratives.

For the overall rating of how well the codes represented the behavior within each category, the

judges circled 1 for "represented" or 0 for "not-represented" (see Table 5). Of the 30 evaluations, the judges decided the definitions represented the behaviors "very well" 28 times (93.2%). One judge made a "not-represented" evaluation based on poor narrative data rather than deficiencies with the WOT categories. In her opinion, questionable narrative data did not supply enough data to evaluate the WOT. The other two judges did not comment on or note the lack of information for the category. The other "not-represented" rating was made by the judge who likewise had low ratings for the category. Both findings are consistent with previous data obtained.

Table 5.

Representation

Represented = 1
Non-represented = 0

Category	Judge 1	Judge 2	Judge 3	Average[a]
Location	1	1	0	% 66
Movement	1	1	1	100
Exit-Seeking	1	1	1	100
Social Contact	1	1	1	100
Subject:Verbal	1	1	1	100
Subject:Nonverbal	1	1	1	100
Subject:Affect	1	0	1	66
Staff:Verbal	1	1	1	100
Staff:Nonverbal	1	1	1	100
Staff:Affect	1	1	1	100

[a] $\bar{x}$=93.2

There were no outstanding inconsistent findings. Where one judge varied in a response, the other two judges were in agreement. This pattern of responses occurred in the results for both research questions. In summary, content validity of the WOT categories appears to be adequate.

The limitations of this study include the setting, since the subjects who wandered were located in one long-term care facilty. Future studies in different settings would provide additional information on the validity of the WOT with different populations. Also,

a limitation was having only three judges evaluate the data. It would be interesting to see if results were consistent when a larger number of judges were included on the panel.

CHAPTER IV

SUMMARY AND IMPLICATIONS

Summary

Wandering behavior of cognitively impaired adults is a problem for caregivers. Research based knowledge for management of wandering behavior has been limited. Contributing to the lack of information has been the complexities associated with studying the cognitively impaired elderly adult. Behavioral observation is an effective method for studying a practice-relevant problem such as wandering. However, establishing an observational instrument's reliability and validity is a necessary step before such an instrument may be used with confidence in nursing research because of the inherent biases in observational methods.

The purpose of this study was to determine the validity of the Wandering Observation Tool. The two research questions addressed were: 1) To what extent does an observer's classification of the behavior of elderly nursing home residents who wander, using the WOT, accurately reflect the behavior that is occurring? and 2) To what extent do the categories of behavior in the WOT adequately represent the content of behaviors of elderly nursing home residents who wander?

The WOT was developed for use as an observational

instrument in nursing research of cognitively impaired elderly adults who wander. The concepts of criterion and content validity were specifically addressed in relation to assessing the validity of the WOT.

Triangulation was used in the data collection so as to establish criterion and content validity of the WOT. Two different methods of data collection provided different perspectives of the same phenomena of interest: wandering behavior. Qualitative data (running descriptive narrative) and quantitative data (WOT coding) were simultaneously obtained by two investigators observing the same subject. Three different subjects were each observed for a 20 minute observation session. A panel of three experts was able to match the qualitative data with the corresponding quantitative data with a high degree of accuracy (89% accurate matches). The panel was unanimous in their subjective assessment of their ability to accurately match the data. The results provide strong evidence for criterion validity of the WOT. In addition, the panel evaluated the content validity of the WOT, that is, the accurate and adequate representation of the behavior of wanderers as it is coded by the WOT. The panel found the categories and codes did represent the behavior

of wanderers very well. Two categories of the WOT, Location and Subject: Affect, may need further clarification.

From a methodological perspective, the findings from this study suggest that the triangulated approach to data gathering has been an effective way to collect both qualitative and quantitative data and overcome some of the bias often encountered in behavioral observation research. Validity is an extremely difficult concept to establish and does not lend itself to quantitative analysis. Rather, it is determined by judgement. In this study a panel of experts provided the judgements, using the qualitative narrative segments and the quantitative WOT segments, that supported a degree of criterion and content validity of the WOT.

Implications

The methodological findings of this study may be useful to nurse researchers who use behavioral observation for data collection. A triangulated approach incorporated into a study design may increase the validity of the findings.

The WOT, as a valid instrument for documenting the behavior of wanderers, may be used in future studies to measure the effectiveness of nursing interventions for

management of wanderers. Establishing a research based source of knowledge for management of wandering behavior is the goal.

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Appendix A

The Wandering Observation Tool (WOT)

ID:_____ Date:_____ Time:_____ Period:_____ Session:_____

OBSERVER:_____ WOT - Page 1

Time Interval	A. Location	B. Movement	C. Exit-Seeking	D. Soc. Contact	Notes
30 SECONDS	0. Unobserved Unit 1. Own room 2. Res. room 3. Staff area 4. Public area Off Unit 5. Res. room 6. Staff area 7. Public area Outside 8. Confined 9. Unconfined	0. Unobserved 1. Ambulate 2. Assisted 3. Circumscribed 4. Still-unre-strained 5. Still-re-strained	0. Unobserved 1. Occurs 2. Does not occur	0. Unobserved 1. No one 2. Resident 3. Visitor 4. Nursing 5. Other Staff 6. Multiple	

1.	21.										
2.	22.										
3.	23.										
4.	24.										
5.	25.										
6.	26.										
7.	27.										
8.	28.										
9.	29.										
10.	30.										
11.	31.										
12.	32.										
13.	33.										
14.	34.										
15.	35.										
16.	36.										
17.	37.										
18.	38.										
19.	39.										
20.	40.										

