

A PROTOCOL FOR ASSESSMENT AND GENERAL MANAGEMENT STRATEGIES FOR WANDERING BEHAVIOR OF OLDER ADULTS WITH DEMENTIA IN LONG-TERM CARE FACILITIES

> Scholarly Project for the Degree of M. S. MICHIGAN STATE UNIVERSITY MESERET H. GEBISSA 1997





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A PROTOCOL FOR ASSESSMENT AND GENERAL MANAGEMENT STRATEGIES FOR WANDERING BEHAVIOR OF OLDER ADULTS WITH DEMENTIA IN LONG-TERM CARE FACILITIES

By

Meseret H. Gebissa

A SCHOLARLY PROJECT

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

College of Nursing

ABSTRACT

A PROTOCOL FOR ASSESSMENT AND GENERAL MANAGEMENT STRATEGIES FOR WANDERING BEHAVIOR OF OLDER ADULTS WITH DEMENTIA IN LONG-TERM CARE FACILITIES

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In recent years, research has shown that there is a relationship between old age and dementing diseases. It is now established that dementing diseases affect older adults' quality of life, causing their physical and cognitive conditions to deteriorate and limiting their ability to perform routine activities. As it progresses, the disease is accompanied by such negative behaviors as aggression, irritability, anxiety, paranoia and wandering. Among these, wandering is the least understood, but one that most frequently results in the unnecessary use of physical or chemical restraints. The challenge for the caregiver of older adults with wandering behavior is to allow wanderers to ambulate freely while protecting them from harmful situations.

This scholarly project is a protocol developed to assess and manage the wandering behavior of older adults with dementia. Based on Lawton and Nahemow's ecological theory of adaptive behavior, i.e., the person-environment interaction model, the protocol provides suggestions on how to assess the wandering person, the environment and the manifested behavior and recommends appropriate environmental interventions for management of wandering behavior. By way of conclusion, the protocol discusses the importance of educational programs and suggests an agenda for further research.

ACKNOWLEDGMENTS

This scholarly project would not have been possible without the support, cooperation, and friendship I have received from many individuals. My debt is owed to Professor Sharon King, my advisor and chairperson of my scholarly project committee, who had confidence in me, encouraged me to pursue my goals, and guided me during the various stages of my graduate studies and this project. Professor King showed unflagging patience with me and never wavered in her support.

The members of my scholarly project, Professors Laura Struble and Kate Lein gave me valuable suggestions and comments which I gratefully acknowledge. Professors King and Struble furnished important materials on which this project is partially based. I appreciate their professionalism and express a sincere gratitude for their generousness. I salute all three members of my committee for their enthusiasm, prompt responses and solid intellectual guidance.

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I would like to express my appreciation and gratitude to my husband, Ezekiel, for his encouragement, support, confidence, persistence and patience. I would also like to thank my children, Haara and Kenna, for making it possible for me to find joy in school, work and family. To my family, and my almighty God, who guided me through thick and thin and provided me encouragement when I needed it most, I owe much more than I can ever say.

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CHAPTER I

INTRODUCTION

1. The Problem

. 1 In the past few decades a substantial proportion of the United States' population has grown older. Since 1990 the number of older Americans has increased by 5% and the proportion of Americans over age 65 is projected to reach 13% by the year 2000 (American Association of Retired Persons [AARP], 1994). The increased survival rate has been largely due to breakthroughs in medical science and technology. Still, the number of Americans diagnosed with diseases involving dementia was a staggering four million in the late 1980s (Davies, 1988). By the year 2000, the number of individuals with severe dementia is expected to increase by 60%.

The prevalence of dementing diseases increases significantly with age. Dementing diseases affect older Americans' quality of life by depriving them of the opportunity to function independently and by causing their families both grief and greater burden of home care responsibility. The stress that emanates from such responsibility becomes increasingly intense with the inevitable decline in the physical and mental conditions of patients with dementing diseases. Families of older adults with dementia worry about their relatives and suffer from guilt of having to restrict their loved ones through the use of physical and/or chemical restraints (Fopma-Loy, 1988).

As their physical and cognitive conditions deteriorate, persons with dementing disease become increasingly "confused, disoriented, and unaware of their surroundings and behavior" (Teri, Larson & Reifler, 1988, p. 3). Over time, they grow unable to do the

activities that they normally accomplish without difficulty. Dementing illnesses are often accompanied by such negative behaviors as physical or verbal aggression, pacing, irritability, withdrawal, fear, anxiety, paranoia and wandering (Mace 1991; Swearer, Drachman, O'Donnell, & Mitchell, 1988; Teri et al., 1988). These behaviors are believed to be related to the degree of cognitive impairment and the stage of the illness (Fopma-Loy, 1988; Teri et al., 1988). Negative behaviors also lead older adults with dementia to endanger themselves and cause their caregivers to suffer from stress, fear, and/or exhaustion (Mace, 1991).

Winger, Schirm, & Stewart (1987) reported that 84% of nursing home residents exhibited behaviors that were serious enough to endanger themselves or others. The incidence of cognitive impairment or neuropsychiatric condition among residents in longterm care facilities is estimated to be between 63% and 94% (Feldt & Ryden, 1992). It is generally recognized that elderly residents with dementia in a long-term facility exhibit difficult behaviors such as yelling, wandering, abusive language, and physical aggression, thus making caring for them a formidable challenge to caregivers (nurses, nurse assistants, social workers, dieticians, and physical, occupational and speech therapists) (Hagen & Sayers, 1995). Among negative behaviors of elderly residents, however, wandering is one of the least clearly understood, but one that most frequently results in the unnecessary physical or chemical restraint of residents.

Wandering is a serious problem that worries nursing staff as they attempt to provide quality care and protect patients from falls, fatigue, excessive caloric utilization or physical pain (Coltharp, Richie, & Kaas, 1996; Fopma-Loy, 1988; Heim, 1986). Staff

members have the responsibility of ensuring the wanderer's need to move about freely without exposing the individual to potentially harmful situations. The dilemma, coupled with the lack of knowledge about the etiology of and intervention for the behavior, increases the level of the stress for the care provider (Hirst & Metcalf, 1989; Namazi, Rosner, & Calkins, 1989). Some researchers, oblivious to the underlying causes of wandering, think of wandering as an aimless movement that holds many potential hazards for the wanderer (Heim, 1986). Others believe that cognitively impaired persons wander in an effort to fulfill their felt social, emotional, and physical needs (Algase, 1992a; Rader, Doan & Schwab, 1985). Still others consider wandering as a natural outcome of the searching process for a place of safety and familiarity (Coltharp, et al., 1996).

In long-term care facilities, wandering causes disruptions in interpersonal relations of residents. When wanderers indiscriminately enter other residents' room and explore others' personal possessions, fellow residents become upset and endanger the wanderers or themselves (Hirst & Metcalf, 1989; Hoffman & Platt, 1990).

The Advanced Practice Nurse (APN) must have a full understanding of the causes and consequences of wandering behavior in older adults with dementia in order to provide older adults comprehensive care. In such primary care settings as clinics, private practices, or long-term care facilities, the APN needs a clinical guideline to identify wandering behavior and implement appropriate interventions. Within long-term care sites in particular, the APN should educate and train the nursing staff who is directly involved in daily patient care to enable them manage wandering behavior in restraint-free environment. In all facilities, the APN must collaborate with the residents' physician and

other health care team to enhance provision of quality care.

