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WANT Model: The Need-Centered Care and Management Model for Behavioral and Psychological Symptoms of Dementia

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Abstract

Aims: A discussion of a newly developed need-centered care and management model for Behavioral and Psychological Symptoms of Dementia (BPSD) and its practice protocol.

Background: A simple and memorable care and management model for BPSD is needed to guide care-providers especially those working in long-term care facilities.

Design: The model named "WANT" model is the abbreviation of Watch-Assess-Need intervention-Think. Watch- to pay attention to the frequency and status of behaviors of resident with dementia; Assess- to assess relevant background and proximal factors for such behaviors and deduce the needs behind; Need intervention- to implement care measures according to residents' needs; Think- to reflect on and share mutual experiences with peers. The expert validity of final version of the WANT model reached .99.

Data sources: The development of the WANT model was through three phases: Literature review, content formulation and expert panel evaluation.

Implications for nursing: Care-providers may integrate the model with daily care process. An education and training protocol based on the WANT model can be widely applied to staff working in long-term care facilities worldwide.

Conclusion: This model can be easily remembered by care-providers and trigger care-providers' reflection on the causes behind the problems behaviors.

Keywords: Care management model; Behavioral and psychological symptoms; Dementia

Introduction

The Alzheimer's Disease International (ADI) reported that over 50 million people worldwide are living with dementia in 2020 and this number will be double every 20 years, reaching 82 million in 2030 and 152 million in 2050. Dementia is a group of symptoms that are not only cognitive dysfunctions but also non-cognitive dysfunctions. The latter are also collectively referred to as Behavioral and Psychological Symptoms of Dementia (BPSD). Approximately 75% of people living with dementia are complicated with BPSD that may take place at any time over the course of dementia and their severity varies with the progression of dementia [1]. Behavioral and psychological symptoms of dementia are usually the main cause leading to family caregivers' care burden and early transfer of patients to facilities [2]. Common clinical BPSDs include wandering, delusions and hallucinations, depression, pacing and repetitive motor activity, anxiety, screaming, agitation and/or restlessness, repetitive vocalization, cursing and swearing, sleep disturbance, sundown symptoms, aggression and hoarding, etc [3]. Although some medications can be adjusted for target symptoms (e.g. agitation and aggression), the side effects of medications are significant. Many scholars internationally have suggested that non-pharmacological treatment should be prioritized for treating BPSD and drug treatment should be used as an adjuvant treatment when the symptoms cannot be effectively improved [4]. In 2005, Kovach, Noonan, Schlidt and Wells indicated that the BPSD of people living with dementia are associated with the failure to meet their needs. If care-providers cannot understand the meanings behind these BPSDs, there will be communication barriers, the care provided by them cannot meet patients' needs, patients' BPSD will gradually aggravate, and care-providers will also experience higher stress [5]. Treating dementia complicated with BPSD will help reduce the severity of BPSD of people living with dementia and reduce constraint imposed on patients, medication use, and repeated admission, which will further improve patients care quality and decrease the medical costs [6]. The systematic literature review by Reis, summarized the features of dementia care and management models include: Abilities focused care, person-centered approach, behavioral oriented approach with person

environment fit, emotion-oriented approach, communication skills, practice-based approach, and skills to reduce the need for restraint approach [7]. However, in terms of these models, some of them lack an easy to follow education manual, and others are more complicated and difficult to remember or lack detailed descriptions about educational content [8]. Moreover, people living with dementia complicated with BPSD are individualized and diversified. Therefore, in the current busy care work, it is necessary to develop a simple and memorable management model that assists caregivers in clinical application [9]. In particular, such a model can also rapidly integrate with caregivers' strategies for daily care process. We proposed a need-driven BPSD care and management model-WANT (watch-Assess-Need intervention-Think) that can be easily implemented and integrated with daily care at various types of care facilities to effectively manage BPSD of people living with dementia. Hopefully, care-providers' work efficiency can be improved and the objective of patient-centered high-quality care can also be achieved [10].