ID:_____ Date:_____ Time:_____ Period:_____ Session:_____

OBSERVER:_____ WOT - Page 2

E. SUBJECT/STAFF INTERACTION

Subject: E1. Verbal	Subject E2. Nonverbal	Subject E3. Affect	Staff E4. Verbal	Staff E5. Nonverbal	Staff E6. Affect
0. Unobserved 1. Positive 2. Negative 3. Silent 4. Nonsensical 7. Undiscern. 8. Not Applic.	0. Unobserved 1. Coop/Assist/ Attend 2. Ignore, Avoid 3. Resist 4. Aggressive 7. Undiscern 8. Not Applic.	0. Unobserved 1. Positive 2. Negative 3. Flat 7. Undiscern. 8. Not Applic.	0. Unobserved 1. Positive 2. Negative 3. Silent 7. Undiscern. 8. Not Applic.	0. Unobserved 1. Assist/Attend Accompany 2. Ignore, Avoid 3. Resist 4. Aggressive 5. Retrieve/ Divert 6. Restrain 7. Undiscern 8. Not Applic.	0. Unobserve 1. Positive 2. Negative 3. Flat 7. Undiscern. 8. Not Applic.

1.	21.										
2.	22.										
3.	23.										
4.	24.										
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19.	39.										
20.	40.										

OBSERVATIONAL TOOL FOR WANDERING BEHAVIOR AND STAFF/WANDERER INTERACTION

Definition of Variables

A. LOCATION

Location is comprised of physical rooms or areas that a resident can enter within the unit or the facility, and outside of the facility. Locations are defined by the floor plan of the facility and visual inspection of the area for its function.

All locations

0. Unobserved: Subject is in an area where he/she cannot be observed (e.g. bathroom or office with door closed; away from facility).

On unit

1. Own room: Subject's room on unit in which he/she resides, including attached bathroom.

2. Resident's room: Other residents' rooms on unit in which they reside.

3. Staff area: All areas on unit for staff-related activity (e.g. nurses station, utility room, physical therapy room).

4. Public areas: All areas on unit which are for general use of residents (e.g. hallway, lounge, dining area).

Off unit

5. Resident's room: Other residents' rooms on other units in facility in which they reside.

6. Staff area: All areas on other units in facility for staff-related activity (e.g. nurses station, MD office).

7. Public areas: All areas on other units in facility which are for general use of residents (e.g. hallway, lounge, dining area).

Outside

8. Confined: Outdoor areas that are enclosed for residents use (e.g. courtyard, garden, etc.).

9. Unconfined: Outdoor areas that are open spaces (e.g. non-fenced yard, parking lot, sidewalk).

B. MOVEMENT

Movement is defined by the extent to which a resident moves or propels one's self through space.

0. Unobserved: Subject is inaccessible and cannot be observed.

1. Ambulate: Moving one's self through space by walking or propelling one's self in a wheelchair. Includes walking with a cane or other devise.

2. Assisted: Being assisted to walk by another person or being pushed in a wheelchair or stretcher.

3. Circumscribed: Movement of a limited nature such as taking a few steps (maximum of three) or rolling wheelchair back and forth in a limited area (maximum of three lengths).

4. Still-unrestrained: Staying in one place of one's own volition. Includes standing still, sitting and lying down. Includes shifting one's position when standing, sitting, or lying down.

5. Still-restrained: Staying in one place because of the use of restraints. Includes being restrained in bed, or in a chair or wheelchair so that one cannot propel or move one's self through space. Does not include use of restraints to hold arm in place or waist restraints to prevent person from falling out of chair. (Note: determine use of restraints prior to beginning observational session.)

C. EXIT-SEEKING

Exit-seeking is defined as any attempt initiated by a resident to leave the facility through a door that leads to the outside.

0. Unobserved: Subject is inaccessible and cannot be observed.

1. Occurs: Subject approaches external exit door (i.e. leading outside the facility) and touches it, tries to open unsuccessfully, or succeeds in opening door on own. Includes approaching exit door and asking for assistance to leave. Includes successfully exiting through external door.

2. Does not occur: Subject does not attempt to leave facility through external exit on own volition. Non-occurence includes being taken outside by staff or visitor, but only if subject did not initiate leaving facility.

D. SOCIAL CONTACT

Social contact is defined by the extent to which a resident initiates, responds to, or is directly involved in verbal or nonverbal behavior with others. This includes involvement in activities such as talking, singing, holding hands, playing a game, engaging in a task or ADL.