2. <u>Purpose of the Study</u>

This project seeks to develop a protocol for assessment and general management of wandering behavior in older adults with dementia in long-term care facilities. The protocol could ultimately be utilized in primary care settings and by families caring for older adults with dementing diseases.

The proposed protocol is based on the framework of person-environment interaction and draws on pertinent literature on the phenomenon of wandering. The literature review consists of definitions of wandering behavior, its possible causes and its effects on the individual elderly patient, on other residents and on the caregivers. The protocol also provides suggestions on how to assess the person (wanderer), the environment and the wandering behavior as well as how to manage wandering behavior by using different environmental interventions.

3. <u>Conceptual Framework</u>

An ecological theory of adaptive behavior and aging was described by Lawton & Nahemow (1973) in terms of the adaptation of person to his/her environment and his/her alteration of the environment as part of the process of human adaptation. According to Lawton (1982), much of the research on aging has been essentially descriptive. Descriptive data is a necessary step toward theorizing, but its practical benefit is minimal. In order to encompass the growing body of studies of older people's behavior in specific environments and increase the utility of the research, Lawton and Nahemow developed a predictive model for the behavior of older adults. The model incorporates both non-

physical, extra-individual stimuli and intra individual environmental representations. The major predictive components of the model have been referred to as competence and environmental press.

3.1 <u>Competence</u>

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According to Lawton (1982), competence is viewed as "a characteristic of the individual, for heuristic purposes conceived of as relatively independent of factors outside the individual" (p. 35). The degree of individual competence is conceived as a diverse collection of abilities residing in a person, which differ among themselves and vary over time and individual-specific. The term competence has an evaluative connotation, ranging from adaptive to non-adaptive variations. Competence is characterized by such aspects as cognitive ability, psychological adjustment, physical health, or other qualities (Lawton & Nahemow, 1973). The processes that seem to most clearly represent competence are biological health, sensory-perceptual capacity, motor skills, cognitive capacity, and ego strength (Lawton, 1982).

Biological health refers to "the absence of disease states" and is commonly listed as laboratory results, signs, symptoms, and medical diagnoses. Sensory and perceptual capacities include vision, audition, olfaction, gustation, tactile, depth and pain perceptions. Motor skills are related to biological health and sensory-motor capacity involving muscular strength and coordination. Cognitive capacity is presumed to be an individual's ability to comprehend, process, and cope with the external world. Ego strength indicates the individual differences in psychological strength that are independent of external events. These five classes enabled Lawton to define competence as, "the theoretical upper limit of

capacity of the individual to function in the areas of biological health, sensationperception, motoric behavior, and cognition" (Lawton, 1982, p. 38).

3.2 Environmental press

Environmental press, as described in 1938 by Murray, refer to environmental forces or "stimuli possessing some motivating quality to activate a cognate individual need" (Lawton, 1982, p. 35). These forces in the environment, together with an individual need, elicit a response. Press may be characterized by normative stress-producing properties, problematic qualities, demand character (subjective or objective) and support character (Lawton & Nahemow, 1973). Environmental press fluctuate from time to time, as the environment itself alters momentarily; similarly, the individual's need and competence vary over time.

In an attempt to classify environmental aspects of the behavioral system, Lawton (1982) categorized environment as: (a) the interpersonal environment, constituting the world of significant others -family members, friends, work associates; (b) the suprapersonal environment, which is determined by the modal characteristics of those in physical proximity to the individual (for example, the predominant race or the mean age of other residents in an institution); (c) the social environment including institutions operating in the individual's subgroup or culture, values and social norms; and (d) the physical environment described as the nonpersonal and nonsocial aspects of the environment.

3.3 Behavior

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The behavior of the individual is a dependent variable and viewed as the outcome of competence and environmental press equation (Lawton, 1982). Behavior is a function of the person (competence of the individual) and the environment (press of the situation), B = f (P, E). Behavior, also known as adaptive behavior, is a result of the individualenvironment transaction, usually thought of as the outer manifestation of individual competence (Lawton & Nahemow, 1973). Behavior may be either outwardly observable motoric behavior or an inner affective response. In the discussion of the ecological model, behavior usually refers to both the overt and inner affective response falling in the range of adaptive through nonadaptive (Lawton, 1982; Lawton & Nahemow, 1973).

The press-competence model incorporates another concept, adaptation level (AL), that represents a state of balance between the level of external stimulation and the sensitivity of the individual's sensory, perceptual, and cognitive state (Lawton, 1982). Adaptation level is established by the individual to external stimuli. It represents a theoretical mean for all individuals at a given level of competence, averaged over the particular environmental press at issue (Lawton & Nahemow, 1973). Moreover, Lawton states, "[N]ot only is there a tendency for every individual experiencing a given environmental press to establish an adaptation level, but the magnitude of that neutral stimulus level is partly determined by the competence of the individual" (p. 46). As the competence of the individual decreases, the proportion of behavior attributable to environmental characteristics increases. That is, the less competent are more vulnerable in terms of their behavior being controlled by environmental, rather than intrapersonal forces

(Lawton & Nahemow, 1973).



Figure 1. Adapted Lawton's Press-competence Model (1982).

As presented in Figure 1, the strength of press is shown on x-axis (horizontal line) and the degree of individual competence is shown on y-axis (vertical line). Any point on the schema indicates an individual's given level of competence for coping with environmental press of a given magnitude. This point also implies behavior that may be characterized in terms of adaptiveness.

The diagonal line labeled AL represents adaptation level of an individual over a particular environmental press. Individuals of a given level of competence would be distributed normally to the right and left of the AL point for that level. This is true for the region in which the environmental demands are both slightly lower and slightly higher than

adaptation level.

The low point of environmental demand might occur in sensory deprivation situations or perceived inaccessibility to bathroom and food, while the high point might occur in stressful or overloading situations such as crowded room or overstimulating activities. The challenge of health professionals is to balance between the individual competence and the press so that the person with dementia stays within the adaptive range. Thus, an equilibrium between personal resources (competence) and environmental demands (press) result in person's behavior. When the environmental demand level increases, the subject's behavior may range out of the positive outcome. In order to correct this, Lawton & Nahemow (1973) suggest two methods, either lowering the level of environmental press or raising the subject's competence. Environmental change, with the subject assuming a relatively passive role, alters the person's adaptive behavior. The person's competence could be enhanced by involving him/her in social interaction.

As indicated in the upper areas of the two shaded segments of Figure 1, individuals of high competence have a wide latitude to interact with the environment in ways that maximize adaptive behavior. However, owing to their cognitive impairment, older adults with dementia have a drastically reduced competence. Lawton's model suggests that behavioral change could be effected either by increasing the subject's competence or by reducing the environmental press. To date, neither science nor medical technology has succeeded in reversing the situation of demented individuals. Increasing the competence of individuals with dementia is unlikely to be an option available to produce a satisfactory result in managing their behavior. This protocol therefore focuses

on environmental press reduction, rather than on competence enhancement of individuals with dementia who exhibit wandering behavior. Specifically, it suggests steps caregivers need to follow to reduce environmental press on the wanderer. In order to prepare such a protocol, it is necessary to understand the current state of knowledge regarding wandering behavior. To that end, the existing literature on the subject will be reviewed.