Theoretical Foundation of the Model

This study developed WANT model based on the framework of Need-Driven Dementia-Compromised Behavior (NDB) model developed by [11]. This model indicates that all the disruptive behaviors of people living with dementia are caused by the failure to meet one or multiple needs, including physiological, mental, emotional, and social needs. Because such patients have lost the ability to express themselves, their BPSD are actually an attempt to communicate with people. The NDB model emphasizes that the cause inducing stress and discomforts in such patients is the fluctuation between personal traits and environment. Dementia-compromised behaviors are affected by background factors and proximal factors. The background factors include neurological function factors, brain damage of special parts, imbalanced neurotransmission, physiological clock imbalance, etc. Cognitive function factors- attention, memory, visual space ability, language ability, etc; health status-overall health, physical functions, and emotional status psychosocial factors- gender, education, occupation, personality, medical history of mental stress, and behavioral responses to stress. The proximal factors include personal factors- emotions, physiological need status, and executive ability; physical environment- light, noise, and temperature; social environment-ward atmosphere, stability of staff, composition of staff, etc [12]. Also, described that the BPSD of people living with dementia are a symbol of unmet needs. These symptoms are not caused by a single factor, but the syndrome caused by multiple factors. In addition, our study team had investigated a series of common BPSD-related background and proximal factors in people living with dementia, and the needs behind theme based on the NDB model [13]. We further found that the reappearance of inner personality and habits, the resurgence of past economic crisis, lack of security, changes in living conditions, monotonous life, the search for inner comfort, prohibited old habits and customs, ignored emotions or alienation, physical discomfort, desire to maintain self-control, emotional venting, attention seeking, the desire for safety, the need for a sense of belonging, the need to connect with the outside world, and self-control are the causes inducing BPSD in patients or aggravating the severity of BPSD [14,15]. All the empirical data mentioned above have become the fundamental data for developing the need-driven WANT care and management model for people living with dementia.

Systematic Review

Firstly, we searched for the keywords (dementia, dementia BPSD, dementia management model, dementia care, causes and needs of BPSD, etc.) in databases CINAHL, MEDLINE, ProQuest nursing, PubMed, CEPT, GOOGLE SCHOLAR to find out the causes and needs behind BPSD of dementia complicated with BPSD in domestic and foreign literature, individualized BPSD care approaches, and management model for dementia complicated with BPSD. After multiple discussions and modifications, the study team preliminarily summarized various common causes, needs, and care strategies or approaches behind the BPSD in the WANT model as the preliminary resources for the development of meanings of the model (**Figure 1**).

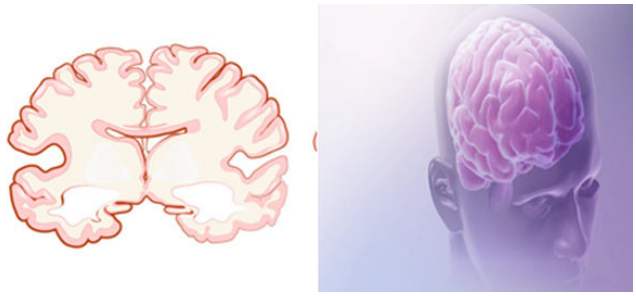

Figure 1: Psychological Symptoms of Dementia.

Development of WANT model content

We developed the learning manual for multiple common and troublesome BPSD scenarios, including factors associated with common behaviors, such as wandering, aggression, change in dietary habit, delusions, and sundown symptoms, needs behind, and care treatments and strategies. The corresponding cases and scenarios according to the sequential order and steps of WANT model were developed, and then simple and comprehensible content were constantly discussed about and reflected on the content to develop the model, which was then tested using expert content validity.

Expert panel

This study invited 5 experts to convene the expert panel (including experts in academic nursing, institutional nursing supervisors, institutional senior nurses, etc.). Firstly, this study sent written documents to the experts, and then invited them to review such documents without scoring them. Afterwards, an expert panel was scheduled for all the experts. The researcher hosted the expert panel where the experts were invited to score the appropriateness of finalized dementia BPSD management model (4 points: Appropriate, no modifications needed; 3 points: Appropriate, only partial modifications are required; 2 point: Appropriate, but need greatly modification; 1 point: Inappropriate/recommended to be deleted). After the expert

panel, the model was modified according to experts' comments. Moreover, this study continued communicating with the experts *via* email until the Content Validity Index (CVI) reaches and the expert validity of final version of the WANT model reached.