0. Unobserved: Subject is inaccessible and cannot be observed (e.g. behind closed door; away from facility).

1. No one: Subject is not directly involved in verbal or nonverbal behavior with one or more persons (e.g. subject is sitting alone although others are in vicinity; subject is singing or talking but to no one in particular; subject is reading or watching T.V. without showing awareness of others in area; someone else speaks to subject but subject's eyes are closed or subject appears unaware of other's presence; subject is eating alone). In otherwords, the subject does not initiate nor is engaged in contact with others.

2. Resident: Subject initiates, responds to or is directly involved in verbal or nonverbal interaction/behavior with one or more persons who reside in the facility. Behaviors include activities such as talking to each other, singing together, holding hands, playing a game, assisting with ADL, or engaging in a task together.

3. Visitor: Subject initiates, responds to or is directly involved in verbal or nonverbal interaction/behavior with one or more persons who come to see subject but who neither live nor work at the facility (e.g. family members, friends, private M.D., volunteers, nursing student).

4. Nursing staff: Subject initiates, responds to or is directly involved in verbal or nonverbal interactions/behavior with one or more nursing staff members who work at the facility (e.g. Registered Nurses, Licensed Practical Nurses, Nursing Assistant or Aide).

5. Other staff: Subject initiates, responds to or is directly involved in verbal or nonverbal interaction/behavior with one or more staff members other than nursing who work at the facility (e.g. housekeeper, chaplin, social worker, physical therapist).

6. Multiple parties: Subject initiates, responds to or is directly involved in verbal or nonverbal interaction/behavior with representatives of at least two of the above categories of people.

E. SUBJECT AND STAFF INTERACTION

Subject and staff interaction is defined as being classified as 4, 5, or 6 (if staff is one of the parties) on D. Social Contact.

Across all subcategories: subject and staff

0. Unobserved: Subject is inaccessible and cannot be observed.

8. Not applicable: No social contact between staff and subject coded in D (i.e. social contact coded as 1, 2, 3, or 6, if staff is not one of parties).

E.1 SUBJECT: VERBAL

1. Positive: Includes comments and responses that seek or give information; clarifies or validates; compliments or rewards; comforts or assures; humorous retort; prescribes action (i.e. tells what to do). Includes social amenities such as greetings and farewells, and standard comments such as "How's the weather?"

2. Negative: Includes comments and responses that reprimands or admonishes; accuses of wrong doing or punishes; threatens or rejects; proscribes action (i.e. tells what not to do).

3. Silent: Makes no sound or verbal response, but includes clearing throat.

4. Nonsensical: Includes comments and responses that are bizarre or make no sense (e.g. "I am God"); unintelligible mumbling or muttering; singing; screams, moans, or repetitive sounds ("Oh my, Oh my...")

7. Undiscernible: Subject comments verbally but observer cannot hear clearly what is said. Does not include mumbling or muttering.

E.2. SUBJECT: NONVERBAL

1. Cooperates/assists/attends: Subject allows or assists staff to perform task or carry out activity. If the activity is verbal only, then subject appears to attend to or listen to what staff says (e.g. nods, follows with eyes).

2. Ignores, avoids: Subject turns away from staff who is trying to engage subject in activity or to assist with task. If activity is verbal only, subject avoids eye contact, turns eyes down.

3. Resists: Subject pulls away from or pushes away staff who is trying to engage subject in activity or to assist with task. Subject refuses assistance or activity or undoes task. If activity is verbal only, subject shakes head no.

4. Aggressive: Subject strikes out at, hits, or shoves staff hard; or subject throws object at or near staff, or strikes object.

7. Undiscernible: Subject responds nonverbally but observer cannot see or distinguish behavior.

E.3. SUBJECT: AFFECT/DEMEANOR

1. Positive: Appears calm or relaxed; looks happy or pleased, attentive or curious.

2. Negative: Appears tense, anxious, or upset; looks sad, annoyed, irritated, or angry.

3. Flat: Shows no or little emotion; expressionless.

7. Undiscernible: Observer cannot see or distinguish affect/demeanor clearly.

E.4. STAFF: VERBAL

1. Positive: Includes comments and responses that seek or give information; clarifies or validates; compliments or rewards; comforts or assures; humorous retort; prescribes action (i.e. tells what to do). Includes social amenities such as greetings and farewells, and standard comments such as "How are you doing?"

2. Negative: Includes comments and responses that reprimands or admonishes; accuses of wrong doing or punishes; threatens or rejects; proscribes behavior (i.e. tells what not to do).

3. Silent: Makes no sound or verbal response, but includes clearing throat.

7. Undiscernible: Staff comments verbally but observer cannot hear clearly what is said.

E.5. STAFF: NONVERBAL

1. Assist/Accompany/Attends: Staff assists subject to perform task or carry out activity; or staff stays with or accompanies subject as subject carries out activity; or staff engages in activity with subject. For example, staff may help subject eat, may sit with subject but not assist, or may eat with subject. If activity is verbal only, then staff appears to attend to or listen to what subject says.

2. Ignores, avoids: Staff turns away from subject who is trying to engage staff in activity. If activity is verbal only, staff avoids eye contact, turns eyes down.

3. Resists: Staff pulls away from, or pushes away subject who is trying to engage staff in activity or seeks assistance with task. Staff refuses to assist subject in activity.