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CHAPTER II

LITERATURE REVIEW

Until recently, the phenomenon of wandering generated very little scholarly interest. In 1987 Dawson and Reid (citing Burnside, 1980) reported that only five articles on wandering were written between 1941 and 1978 and another batch of five articles during the five years prior to the publication of their study. Although more work has been done in the last decade on the subject, it cannot be said that adequate empirical data has been compiled to increase our understanding of the causes of wandering or to respond to wandering behavior with a more appropriate intervention. In the literature, researchers concentrated on issues pertaining to definition, etiology, and classification or typology. These subjects remained dominant because the primary stimulus for research has been the need to reduce the effects of wandering and better manage the behavior.

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Managing wandering behavior could be a tremendous task for caregivers in providing adequate protection and quality care. The problem wanderers present reaches unmanageable levels when the potential for injury abound, the rights of other residents are infringed, and precious staff time is spent on tracking residents rather than therapeutic actions (Hirst & Metcalf, 1989).

The Advanced Practice Nurse needs to assess the health status of the wanderer and his/her environment by obtaining relevant health, medical, social and mental history from family members and past medical records and perform a complete physical examination in order to identify the causes of wandering and implement appropriate intervention.

Effective management of wandering, therefore, highly depends on the care provider's understanding of the phenomenon. In view of the importance of a more comprehensive understanding of wandering, it is imperative that this study provides a review of the existing literature.

1. Definitions and Descriptions

In common parlance, wandering is used to denote aimless movements. Terms such as rove, ramble, stroll, digress, deviate, stray, rave and so forth are used to describe behaviors that some people exhibit in their daily lives. From the vantage point of health care professionals and care givers, none of these vocabularies adequately describe the phenomenon that they encounter every day in their dealings with individuals identified as wanderers. The impact of wandering on health care providers and caregivers includes fear, embarrassment, frustration, overwhelming fatigue and feelings of helplessness. A considerable amount of time, energy and money is spent on protecting wanderers from getting lost, accidents and fatal injuries (Fopma-Loy, 1988), but its effects are not confined to the patient. Although the effects of wandering extend beyond the wanderer to the care provider, the terminologies listed above depict wandering simply as an idiosyncratic behavior and fail to capture the essence of the phenomenon as experienced by health care providers and caregivers.

A review of the literature on wandering reveals lack of clarity and the absence of a consensus among researchers who have conducted in-depth studies on the subject of wandering. Some researchers provide definitions that are indistinguishable from the one in common usage. Monsour and Robb (1982), for instance, following a dictionary definition,

identify wandering as "disoriented activities and aimless movements toward an undefinable or unattainable goals" (p. 411). Snyder, Rupprecht, Pyrek, Brekhus, & Moss (1978) define wandering as "a tendency to move about, either in a seemingly aimless or disoriented fashion, or in pursuit of an indefinable or unobtainable goal" (p. 272).

Similarly, Davidhizar and Cosgray (1990) define wandering as an aimless behavior triggered by memory impairment, disorientation and confusion caused by either organic or environmental factors. Although Davidhizar and Cosgray conceive wandering as an aimless behavior, their definition differs from others' in one important respect. Unlike the researchers who define wandering based on the behavior of the wanderer, Davidhizar and Cosgray provide a definition that takes into account the wanderer's behavior as well as the organic and environmental factors that trigger wandering.

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In an unpublished paper presented at an annual meeting of the Gerontological Society of America in 1985, Robb defines a wanderer "as a person who moved, under his or her own volition, into unsafe and/or inappropriate situations while experiencing impaired cognitive status" (p. 214). Although Robb's definition had evolved during the years that had elapsed since her publication of the article she authored with Monsour, it seems that the wanderer had remained the focus of her definition. In her latter definition, Robb appears to have taken into account the cognitive impairment of the wanderer as a cause for wandering.

Wandering is also defined as a person's inability to return to his/her point of origin. Hussian (1981b) defined wandering as, "Any change in physical location which results in a person's inability to return to the point of origin, with or without prosthetic devices" (p.

139). Researchers who perceive wanderers as lost persons, in essence, refer to disorientation, the individual's propensity to lose direction while attempting to reach a certain destination. In other words, they consider wanderers as disoriented individuals in pursuit of a given goal, not as not aimless ambulators (Hiatt, 1980; Hussain, 1981a).

Some researchers do not accept the notion that wandering is prompted by external factors. Coons (1988), for instance, suggests that "wandering refers to ambulation that is self-initiated and occurs independently of environmental cues such as the ringing of a bell for meal time, or an invitation by staff to take part in an activity" (p. 31). Obviously, Coons rejects external causation as a factor, emphasizing instead the initiative of the wanderer in triggering wandering. As such, Coons describes a wanderer as "an individual with a supply of unused energy, who is physically fit, who responds to well established patterns of action, and who sets out to achieve a goal..." (p. 32). Even though Coons's definition is wanderer-centered, just as are the definitions by Monsour and Robb as well as Snyder et al., unlike the latter, she recognizes that the wanderer is not an aimless, purposeless individual who moves about to achieve unattainable objectives.

Categorically rejecting the notion that wanderers are aimless ambulators, Thomas (1995) contends that the terms "aimless" or "purposeless" must be expunged from any definition of wandering. He argues that these terms imply that the wanderer has no intent or goal for moving about, while, in practice, even the most seemingly purposeless behavior could very well be purposeful if viewed from the wanderer's perspective. Accordingly, Thomas defines wandering as:

A purposeful behavior that attempts to fulfill a particular need (from the context of the wanderer), is initiated by a cognitively impaired and disoriented individual and is characterized by excessive ambulation that often leads to safety- and/or nuisance-related problems. (p. 37)

It is noted in the literature that wandering has been considered "so imprecise" a term as to defy definition. In this respect, Algase has expressed concern that the absence of a more precise definition might impede the development of a valid and reliable measuring instrument and distort detection and assessment of wandering in clinical practice. It is perhaps impossible to attain a precise definition unless the most common behavioral characteristics of wanderers are identified and the extent of the impact of wandering on caregivers is factored in. From the perspective of this protocol, an overall understanding of the phenomenon is more critical than definitional exactitude. To comprehend wandering, a more comprehensive definition that takes into account the behavior of the wanderer and the impact of wandering on caregivers is extremely necessary.

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Some researchers have preferred to describe the characteristics exhibited by wanderers rather than attempting to define it. Commonly, wanderers' characteristics include: spending more time in motion than the average non-wanderers, having unmet basic needs, and increasing disorientation that is induced by memory loss. Thus, wandering may be a coping mechanism- a search for food, fluids, shelter, or fulfillment of psychosocial needs.