The practice protocol

The WANT model uses logical reasoning to teach institutional care-providers to connect a need-centered care approaches. Firstly, care-providers must understand residents' personality traits. Secondly, care-providers must clearly grasp the proximal factors around residents, including the interactions among individual, physical environment, and social environment, such as: Pain, fatigue, noisy environment etc, in order to understand the main causes and needs of residents. In this way, when BPSDs are observed in residents, care-providers are able to associate such behaviors with residents' past life experiences, preference, past problem-solving method, and things that are taking place around resident, as well as implement the individualized intervention measures according to residents' behavioral performance. The following is a description of a Scenario (Aggressive behavior) to illustrate the operation processes: Mrs. Lin suffered from severe dementia for 4 years. She used an indwelling nasogastric tube and her activities of daily living were completely dependent. She received home-based care and sat in the living room quietly. When the caregiver said hello to Mrs. Lin, she would nod her head and smile. However, when the caregiver helped her take a bath, she would attack the caregiver as long as she was undressed. She would start to struggle and beat, grab, and bite the caregiver when taking a shower.

Watch: Aggressive behavior was observed. Every time when the care-provider helped Mrs. Lin undress herself or take a bath, Mrs. Lin would keep screaming, biting, and grabbing the care-provider. She would not restore her calmness until she completed taking a bath.

Assess: Assessing the reason why Mr. Lin would beat and bite the care-provider helping her take a bath, and reflecting on why she would resist and attack the care-provider every time when she took a bath. In this case the possible reasons were: Background factors-cerebral atrophy and cognitive decline, resulting in the failure to communicate with people. Resident can only make some sounds, rather than speak out complete sentences. As a result, outsiders cannot understand what the resident intended to express. Proximal factors-taking a bath needs to use water, and the water might be too cold. Besides, the resident might be unfamiliar with the environment (from restroom to bathroom) and the care-provider. The resident might have no idea what the care-provider wanted her to do. In addition, undressing without any reason might make adult women experience a sense of fear.

Need-intervention care measures: Need for a sense of safety: (1) arranging the care-providers with whom the resident was familiar with to help her take a bath and respecting the resident's habit; (2) meeting the resident's need for taking a bath, adjusting the water temperature, and letting the resident to test an adequate water temperature; (3) making the resident know the bathing environment before taking a bath and explaining what the care-provider will do; (4) for the resident who is unwilling to undress herself, it is necessary to respect the privacy of and allow her to undress herself partially to take a bath without being fully undressed or cover her with a towel; (5) communicating with the resident in way that she can understand and using simple words and sentences to explain every step of taking a bath. For example, "Granny, it's time to undress and take a bath." "It's time to wash your face and wash your body," etc. to enable people living with dementia to feel relieved.

Think: The resident might be frightened because no one explained to her that the care-provider would help her take a bath, but directly undressed her. The resident might think that the care-provider would harm her. After the care-provider explained to her and appeased her, Mrs. Lin could accept the care-provider helping her take a bath. This finding could be shared with other care-provider to help everyone understand Mrs. Lin's habit about taking a bath.

Implications for Care

The WANT model focuses on the "need/want" of people living with dementia and is named after it. Besides, the WANT model also takes into account the timeliness of learning of clinical care-providers. After learning this competency, institutional care-providers are able to discover early the main problems and needs of residents with BPSD, successfully manage people living with dementia complicated with BPSD. Moreover, the WANT model can also trigger the abilities of reflection and association of professional and nonprofessional care-providers discover the needs of people living with dementia provide the directions for treating BPSD, help institutions to improve care quality. This model consisting of simple and practicable steps can be converted into teaching videos in the future, which may serve as importance reference for public sectors to plan for the training of professionals caring for people living with dementia. Hopefully, this model can be easily remembered by care-providers and trigger their reflection on the causes behind the problems. It is also hoped that caregivers may repeatedly practice this model to integrate it with daily care process rapidly. This model can become a model that is widely applied internationally in the future. Importantly, rigorous future studies are advised to be conducted to verify the effectiveness of this model and develop empirical-based scientific care measures [16].

Conclusion

In the society of increasingly severe trend of aging, attention should be paid to dementia care issues. People living with dementia should be understood, instead of being ignored. People living with dementia may be unable to express their needs, which should not be overlooked to prevent people living with dementia from falling into a painful situation. If the first-line care-providers are able to discover the BPSDs of people living with dementia and pay more attention to the analysis of their BPSDs, they can effectively help meet residents' needs, which will help improve the care quality and enable people living with dementia live with a sense of safety and dignity. The

current international trends of dementia care are to take care of elderly people living with dementia in a more humanized manner and to develop person-centered individualized care measures. Therefore, this WANT care and management model will help alleviate the BPSD of people living with dementia, reduce their restraints, medication, and repeated admission rate to further improve caregiver relationship and care quality and reduce the medical costs of dementia complicated with BPSD.

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