4. Aggressive: Staff shoves, pushes or pulls subject abruptly/brusquely; strikes out at, hits, or slaps subject; throws object down hard or strikes object hard near subject.

5. Retrieve/divert: Staff leads subject away or moves subject away from person, place or object. Includes guiding or wheeling subject away from something (e.g. exit, another resident).

6. Restrains: Staff prevents subject from carrying out activity by physically holding subject or blocking subject's movement.

7. Undiscernible: Staff responds nonverbally but observer cannot see or distinguish behavior.

E.6. STAFF: AFFECT/DEMEANOR

1. Positive: Appears calm or relaxed; looks happy or pleased, attentive or curious.

2. Negative: Appears tense, anxious or upset; looks sad, annoyed, irritated or angry.

3. Flat: Shows no or little emotion; expressionless.

7. Undiscernible: Observer cannot see or distinguish affect/demeanor clearly.

NOTES A section labeled notes is included on page one of the OTW. This is for the observer's comments while coding behavior.

Appendix B

Description of the development of the WOT

An Observational Tool for Studying the Behavior of Cognitively–Impaired Nursing Home Residents Who Wander

Beverly Hoeffer, RN, DNSc; Joanne Rader, RN, MN; Georgene Siemsen, RN, BSN

Abstract

The wandering observational tool (WOT) was developed by the investigators for use in a proposed study of cognitively–impaired elderly nursing home residents who wander. The study will test the effectiveness of a nursing intervention for managing the behavior of wanderers. Observational methods seemed particularly well suited for measuring the outcomes of the intervention and for use with cognitively–impaired subjects.

The co–investigators reviewed the literature to identify characteristics of wanderers and properties of wandering as described by clinicians and researchers, and to examine other observational methods used in previous studies. The following definitions were derived as a basis for selecting three elderly residents in one nursing home as subjects for unstructured observations to develop the WOT. A wanderer is a person who is cognitively impaired and who is able to ambulate/move about on foot or by wheelchair under his/her own volition. Wandering is the pattern of either goal-directed or nongoal-directed moving about by a wanderer that may result in entry into unsafe places.

The WOT was constructed using the techniques described by Rosenblum (1978) for developing a behavioral taxonomy for use in observational research. Data were gathered by a research assistant during unstructured observations of three male residents on one unit identified as wanderers by the nursing home staff. The subjects ranged in age from 83-86 years and scored as severely impaired on the MSQ. Each subject was observed once a week over a four- week period for an average of two hours. All verbal and nonverbal behaviors of the subject and persons with whom he interacted were recorded. The research assistant also recorded all incidents of exit-seeking behavior on the unit, her impressions of the environment, the appearance of each subject, and her subjective response to what she had observed. Following each day of observation, she transcribed her field notes into typed data records .

The co-investigators and the research assistant independently conducted a content analysis of the data records to identify all discrete behaviors and to abstract preliminary categories. Six mutually exclusive categories were selected for inclusion in the WOT. These were: a) location, b) movement, c) exit-seeking, d) social involvement, e) initiator of subject/staff interaction, and f) subject/staff interaction which had six subcategories (subject verbal, nonverbal, and affective behavior; staff verbal, nonverbal, and affective behavior). The definitions of each category and subcategories and discrete behaviors within categories were derived from the content analysis and the literature.

The WOT was refined over a six-week period. The research assistant used the WOT to conduct structured observations of three elderly residents identified as wanderers by staff (two males; one female). Changes were made in the WOT based on data collected from these observations. For example, one category (e. initiator of subject/staff interaction) was eliminated, and behaviors in the movement category were revised to distinguish between voluntary and restrained nonmovement. Each subject was observed again for three twenty minute observation sessions using the refined WOT. Behaviors were coded in each category during 30 second intervals within sessions.

This version of the WOT was pre–tested to establish its validity and reliability. The following process is being used to establish validity of the WOT. The research assistant and an untrained observer simultaneously observed three elderly residents for 20 minutes each. The former used the WOT to record subjects' behavior; the latter recorded unstructured observations of subjects as a proxie variable for subjects' actual behavior. A panel of experts will evaluate the accuracy of the WOT by assessing the degree of match between the two sets of data obtained through different methods of collection.

The interrater reliability or agreement for the WOT was determined by computing percent agreement and kappa for each of the 10 categories and subcategories of behavior. Percent agreement between the trained and untrained observer ranged from 70-100% ($\bar{x}$ = 86%). However, kappas for the two observers ranged from .14-.91 ($\bar{x}$ = .40). The major problem, accounting for kappas below .40, was distinguishing between whether social involvement was unilateral or mutual, a decision which affected the coding of behavior in the five subsequent subject/staff interaction categories. These findings were used to revise the WOT. The social involvement category was changed to social contact and simplified (i.e. the distinction between unilateral versus mutual involvement was eliminated and definitions of behaviors clarified). The subject/staff interaction subcategories were modified so that unilateral contact by subjects could be coded also (e.g. subject initiates contact but staff ignores or avoids contact). Observers will be systematically trained to use the WOT prior to beginning data collection for the proposed intervention study.

Rosenblum, L.A. (1978). The creation of a behavioral taxonomy. Observing behavior: Data collection and analysis method. Baltimore, MD: University Park Press.