Cohen-Mansfield, Marx & Rosenthal (1989), identify wandering as a physically nonaggressive behavior. They also explain the behavior as an increase in gross motor movement with a repetitive nature, but has no apparent negative effect on others. Rader and associates (1985) described wandering as a form of communication by the confused person to alleviate fear and feelings of loneliness and separation. Mace and Rabins (1981) agree with Rader and suggest that wandering may be an attempt to communicate feelings of being lost and to find things perceived as lost. Hiatt (1980) also indicated that wandering may be a form of communication perhaps used by individuals who are less sociable or verbal.

Davidhizar and Cosgray (1990) consider the wandering patient as "an all-toocommon and frequently serious problem in an extended care facility" (p. 280). Wandering behavior is problematic because it often is accompanied by anxiety and fear, adding further to the patient's distress. When wandering occurs at night, it also deprives the patient of needed rest.

Dawson and Reid (1987) distinguished wanderers from non-wanderers using behavior descriptors. Based on their study, they concluded that wanderers have notably greater difficulties with speech, reading, incontinence, constant rather than transitory disorientation, and the inability to know they are lost. However, wanderers are less withdrawn, exhibit better social skills, and are quite mobile and active with better hearing. In the contrary, other studies found wanderers to have a low level of social interaction and more stressful life events (Cornbleth, 1977; Snyder et al., 1978). Among cognitively impaired nursing home residents, wanderers show a behavior pattern characterized by a high degree of locomotion and gross motor output (Hussain, 1982; Snyder 1978), and more disorientation (Dawson & Reid, 1987; Rader, et al., 1985).

Wanderers have demonstrated memory, orientation, and language deficits and higher cognitive impairment (Algase, 1992b; Coons, 1988; Cornbleth, 1977; Dawson & Reid, 1987; Fopma-Loy, 1988; Monsour & Robb, 1982; Snyder 1978). Algase (1992b) recently studied 163 subjects from eight randomly selected nursing homes to determine dimensions of cognitive impairment that would best discriminate wanderers from nonwanderers. Results showed that wanderers had more cognitive impairment and showed poorer performance on all cognitive dimensions (abstract thinking, language, judgement, and spatial skills) than nonwanderers.

Algase (1988) has suggested that, if a more useful and meaningful definition of wandering behavior were to be attained, the phenomenon must be seen as a behavior characterized by high levels of locomotion and gross motor output that is manifested by some cognitively impaired persons, possibly need-driven, and often incongruent with objective circumstances. Except for environmental cues, this particular definition incorporates the most salient indicators of wandering: ambulation, cognitive impairment, purposefulness and disorientation.

From this investigator's perspective, the impact of wandering on caregivers is as important an element as the behavior of the wanderer in understanding the phenomenon of wandering. Only a definition that encompasses the reactions of the caregiver to wandering behavior could provide a more comprehensive understanding of the phenomenon which enables care providers to detect, assess, measure and prescribe a more appropriate intervention. In order to develop a protocol for appropriate intervention in long-term institutionalized settings, a fuller understanding of the reasons for wandering is required. The following section deals with the causes of wandering.

2. <u>Causes</u>

Even though the literature on wandering devotes considerable attention to the question why people wander, no single reason has so far been identified as the cause of wandering. While the existing studies are inconclusive as to what initiates its occupance, there seems to be a consensus about factors that contribute to phenomenon of wandering.

One important work that attempts to systematize our understanding of the causes of wandering is written by Algase and Struble (1992). The authors maintain that, as a behavior, wandering can be initiated by factors in the person, the environment, or both. Factors in the person have physiological and psychological explanations.

Physiological explanations of wandering include: medication interactions, sedatives, or tranquilizers; physical discomfort due to pain, hunger, thirst, constipation, or need to urinate; and desire to exercise. Weller (1987) postulated a hypothesis that describes the cause of wandering as a biochemical mechanism, i.e., low levels of the enzyme acetylcholine in brain neurones (cholineacetyltransferase) and an over activity of the dopaminergic system causes the restlessness and wandering. Wanderers are also said to show overall impairment in basic and higher order cognitive skills. Cornbleth (1977) indicates that wandering behavior might be highly correlated with the presence of cortical atrophy secondary to chronic organic mental disorders. Other identified underlying pathophysiology for wandering include: deteriorative diseases of the central nervous system or cardiac decompensation, neurotic disorders, restlessness associated with depression, and organic brain syndrome (Heim, 1986; Teri et al., 1988). All of these physiological conditions are based on surveys and researchers concede that more empirical testing is needed to buttress these preliminary findings.

Another aspect of personal factors that Algase and Struble (1992) identified was psychological. Following Rader et al., (1985), the researchers depict wandering as a form of agenda behavior, aimed at meeting felt social, emotional, or physical needs. Arguing that wandering was shown to stem from loneliness and separation, they name three sources for agenda behavior: 1) fear engendered by separation from familiar people and environment; 2) frustration over interference in agenda behavior, and 3) the desire to be important or relevant. In these situations, wandering is a means of alleviating loneliness and separation, i.e., wandering addressed a psychological need: releasing tension or stress (Hussain, 1982).

Environmental factors are also noted as initiators of wandering. Citing Hussain (1981b), Algase and Struble (1992) argue that wanderers often respond to environmental cues. Wanderers' difficulty in making sense of their environment, be it overly stimulating or nonstimulating restrictive surroundings, and new or unpredictable situations are also thought to induce wandering behavior. In addition, a poor or impoverished social environment is suspected to play a role in the occurance of wandering. To support this hypothesis, Algase and Struble cite Cornbleth's (1977) study which showed that wanderer's have less competence than nonwanderers in the psychosocial areas of friendliness, communication skills, and self-control.

Other environmental factors that have been suggested as causes for wandering behavior include relocating and becoming lost or seeking to learn a new environment (Hiatt, 1980; Mace & Rabins, 1981; Monsour & Robb, 1982, Robb, 1985), and weather or seasonal changes (Fopma-Loy, 1988). Environment can produce wandering by adding to the confusion of residents. (Rader, 1987; Rader et al., 1985) stated that the primary cause of wandering is fear engendered by separation from familiar persons or environment. A patient may feel lost when away from his or her familiar environment and become disoriented in a new environment. Especially at night as disorientation increases, wandering behavior will be manifested more frequently (Aronson, 1988; Burnside, 1980; Snyder et al., 1978).

Coons' (1988) finding suggests that wandering may be an attempt to escape from crowds or noise or from what may seem like a strange and unfriendly environment. Wandering behaviors are, at times, evidence of disorientation as with the person who paces back and forth in a hallway, attempting to locate the bathroom or her own room. Wandering may result from increasing cognitive impairment or may be an expression of agitation (Algase, 1992a; Heim, 1986; Mace 1981; Rader et al., 1985). Other causes of wandering, identified by Butler and Barnett (1991), consist of sleep disorder, anxiety, unmet physiological needs, and low self-esteem.

Several research studies (e.g. Coons, 1988; Mace, 1991; Monsour & Robb, 1982; Snyder et al., 1978; Thomas, 1997) have shown that wandering behavior could be a continuation of previous lifestyles or coping mechanisms. Based on a study of a sample of matched pairs of wanderers and nonwanderers in a nursing home, Snyder and associates

identified three psychosocial factors that may influence wandering: life-long patterns of coping with stress (stress as abrupt change to new environment and new routine), previous work roles (e.g. taking care of their children at home), and a search for security associated with a need to search for familiar persons or places.