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Appendix C

Wandering Observation Tool, pretest version

CLIENT ID: _____ OBSERV. PERIOD: _____ OBSERV. SESSION: _____ DATE: _____

TIME: _____ OBSERVER: _____ RESTRAINTS: Yes____ No.____

MAJOR CATEGORIES/CODES

Time Interval	A. Location	B. Movement	C. Exit-Seeking	D. Soc. Involve.	E. ~~Initiator~~ NOTES
30 SECONDS	0. Unobserved Unit 1. Own room 2. Res. room 3. Staff area 4. Public area Off Unit 5. Res. room 6. Staff area 7. Public area Outside 8. Confined 9. Unconfined	0. Unobserved 1. Ambulate 2. Assisted 3. Circumscribed 4. Still-unre-strained 5. Still-re strained	0. Unobserved 1. Occurs 2. Does not occur	0. Unobserved 1. Alone, no one Unilateral 2. Resident 3. Visitor 4. Nursing 5. Other staff 6. Multiple Mutual 7. Resident 8. Visitor 9. Nursing 10. Other staff 11. Multiple 12. Undiscern	~~0. Unobserved~~ ~~1. Subject~~ ~~2. Nursing~~ ~~3. Other staff~~ ~~4. Undiscern~~ ~~5. Not appli.~~ NOTES
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					
31.					
32.					
33.					
34.					
35.					
36.					
37.					
38.					
39.					
40.					

CLIENT ID: _____ OBSERV. DAY: _____ OBSERV. SESSION: _____ DATE: _____

TIME: _____ OBSERVER: _____

MAJOR CATEGORIES/CODES

F. SUBJECT/STAFF INTERACTION

Subject: F1. Verbal	Subject: F2. Nonverbal	Subject: F3. Affect	Staff F4. Verbal	Staff: F5. Nonverbal	Staff: F6 Affect
0. Unobserved 1. Positive 2. Negative 3. Silent 4. Nonsensical 6. Undiscern. 7. Not Applic.	0. Unobserved 1. Coop/Assist/ Attend 2. Resist/Avoid 3. Aggressive 6. Undiscern 7. Not Applic.	0. Unobserved 1. Positive 2. Negative 3. Flat 6. Undiscern. 7. Not Applic.	0. Unobserved 1. Positive 2. Negative 3. Silent 6. Undiscern. 7. Not Applic.	0. Unobserved 1. Assist/Attend Accompany 2. Resist/Avoid 3. Aggressive 4. Retrieve/ Divert 5. Restrain 6. Undiscern. 7. Not Appli.	0. Unobserved 1. Positive 2. Negative 3. Flat 6. Undiscern. 7. Not Appli.
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					
31.					
32.					
33.					
34.					
35.					
36.					
37.					
38.					
39.					
40.					

OBSERVATIONAL TOOL FOR WANDERING BEHAVIOR AND STAFF/WANDERER INTERACTION

Definition of Variables

A. LOCATION

Location is comprised of physical rooms or areas that residents can enter within the unit or the facility, and outside of the facility. Locations are defined by the floor plan of the facility and visual inspection of the area for its function.

All locations

0. Unobserved: Subject is in an area where he/she cannot be observed (e.g. bathroom or office with door closed; away from facility).

On unit

1. Own room: Subject's room on unit in which he/she resides, including attached bathroom.

2. Resident's room: Other resident's rooms on unit in which they reside.

3. Staff area: All areas on unit for staff-related activity (e.g. nurses station, utility room, physical therapy room).

4. Public areas: All areas on unit which are for general use of residents (e.g. hallway, lounge, dining area).

Off unit

5. Resident's room: Other residents' rooms on other units in facility in which they reside.

6. Staff area: All areas on other units in facility for staff-related activity (e.g. nurses station, MD office).

7. Public areas: All areas on other units in facility which are for general use of residents (e.g. hallway, lounge, dining area).

Outside

8. Confined: Outdoor areas that are enclosed for residents use (e.g. courtyard, garden, etc.).

9. Unconfined: Outdoor areas that are open spaces (e.g. non-fenced yard, parking lot, sidewalk).

B. MOVEMENT

Movement is defined by the extent to which a resident moves or propels one's self through space.

0. Unobserved: Subject is inaccessible and cannot be observed.

1. Ambulate: Moving one's self through space by walking or propelling one's self in a wheelchair. Includes walking with a cane or other devise.

2. Assisted: Being assisted to walk by another person or being pushed in a wheelchair or stretcher.

3. Circumscribed: Movement of a limited nature such as taking a few steps or rolling wheelchair back and forth.

4. Still-unrestrained: Staying in one place of one's own volition. Includes standing still, sitting and lying down.

5. Still-restrained: Staying in one place because of the use of restraints. Includes being restrained in bed, or in a chair or wheelchair so that one cannot propel or move one's self through space. Does not include use of restraints to hold arm in place or waist restraints to prevent person from falling out of chair.

C. EXIT-SEEKING

Exit-seeking is defined as any attempt initiated by the resident to leave the facility through a door that leads to the outside.

0. Unobserved: Subject is inaccessible and cannot be observed.

1. Occurs: Subject approaches external exit door (i.e. leading outside the facility) and touches it, tries to open unsuccessfully, or succeeds in opening door on own. Includes approaching exit door and asking for assistance to leave. Includes successfully exiting through external door.

2. Does not occur: Subject does not attempt to leave facility through external exit on own volition. Non-occurence includes being taken outside by staff or visitor, but only if subject did not initiate leaving facility.

D. SOCIAL INVOLVEMENT

Social involvement is defined by the extent to which residents are directly involved in verbal or nonverbal behavior with others. This includes involvement in activities such as talking, singing, holding hands, playing a game, engaging in a task or ADL.

0. Unobserved: Subject is inaccessible and cannot be observed.

1. Alone, no one: Subject is not directly involved in verbal or nonverbal behavior with one or more persons (e.g. subject is sitting alone although others are in vicinity; subject is singing or talking but to no one in particular; subject is reading or watching T.V. without showing awareness of others in area; someone else speaks to subject but subject's eyes are closed; subject is eating alone).

F. SUBJECT AND STAFF INTERACTION

Subject and staff interaction is defined as being classified as 4, 5, 9, 10, or 6, 11 (if staff is one of the parties) on D. Social Involvement.

Across all subcategories: subject and staff

0. Unobserved: Subject is inaccessible and cannot be observed.

7. Not applicable: No social involvement between staff and subject coded in D (Social involvement coded as 1, 2, 3, 7, 8, or 6, 11 if staff is not one of parties). If Social Involvement coded 4, 5, 6, (when staff is not one of the parties), use for staff only.

F.1 SUBJECT: VERBAL

1. Positive: Includes comments and responses that seek or give information (except standard comments); clarifies or validates; compliments or rewards; comforts or assures; humorous retort; prescribes action (i.e. tells what to do). Includes social amenities such as greetings and farewells, and standard comments such as "How's the weather?"

2. Negative: Includes comments and responses that reprimands or admonishes; accuses of wrong doing or punishes; threatens or rejects; proscribes action (i.e. tells what not to do).

3. Silent: Makes no sound; includes clearing throat.

4. Nonsensical: Includes comments and responses that are bizarre or make no sense (e.g. "I am God"); unintelligible mumbling or muttering; singing; screams, moans, or repetitive sounds ("Oh my, Oh my...")

6. Undiscernible: Subject comments verbally but observer cannot hear clearly what is said. Does not include mumbling or muttering.

F.2. SUBJECT: NONVERBAL

1. Cooperates/assists/attends: Subject allows or assists staff to perform task or carry out activity. If the activity is verbal only, then subject appears to attend to or listen to what staff says (e.g. nods, follows with eyes).

2. Resists/avoids: Subject turns away from, pulls away from or pushes away staff who is trying to engage subject in activity or to assist with task. Subject refuses assistance or activity or undoes task. If activity is verbal only, subject appears to turn away from staff, shakes head no, or turns eyes down and avoids eye contact.

3. Aggressive: Subject strikes out at, hits, or shoves staff hard; or subject throws object at or near staff, or strikes object.

6. Undiscernible: Subject responds nonverbally but observer cannot see or distinguish behavior.

F.3. SUBJECT: AFFECT/DEMEANOR

1. Positive: Appears calm or relaxed; looks happy or pleased, attentive or curious.

2. Negative: Appears tense, anxious, or upset; looks sad, annoyed, irritated, or angry.

3. Flat: Shows no or little emotion; expressionless.

6. Undiscernible: Observer cannot see or distinguish affect/demeanor clearly.

F.4. STAFF: VERBAL

1. Positive: Includes comments and responses that seek or give information (except standard comments); clarifies or validates; compliments or rewards; comforts or assures; humorous retort; prescribes action (i.e. tells what to do). Includes social amenities such as greetings and farewells, and standard comments such as "How are you doing?"

2. Negative: Includes comments and responses that reprimands or admonishes; accuses of wrong foing or punishes; threatens or rejects; proscribes behavior (i.e. tells what not to do).

3. Silent: Makes no sound; includes clearing throat.

6. Undiscernible: Staff comments verbally but observer cannot hear clearly what is said.

F.5. STAFF: NONVERBAL

1. Assist/Accompany/Attends: Staff assists subject to perform task or carry out activity; or staff stays with or accompanies subject as subject carries out activity; or staff engages in activity with subject. For example, staff may help subject eat, may sit with subject but not assist, or may eat with subject. If activity is verbal only, then staff appears to attend to or listen to what subject says.

2. Resists/Avoids: Staff turns away from, pulls away from, or pushes away subject who is trying to engage staff in activity or seeks assistance with task.

3. Aggressive: Staff shoves, pushes or pulls subject abruptly/brusquely; strikes out at, hits, or slaps subject; throws object down hard or strikes object hard near subject.

4. Retrieve/divert: Staff leads subject away or moves subject away from person, place or object. Includes guiding or wheeling subject away from something (e.g. exit, another resident).

5. Restrains: Staff prevents subject from carrying out activity by physically holding subject or blocking subject's movement.