In a similar kind of study, Monsour and Robb (1982) found that wanderers engaged in a higher level of social and leisure activities, experienced more stressful life events, showed such motoric reactions as pacing and walking under stress, and demonstrated more motoric behavioral styles earlier in their lives than nonwanderers. Their study confirmed the suggestion made by Snyder et al. (1978) that the tendency of the elderly to wander is consistent with their lifelong psychosocial patters. In a more practical way, the notion advanced by Snyder et al. and Monsour & Robb, could be used to predict wandering behavior and provide ideas for managing such behavior if and when it occurs (Hoffman & Platt, 1990).

In her seminal work on wandering, Coons (1988) has also stated that wandering could result from excess energy and lifelong habits. Her finding suggests that, for some individuals, wandering may release stress-induced tensions, while for others, the activity may be a continuation of previously held job. Walking may represent a way of recapturing familiar routines. Wandering could also be a substitute for social interaction by the patient (Algase, 1992a; Monsour & Robb, 1982; Rader et al., 1985).

Boredom is also identified as a cause of wandering behavior (Coons, 1988; Mace & Rabins, 1981; Snyder et al., 1978). Boredom-borne wandering can occur when there are few or no opportunities for resident involvement, no sensory stimulation, nothing to

help residents have a sense of belonging and being needed, and no meaningful use of time.

Overall, the reasons of wandering could be summed up as physiological, psychosocial and environmental. Physiological factors consist of physical discomfort due to pain, hunger, thirst, constipation, or need to urinate, need for warmth, desire to exercise, sleep disorder, unmet physiological needs, or medication interactions, sedatives, or tranquilizers; and underlying pathophysiology such as deteriorative diseases of the central nervous system or cardiac decompensation, neurotic disorders, restlessness associated with depression, and organic brain syndrome or the brain damage itself.

Psychosocial factors constitute boredom, disorientation, searching for someone or for something to handle, or reactions to crowds or noise, tension, anxiety, low self-esteem, a substitute for social interaction, an indicator of worsening cognitive impairment, an expression of agitation, the patient's premorbid coping style, releasing tension or stress, a means of alleviating loneliness and separation or fear engendered by separation from familiar persons or environment.

Environmental factors that are thought to induce wandering behavior include the physical, interpersonal, and internal environments. For instance, physical environment could be overly stimulating or nonstimulating environments, restrictive surroundings, and new or unpredictable situations, relocating, and weather or seasonal changes; internal environment could be becoming lost or seeking to learn a new environment; and interpersonal environment could be poor or impoverished social environment.

3. Types and Classifications

An increasing awareness of the diversity of wandering behavior has led to the formulation of wandering typologies and classifications (Fopma-Loy, 1988; Thomas, 1995). In a situation where wandering appears to defy definition, classifying the phenomenon according to types might help care providers to determine an intervention appropriate to the particular kind of wandering at hand.

Using behavior mapping to reveal wandering patterns and space use, Snyder et al. (1978) delineated three types of wandering behavior. The first category is referred to as the overthy goal-directed/searching behavior. The wanderer's behavior is characterized by constantly searching for something that is often unattainable (mother, home, abstract objects). The second type of wanderer, categorized as overthy goal-directed/ industrious behavior, is characterized by a seemingly inexhaustible drive to do things and engage in activities. The third, designated as apparently nongoal-directed behavior, is related to increased disorientation and short attention span. The wanderer is aimlessly drawn to various stimuli, momentarily attentive then diverted again.

Hoffman & Platt (1990) built their typology based on Snyder's classification, but differentiated wandering in terms of energy level and presence or absence of a goal. Their approach resulted in four types wandering behavior: 1) high energy level/goal directed (wants to go home), 2) high energy/no defined goal (activity itself is the goal and movement is soothing), 3) low energy level/goal directed (unexpectedly leaves), and 4) low energy level/ no defined goal (a pacer).

Hussain (1985) identified four types of wandering patterns focusing on the wanderers' behaviors: a) the exit seekers, b) the akathesiacs, c) the self-stimulators, and d)the modelers. Exit seekers are highly motivated and attempt to leave their physical environment for any reason. Their focus seems to be centered on going out a door. Akathesiacs are those individuals who exhibit restless, aimless, and pacing behavior, often unable to sit still as a result of prolonged psychotropic medications use. Self-stimulators are those whose focus is the desire to turn the door knob, showing inadequate sensory stimulation. They do not necessarily care about actually leaving, but instead want the physical stimulation of opening the door. The last type of wanderers are the modelers. Their goal is to follow those around them. If the people they are with leave, they too want to leave.

Butler and Barnett (1991) constructed their classification based on the wanderer's behavior. They classified wandering as purposeful, aimless, escapist and critical. Purposeful wandering is manifested by walking with an apparent intent which could be looking for something, exercising, walking to relieve boredom, or just to pass time. An aimless wandering is wandering without knowing location or without any purpose. The aimless wanderer is confused and disoriented. An escapist wandering is a deliberate action and a concerted attempt to get somewhere. The wanderer knows where he is or where he is not, but slips away from the care facility undetected. The critical wanderer strays from the nursing unit but does not understand the implications of his wandering. This type of wandering is the most dangerous form of all and has been linked to out-offacility deaths.

In classifying wanderers, Thomas (1995) takes a different approach from most researchers. He uses the quantitative variable of "time-in-motion" and distinguishes the following two categories. The first includes continuous wanderers who are on the move constantly (i.e., over 50% of one's wakeful time) until they are literally too tired to stand or walk. These wanderers are associated with a greater degree of cognitive impairment and inefficient travel behavior. The second category consists of sporadic wanderers who are not constant movers but have an occasional desire to move about in an effort to satisfy a particular need (i.e., going home). These sporadic wanderers are considered less cognitively impaired than continuous wanderers and show a greater ability to verbally communicate their needs to the care provider.

4. Theories and Models

The lack of adequate empirical data on wandering behavior has not allowed for the development of theories of wandering. Based on the literature reviewed, there seemed to exist only three works that attempt to build a theoretical model for understanding the phenomenon of wandering. Weller (1987), for instance, has proposed a biochemical hypothesis of wandering in which she suggested that the wandering of demented patients might be similar to the dopamine hypothesis of schizophrenia which postulates an over activity of the dopaminergic system. It has been observed that amphetamines and dopamine agonists cause restlessness and irrelevant (non-goal directed) behavior in animals and humans. Weller suggests that the same biochemical mechanism, which explains the wandering tendency of schizophrenic patients, could be responsible for the wandering exhibited by older adults with dementia.

Other researchers have suggested the application of other theories of nursing to wandering for the purpose of increasing our understanding of the phenomenon. Algase (1992a), for instance, conceptualizes wandering in the context of rhythm theory. She views the phenomenon as a naturally recurring processes resulting from oscillating measurable variables which include the peak (maximum value), trough (minimum value), and cycle (shortest repeating part of a rhythm). As a rhythm, she sees wandering as a movement that changes over time, occurring in a nonlinear ultradian rhythm, with locomoting and nonlocomoting phases. The rhythms could originate within the person (endogenous) or could be triggered by environmental cues (exogenous). In suggesting the applicability of the rhythm theory, Algase contends that it affords a view of wandering that combines personal and environmental bases.