6. Undiscernible: Staff responds nonverbally but observer cannot see or distinguish behavior.

F.6. STAFF: AFFECT/DEMEANOR

1. Positive: Appears calm or relaxed; looks happy or pleased, attentive or curious.

2. Negative: Appears tense, anxious or upset; looks sad, annoyed, irritated or angry.

3. Flat: Shows no or little emotion; expressionless.

6. Undiscernible: Observer cannot see or distinguish affect/demeanor clearly.

Appendix D

Instructions to judges and data sheets.

You have been asked to participate in a validity study of the Wandering Observation Tool (WOT). The WOT is an instrument that was developed recently by an investigato in a long-term care facility. It is being used to record the behaviors of cognitively impaired elderly clients who wander.

This session will take approximately two to three hours. We will have a 15 minute break about midsession. You have a blank copy of the WOT in your packet. Please find it now and examine the following along with me. At the top you see six columns with headings. These headings comprise the categories of the WOT. The first column reads Time Interval. This heading refers to the numbers that follow below in this column. This is not a behavioral category, rather, it indicates the frequency in which the behaviors were recorded. Each row signifies a 30-second time interval. The 20 numbered rows form a grid with the columns. Each box in the grid contains a number that codes the particular client behavior that occurred for that thirty second interval. Are there any questions so far? Reading across the row you will find a number in each box which is a code for the behavior that occurred within that category.

The top of the next column reads A. Location. This column begins the series of categories which describes the observed behaviors. Each category of the WOT describes a particular behavior/event of the client. Below the category you see a list of 'codes' which further describe the category. Each code has a specific definition which you will find on pages It is important that you read and understand the definitions of the codes. (Examples refer to fictional data sample which is in your packet).

EXAMPLE: Category A. Location
Code 4 Public area, on unit
Definition All areas on unit which are for general use of residents (e.g. hallway, lounge dining area.

EXAMPLE: Category B. Movement
Code 1 Ambulate
Definition Moving oneself through space by walking or propelling one's self in a wheelchair. Includes walking with a cane or other device.

Please take ten minutes to study the definitions.

Are there any questions about the definitions?

You have a sample of the WOT with fictional data entered. Try making a verbal translation (description) of the behavior recorded. You will notice that the timing intervals for the WOT are every 30 seconds while the timing intervals on the narrative data vary from one to two or more minutes. The point

is not to make a minute by minute comparison of the data sources, rather, to get an overall picture of the behavior as one would ordinarily observe it happening. Also, there may be information on one data source that is not on the other. Again, we are not looking for an exact replication of the data sets. There may be information on the narrative that is not codable on the tool and there may be information on the tool that is not found in the narrative. That is OK. It is important, however, that you understand the definitions for the behaviors used in the WOT. You may refer to the definitions as needed at any time. You may take ten minutes to become familiar with the WOT, categories and codes.

Part 1. Estimated time -60 minutes

Instructions:

You have been given two sets of data. Both sets consist of ten minute segments of behavioral observation. One set consists of descriptive data in a narrative format. You have six segments of this data. The other set consists of data collected using the WOT. You have six segments of this data also. In the upper right hand corner you will find a circled letter which you are to use as the symbol to identify that particular segment. Since both sets of data were collected while the investigators simultaneously observed and recorded the behaviors of the same client, each narrative segment can be paired with its corresponding WOT segment. Your task is to accurately match up a narrative segment with its corresponding WOT segment. As with the fictional sample you may find that the data segments are not exact matches. Some behaviors may not have been picked up by one or the other pieces of data and some matches may actually have small areas of disagreement but these inconsistencies should not detract from the overall scenario that each data segment describes. In some cases it may be a matter of making a best guess. When finished you should have six pairs of data. Find answer sheet #1.

Answer Sheet #1.

Please list the corresponding WOT symbol with the narrative that matches it.

	Narrative	WOT
EXAMPLE:	1.	D

Narrative	WOT
1.	
2.	
3.	
4.	
5.	
6.	

For the second section you will be making a rating of how the data sets match. It is important to keep in mind that we are not looking for exact replications of information rather an estimation of how accurately the WOT was able to code the behavior that occurred as described in the narrative. For instance, if information found on the WOT is not found in the narrative the match should not be downgraded because the WOT actually captured more data than expected. If, on the other hand, the narrative contains information related to the WOT categories that is not coded on the WOT you may want to downgrade the match.

Question 1. Regarding the narrative data and the corresponding WOT data, on the whole, how well do the two sets of data match?

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Question #2.

Please rate how well each pair of data segments match.

Example: Pair 1., D

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Pair 1.,

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Pair 2.,

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Pair 3.,

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Pair 4.,

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Pair 5.,

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Pair 6.,

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Part 2. Estimated time -1 hour
Instructions:

For this part you will be looking at the individual categories of the WOT. For each set of matched data, evaluate how well the behaviors/events (ie codes) defined within each category represents the behaviors described in the narrative portion of that set. You will make a judgement (using the Likert-type scale) about how well the codes within the categories adequately describe the behaviors/events that actually occurred for each segment of narrative data. Then you will make an overall judgement for all six data sets in that category for how well the codes represented the the behavior. We will first run through an example. You may want to review the codes and definitions again at this time.

Look back at your fictional data both narrative and WOT data. For the category LOCATION, we know from the narrative data that the client moved in the hallway of the unit. According to the WOT the code for this location would be 4 (on the unit and in the public area of the hallway). Since the code accurately represents the location of the client we would want to rate this a 6 on our likert-type scale. We won't be able to evaluate 6 segments of narrative data for our example

but let's say we have just finished the evaluation for the six segments. Then you will make an overall judgement about how well the category was represented by the codes by circling your response.

EXAMPLE:

A. LOCATION

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, LOCATION, represent the content related to LOCATION in the narrative?

Please circle your response: represented=1
not-represented =0

Now please find answer sheet #2.

Answer sheet #2.

You have 10 answer sheets, each contains a WOT category. On the left hand side of the page are the now familiar narrative segments listed by numerical code. Using the Likert scale please evaluate for each category how well the codes, as defined, adequately describe the behavior/events that occurred as described in the narrative segments.

A. LOCATION

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, LOCATION, represent the content related to LOCATION in the narrative?

Please circle your response: represented=1
not-represented =0

B. MOVEMENT

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, MOVEMENT, represent th content related to MOVEMENT in the narrative?

Please circle your response: represented=1
not represented=0

C. EXIT SEEKING

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, EXIT SEEKING, represent the content related to EXIT SEEKING in the narratives?

Please circle your response: represented=1
not represented=0

D. SOCIAL CONTACT

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, SOCIAL CONTACT, represent the content related to SOCIAL CONTACT in the narratives?

Please circle your response: represented=1
not represented=0

E.SUBJECT/STAFF INTERACTION

E1.SUBJECT:VERBAL

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, SUBJECT:VERBAL, represent the content related to SUBJECT:VERBAL in the narratives?

Please circle your response: represented=1
not represented=0

E2. SUBJECT:NONVERBAL

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, SUBJECT:NONVERBAL, represent the content related to SUBJECT:NONVERBAL in the narratives?

Please circle your response: represented=1
not represented=0

E3. SUBJECT:AFFECT

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, SUBJECT:AFFECT, represent the content related to SUBJECT:AFFECT in the narratives?

Please circle your response: represented=1
not represented=0

E4. STAFF:VERBAL

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, STAFF: VERBAL, represent the content related to STAFF: VERBAL in the narratives?

Please circle your response: represented=1
not represented=0

E5. STAFF:NONVERBAL

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, STAFF: NONVERBAL, represent the content related to STAFF: NONVERBAL in the narratives?

Please circle your response: represented=1
not represented=0

E6. STAFF:AFFECT

Narrative	Likert rating
1.	
2.	
3.	
4.	
5.	
6.	

Not at all	Poorly	Fair	Somewhat	Well	Extremely well
1	2	3	4	5	6

Overall, do the behaviors/events (ie codes) defined for the category, STAFF: AFFECT, represent the content related to STAFF: AFFECT in the narratives?

Please circle your response: represented=1
not represented=0

AN ABSTRACT OF THE THESIS OF

LINDA BALLARD

FOR THE MASTER OF SCIENCE IN NURSING

Date of receiving this Degree: June 10, 1988

TITLE: A VALIDITY STUDY OF THE WANDERING OBSERVATION TOOL: A BEHAVIORAL OBSERVATION INSTRUMENT

Approved:_____

Beverly Hoeffer, R.N., DNSc, Thesis Advisor

The purpose of this methodological study was to determine the validity of the Wandering Observation Tool (WOT), an instrument developed for use in observational nursing research of cognitively-impaired elderly adults who wander. Research question 1. To what extent does an observer's classification of the behavior of elderly nursing home residents who wander, using the WOT, accurately reflect the behavior that is occurring? Research question 2. To what extent do the categories of behavior in the WOT adequately represent the content of behaviors of elderly nursing home residents who wander?

Triangulation was used in the data collection procedure in order to overcome some of the bias encountered in behavioral observation research.

Qualitative data (field notes) and quantitative data (WOT scores) were obtained by two investigators who simultaneously observed the behavior of three cognitively impaired elderly adults identified as wanderers. Data for each subject was divided into two segments so that there were six qualitative and six quantitiative data segments.

A panel of three experts matched the twelve data segments with a high level of accuracy (89%) providing strong evidence for criterion validity. Likert-type ratings made by the judges regarding their ability to match the data segments provided a high level of subjectively assessed accuracy. Each of the ten categories of the WOT was rated by the judges using a Likert-type scale to determine the extent to which the codes in the categories adequately represented the content in the qualitative data. These categories were a) Location, b) Movement, c) Exit-seeking, d) Social contact, e) Subject/staff interaction which had six subcategories (subject verbal, nonverbal, and affective bvehavior; staff verbal, nonverbal and affective behavior). The categories of Location and Subject:Affect received adequate but lower ratings than the other eight categories due in part to sparse

qualitative data and may need further clarification. The remaining categories received high ratings indicative of adequate content validity. In conclusion, this study provides favorable evidence for the criterion and content validity of the Wandering Observation Tool.