Thomas (1997) has also suggested conceptualizing wandering within the context of continuity theory of aging. The theory assumes that a person evolves throughout his/her life based on prior history and experience and employs past concepts to conceive and structure his/her future. This continuity of experiences is an adaptive mechanism by which individuals do what they had done well in the past in order to achieve feelings of satisfaction. Thomas cites Arendt's (1977) notion of *habitual response* (a demented person's involvement in ingrained, familiar behaviors in pursuit of a feeling of competence and mastery) and Lawton's concept of the continuity of personality types (the *securityautonomy continuum* i.e., introverted people seek motivation from within themselves while extroverts seek stimulation from the external world) and shows the near universality of continuity theory's applicability to old age behavior.

Viewed within the context of the broad spectrum of continuity theory, the wanderer continues a lifelong conditioned response of looking to the external world for security and comfort. In other words, "familiar relationships that were developed externally, i.e., social interactions, leisure activities and work experiences, are redeployed in an attempt to establish comfort within a confusing and irrational world created by the illness (Thomas, 1997).

This review of the literature on wandering has shown that scholarly interest in the phenomenon has increased over the last decade. Attempts have been made to define the behavior, determine the personal and environmental factors that cause it and, to some extent, propose theories that can help conceptualize the phenomenon. Definitions have not resulted in accurate characterizations and have often evolved to subjective classifications. The result has been a plethora of definitions and typologies that have not lead to a more informed intervention or continued research.

In preparing the protocol for intervention, I have not relied on any single definition to conceptualize the phenomenon of wandering. In fact, I contend, following Thomas, that the terms "aimless" or "purposeless" should be excluded from any definition of wandering. Rather, we should strive to achieve a more comprehensive conceptualization of the phenomenon that takes into account the impact of wandering on caregivers. It is the experience of caregivers, not the apparently erratic behavior of wanderers, that revealed the fact that wanderer's move about in pursuit of certain goals. If we are to better comprehend the phenomenon of wandering and intervene in a more appropriate manner, it is important to recognize that, viewed from the contextual wandering of the wanderer, wandering has some purpose, at least most of the time. This is the first premise on which the protocol is based.

CHAPTER III

THE PROTOCOL

1. Assessment

An initial interview with the potential resident and significant others or family caregivers allows for the collection of comprehensive history, a vital component of planning for the care of the individual who exhibits wandering behavior (Fopma-Loy, 1988; Thomas 1995). After obtaining pertinent subjective and objective data, the Advance Practice Nurse should perform a complete physical assessment that incorporates pertinent diagnostic tests to obtain a baseline data and consider other underlying medical conditions.

1.1 Assessing the Person

A comprehensive assessment should consist of present health problems, past health history, health habits, family history, personal and social history. Present health status constitutes a clear narrative of the initial onset of the problem, duration, alleviating and aggravating factors, symptoms, treatment and impact on demented older adult's life. Past health history includes assessment of past medical and surgical history, i.e. operations, hospitalizations, accidents and injuries. Heim (1986) suggests investigating history of falls, fractures, dizziness, and orthostatic hypotension when obtaining data related to wandering behavior. Interviews about health habits include tobacco use, alcohol use, caffeine and medication or other drug use in addition to exercise patterns, sleep patterns, elimination habits, and awareness and use of safety measures. Knowledge of family history including chronic medical problems, cause of death, and psychosocial history enables the

APN identify some causes of current resident situation.

Personal and social history consist of wanderer's previous lifestyle, interests, hobbies, meaningful activities and roles, educational background, cultural influences, patterns of socializing, patterns of stress and coping strategies, responses to touching and preferences of the individual in the premorbid years. Understanding these factors and identifying the social context of the cause[s] of wandering behavior, provides caregivers with sufficient information to plan the behavior management program (Monsour & Robb, 1982; Snyder et al., 1978; Thomas 1995).

Physical assessment of the wanderer should include the wanderer's ability to ambulate, gait, facial expressions, speech, vision, hearing, and incontinence. The person's use of glasses, hearing aide, walker or cane, and other prosthetic devices should also be noted (Heim, 1986). Besides, additional assessment should incorporate assessing the wanderer's skin, feet and legs for blisters, calluses, and edema as well as strength, flexibility, pain and range of motion of extremities on admission and weekly (Algase & Struble, 1992).

Nutritional assessment of wanderers should consist of weekly weight, calorie and protein intake, diet history including food likes and dislikes, nutritional risk factors, hydration status, and the use of vitamin supplements.

Functional assessment measures the person's ability to perform self-care. It includes assessment of impairment in communication, mobility, cognitive status and psychosocial adjustment (Barkauskas, Stoltenberg-Allen, Baumann, & Darling-Fisher, 1994). Algase (1991a) recommends assessing abstract thinking, judgment, language and

spatial skills to determine a medical rationale for cognitive impairment and to alleviate reversible causes. In addition, assessing vital signs, monitoring patterns of elimination, exercise, and food and fluid intake and evaluating medication regimen are crucial aspects. Investigation of falls, analyses of contributing factors, and monitoring the frequency and pattern of attempted exits are essential components of implementing safety precautions (Algase & Struble, 1992). Moreover, assessing whether or not wanderers have trouble finding their way allows caregivers to provide directional guides. Other components of functional assessment include physical function (i.e. Activities of Daily Living and Instrumental Activities of Daily Living), emotional status, social support, economic, legal and the assessment of environment (S. King, personal communication, August 30, 1996).

1.2 Assessing the Environment

Environmental assessment should focus on safety and security of the wanderer and modifications for physical and/or cognitive impairment. Fire safety, heating system, stairs, floors, toilets and lighting are some of the general environmental factors that caregivers of demented older adults need to consider.

Heim (1986) suggests that when caregivers assess the environment, they should ask the following questions. Does the environment provide for safety, protection and allow freedom? Does it allow the ability to explore? Are rest areas provided? Is the wanderer's room clearly labeled? Is the area well lit? Are there sufficient night lights? Are there door buzzers on exit doors to alert staff of a wanderer leaving unattended?

Other environmental factors that need to be taken into consideration during assessment are room temperature, loud noises, and overstimulation such as too many

people and cluttered furniture, or under-stimulation such as lack of events, and unfamiliar environment (Davidhizar & Cosgray, 1990; Nelson, 1995). Also note the effect of weather and season on the frequency and pattern of wandering cycles (Algase & Struble, 1992).

Some of the social environmental factors that caregivers need to address are the presence of planned group activities (e.g. handcrafts, cooking and gardening), exercise program, opportunity for peer and staff interaction, and access to television or music program for older adults with dementia. Care providers should also monitor the wanderers' whereabouts to avoid unintentional harm to self or others.

1.3 Assessing the Behavior

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A detailed history of the wandering behavior should be obtained from the caregivers (Coltharp et al., 1996). Ongoing observation and assessment of residents who wander aids in increasing understanding of the behavior i.e. clarification of the behavior itself - timing, frequency and patterns and possible causes of the behavior (Algase, 1992a; Burnside, 1980; Coltharp et al., 1996; Fopma-Loy, 1988; Hiatt, 1980). Identification of patterns of behavior and documentation of antecedents and consequences of wandering behavior is crucial for the management of the behavior (Hirst & Metcalf, 1989; Hussain, 1981b; 1982; Nelson, 1995). Moreover, identifying and dealing with the confused residents' agenda behavior helps the caregivers meet the wanderers' felt social, emotional, or physical needs (Rader et al, 1985; Rader, 1987).

2. Intervention

Therapeutic interventions in wandering ideally should begin prior to admission to the institutional setting. As the patient becomes increasingly dependent, due to cognitive impairment, his or her quality of life is affected by the care received. A comprehensive approach for management of wandering patient should include maximizing whatever function the patient has left (Aronson, 1988), providing opportunities for safe ambulation, increasing the patient's quality of life (Aller & Coeling, 1995) and emphasizing on decreased use of physical and/or chemical restraints (Goldsmith, Hoeffer, & Rader, 1995). As Coltharp et al., (1996) stated, "Manipulation of the environment is one of the best means of dealing with wandering" (p. 7).

One of the interventions of managing wandering is providing a safe, controlled environment to allow free ambulation without injury because wandering stimulates circulation and oxygenation, promotes exercise, maintain strength and muscle tone, and prevents contracture (Aronson, 1988; Coltharp et al., 1996; Fopma-Loy, 1988; Heim, 1986). Environment can be made safer by providing visual cues and a variety of diversional activities and by having adequate glare-free lighting along with minimizing environmental hazards (Aronson, 1988; Coltharp et al., 1996; Thomas, 1995). Other environmental modifications include adequate lighting, color coding, picture symbols clear signs on doors or wall aid increasing orientation of residents and prevent falls and accidents (Burnside, 1980; Hiatt, 1980; Hussian 1981a). Cornbleth (1977) compared wanderers and nonwanderers in both protected and unprotected wards and found that the physical functioning of wanderers improved in the protected ward/environment. Aronson

(1988) suggests that when caring for wanderers, caregivers must make sure the patient wears eyeglasses or a hearing aid, if necessary, to receive environmental cues, wears nonslippery footwear and the patient's clothing is not too long to avoid tripping. Furthermore, the environment should be decluttered and familiar items should be maintained. The wanderer's access to stairs and outdoor exposure in bad weather should be limited, since he or she is prone to fall.

In order to design a therapeutic milieu, efforts should be made to create a calm and relaxed atmosphere by eliminating disturbing sounds such as the clanging of carts, loud chatter, voices on the intercom, television and radio. Maintaining a quiet dinning area also enhances food intake and prevents weight loss [serving one food item at a time, using high-calorie finger foods] (Thomas, 1995). A rich, stimulating, structured, repetitive, predictable and accepting environment is critical. It allows wandering older adults to function at their maximum potential and enables the caregiver to provide a quality life style by decreasing problem behaviors (Coons, 1988; Rader, 1987).

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A setting that offers a variety of opportunities can provide companionship, enhance peer interaction and reduce loneliness. One way of reducing wandering is heightening social opportunity (Algase, 1992a; Coltharp et al., 1996; Monsour & Robb, 1982; Snyder et al., 1978). "Lighthearted, engaging and stimulating activities can divert residents from the things that cause them to become anxious and apprehensive; and their self-esteem can be improved by helping them to continue to perform everyday tasks to the fullest extent possible" (Coons, 1988, p.33).

Some of the effective interventions for evening restlessness after meal and wandering related to agitation are frequent monitoring of patient for physiological needs, exercising, ball tossing, singing, and sharing in the preparation of snacks help residents to lighten up their moods and divert their attention from problem areas (Coltharp et al., 1996; Coons, 1988). Decreasing stressful environmental features such as excess noise and nighttime shadows will assist in reducing wandering related to tension (Burnside, 1980; Fopma-Loy, 1988; Hiatt, 1980).

Coons (1988) recommends a variety of activities for night wanderers to help them relax. These activities include staff walking with resident and gently distracting him/her from walking alone. Distracting the wanderer's attention could be achieved by having snack together, baking cookies or muffins, watching TV, or chatting briefly and rubbing resident's back to relax and go to bed. Robb (1985), who studied the effects of exercise on 20 wanderers, found that exercise program has significant influence in reducing nighttime wandering. Physical exercise may include stretching and simple range of motion exercises, walking and relaxation with deep breathing, and massage. The use of "white noise" to reduce nocturnal wandering and facilitate sleep was found to be partially successful by Young, Muir-Nash, & Ninos (1988). White noise was defined by these authors as any low intensity, continuous, rhythmic, monotonous sound such as the whirl of a fan, or the hum of an air conditioner.

For boredom staff should look for activities or chores that interest residents and invite them to help staff in such areas as setting the table, pushing food cart, and washing dishes. on, and structured activities to enhance enjoyment and relax wandering residents.

Fopma-Loy (1988) suggests that, in order to minimize the stress of relocation, and subsequent anxiety related to wandering behavior, a tour of the prospective resident's area, introduction to staff, and one or two further visits followed by a day-long visit should be arranged. Staying with the patient and reassuring him or her in a new environment during the first few days also lessens the anxiety (Aronson, 1988). Structured recreational activities that influence quality of life and that are adapted for older people's energy and endurance level include dances, music, and sports singing, rhythmic movements, and hand crafts (Aller & Coeling, 1995; Snyder et al., 1978).

In order to reduce continuous wandering, Thomas (1995) suggests that designing an interesting environment through tactile and sensory cues could redirect wanderer's motion and avoid fatigue and falls. Instead of traditional group activities, environmental cues such as sensory tables, tactile boards and "activity barrels" attract the continuous wanderer's attention (Gaffney, 1986). Sporadic wanderers benefit from organized group activities and verbal interactions with other residents and staff. The activities may incorporate exercise, relaxation, music and reminiscence.

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A variety of interventions are being tested in long-term care facilities to provide safety and protection for those who wander. Camouflaging exit doors and concealing doorknobs behind a cloth panel have been found to be successful visual barriers to reduce the exit behavior of wandering residents (Dickinson, McLain-Kark, & Marshall-Baker, 1995; Namazi, et. al., 1989). Hussian & Brown (1987) investigated cognitively impaired patients' ambulation toward exit doors and their perceptions of two types of barrier patterns. They found that placement of masking tape in front of the doors with horizontal

striping to be more effective than vertical striping in preventing exiting behaviors. In unlocked units, chimes on doors (Snyder et al., 1978) that operate by pressing coded sequence buttons, a full-length mirror on the door, painting doors the same color as surrounding walls serve as camouflage to prevent persons from wandering from the area. A special identification bracelet with a phone number to call when a wanderer is lost and an electronically coded tag installed in bracelet or necklace to trigger an alarm when the wanderer opens doors are other ways of protecting the wandering older adults (Coons, 1988; Heim, 1986; Rader, 1987).

In the therapeutic setting, staff should be trained to accept and to recognize some of the behaviors of the person with dementia as normal responses to the environment. It becomes the responsibility of the staff to examine the events and conditions that might be causing the impaired person to become agitated or angry and make essential adjustments to reduce the stress or irritations that may be triggering by the behavior. The staff in treatment settings are faced with the difficult challenge of making available to residents safe and interesting areas to walk, at the same time, providing an exciting, stimulating, and satisfying milieu that will reduce the person's need to wander (Coons, 1988). Therefore, Snyder et al. (1978) suggest that staff (nursing, activities, housekeeping, security, social services, volunteers) should be informed that wandering may be a natural, coping behavior; and they should also be educated to facilitate awareness and identification of the meaning of wandering behavior and to formulate appropriate interventions to meet the needs expressed through wandering (Fopma-Loy, 1988). Approaching the patient in a gentle and quiet manner, using the patient's name frequently, approaching the patient from

the front instead of the side, and reassuring the patient that his/her anxiety is understood are some communication skills caregivers should utilize when dealing with demented older adults (Hirst & Metcalf, 1989). Interacting in skillful, slow, concise, and concrete sentences reduce the confusion and allow demented residents to function at their best. Non-verbal communication is also crucial since residents are sensitive to staff moods and attitudes (Burnside, 1980; Rader, 1987). Goldsmith et. al. (1995) contend that providing sufficient staff time, for interacting with residents and developing activity programs that address residents' needs for activity and rest, redirects wanderers' energy.

It is also important that institutional policies identify procedures for handling a wanderer who could present a danger to himself/herself or others, and at what point physical or chemical restraints be employed (Coltharp et al., 1996). Organizational procedures must also clearly delineate the approach staff is to take in the event the "mislocated" resident is discovered (Fopma-Loy, 1988). All policies should be sensitive to the patient's reasons for wandering by the patient (Hirst & Metcalf, 1989).

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CHAPTER IV

IMPLICATIONS

1. Research

Wandering behavior is identified by caregivers as one of the perplexing problems in caring for the elderly people with dementia. Current research indicates that the prevalence of dementia and associated behaviors will rise in the future. In order to reduce the stress of caring for persons with dementia and determine appropriate intervention, it is necessary to conduct further research into the causes and management of wandering. Replication of studies related to specific intervention and evaluation of its effectiveness could clarify the existing ambiguities regarding the causes of wandering and its management. In sum, more studies could mean providing caregivers choices of strategies in their effort to manage wandering behavior.

2. Education

Since the prevalence of wandering is projected to continue, the challenge of caring is likely to get even more difficult. It is, therefore, essential to make information available and extend educational programs to care providers and families regarding assessments and interventions for wandering behavior. Increasing the knowledge about the causes and characteristics of wandering behavior and taking appropriate measures could prevent falls and eliminate injuries while allowing wanderers to ambulate freely. A rigorous orientation and a continuous provision of educational information to staff could equip them with the knowledge and skill necessary to interact with older adults with dementia. Educating staff is a highly effective instrument of improving the quality of life for older

adults with dementia.

3. Practice

Undoubtedly, more research on wandering will increase our understanding of the phenomenon. In turn, an all-rounded and comprehensive knowledge will enable caregivers to implement appropriate and effective intervention. Even though, older adults with dementia have a drastically reduced competence due to cognitive impairment, adaptive behavior could be achieved by manipulating the environment. A person's competence could be heightened by involving him/her in social interaction. In other wards, the competence of individuals with dementia who exhibit wandering behavior could be enhanced by reducing the environmental press on the wanderer. The fact that, by changing the environment, a person's adaptive behavior can be increased should provide badly needed encouragement and solace for families of older adults and other caregivers.

APPENDIX

Table 1 : Assessment of Person and Intervention

Assessment of Person	Intervention
1. A comprehensive assessment:	1. Increase quality of life
a) Present health problems, past medical, surgical, family history	a) Determine association of health history with present condition
b) Health habits: exercise patterns, sleep patterns, elimination habits	b) Provide regular exercise, maintain bed time routine, establish bowel and bladder program
c) Personal and social history: wanderer's previous lifestyle, interests, hobbies, meaningful activities and roles, patters of socialization, patterns of stress and coping strategies, responses to touching and preferences of the individual in the premorbid years, emotional status	c) Reinforce adaptive behavior, enhance social interaction, encourage continuation of coping strategies, touch gently when appropriate, allow expression of feelings, involve resident in activities, be non-judgmental
2. Physical assessment:	2. Intervention
a) Ability to ambulate, gait, facial expressions, speech, vision, hearing, and incontinence.	a) Monitor exhaustion, provide resting areas, approach from front, speak clearly and slowly, make eye contact.
b) Use of glasses, hearing aide, walker or cane and other prosthetic devices.	b) Make sure the resident wears eyeglasses or hearing aide, nonslippery footwear and use appropriate prosthetic devices.
c) Assessing the wanderer's skin, feet and legs for blisters, calluses, and edema as well as strength, flexibility, pain and range of motion of extremities.	c) Monitor physical condition, treat appropriately and refer when needed.

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Table 2: Assessment of Environment and Intervention

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Assessment of Environment	Intervention			
1.Environmental assessment should focus on safety and security of the wanderer	1. Provide safe and controlled environment			
a) Fire safety, heating system, stairs, floors, toilets and lighting, provide for safety, protection	a) Provide visual cues and a variety of diversional activities and have adequate glare-free lighting, comfortable temperature			
b) Does the environment allow freedom & the ability to explore? Are rest areas provided? Is the wanderer's room clearly labeled?	b) Minimize environmental hazardsclear pathways of any obstacle, fence in yard for safe wandering, post picture symbols, clear signs on wanderer's door/ wall			
c) Check for sufficient night lights room temperature, loud noises	c) Install night lights, use "white noise" for night wandering			
d) Note the effect of weather and season on the frequency and pattern of wandering	d) Limit access to stairs and outdoor exposure in bad weather			
e)Are there door buzzers on exit doors?	e)Install alarm system, camouflage exit doors			
f) Overstimulation such as too many people and cluttered furniture, over-activity	f) Control sensory input by decreasing sounds such as the clanging of carts, loud chatter, voices on the intercom, television and radio, declutter the environment			
g) Under-stimulation such as lack of events, and unfamiliar environment	g) Maintain familiar items, provide a tour of the area and a rich, stimulating, structured, consistent, predictable and accepting environment			

Table 3: Assessment of Behavior and Intervention

Assessment of Behavior	Intervention
1. A detailed history of the wandering behavior from family	1. Involve family in planning the care for wanderer
a) Onset, duration, timing, frequency and possible causes of the behavior	a) Avoid aggravating factors of wandering and encourage alleviating factors
b) Identify of patterns of behavior, i.e. antecedents and consequences of wandering behavior	b) Document intervention utilized and evaluate effectiveness
c) Identify and deal with the confused residents' agenda behavior: way of social interaction, agitation, physiological need, boredom, disorientation, to relieve stress, need for exercise, nocturnal wandering	c) Provide planned group activities (e.g. supervised daily walks, handcrafts, cooking, reading, dancing and gardening), exercise and music program, access to television, companionship, relaxation, reminiscence, encourage peer and staff interaction, heighten social opportunity, use distraction and positive reinforcement, ensure availability of food, fluid, and bathroom, limit day naps, maintain bed time routine

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