An Examination of Self Perceptions of Nursing Assistants and the Effectiveness of Nursing Education Intervention to Improve Nursing Assistants' Knowledge of Mental Health Issues in an Elderly Population

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Abstract

Purpose: The purpose of this study was to examine the self perceptions of nursing assistants and to evaluate the effectiveness of an intervention on nursing assistants' knowledge related to mental health issues in an elderly population.

Methods: A cross-sectional descriptive design was used to examine the nursing assistants' self perceptions. A modified version of the Caregiver Reaction Assessment (CRA), developed by Given et al., 1992, was completed by a convenience sample of 73 nursing assistants from nursing homes and medical and surgical units who took care of older people. The nursing assistants answered 22 questions, in 4 general topic areas, using a 6-point Likert scale. The research was conducted in 2 hospitals and 2 nursing homes located in two Midwestern cities. The age of the 73 nursing assistants ranged from 19 to 60.The mean age of the nursing assistants was 35.02 years old (*SD* =10.68). The mean length of being a nursing assistant was 7.45 years (*SD* = 7.66).

A quasi-experimental design was used in a pilot study to evaluate the effectiveness of an intervention on nursing assistants' knowledge of older people's mental health issues. Thirteen nursing assistants, part of the 73 who completed the CRA, completed a knowledge test, intervention, and a post test.

Results: The results of the self perception questionnaire indicated that the 73 nursing assistants perceived: 1) They have a positive relationship with their clients; 2) they themselves have good health status and sufficient knowledge to take of their elderly clients; and 3) they have a good teamwork among their colleagues.

A comparison of pre and post test scores for the 13 nursing assistants in the pilot study indicated a significant difference in their knowledge of mental health issues in an elderly population (*t* = -3.64, *p* = 0.003). The assistants' pre-test mean score was 6.42 (*SD* = 1.63); their post-test score was 7.58 (*SD* = 1.58).

Conclusion: Although this is a preliminary study, several conclusions can be drawn based on the assistants' responses to the CRA. First, nursing assistants have a positive perception of their role in caring for the elderly. Secondly, although the nursing assistants had a positive perception of their own health status, they reported their health status have declined since becoming a caregiver. Thirdly, nursing assistants had a positive perception of the teamwork with their colleagues. In addition, intervention can positively affect a caregiver's knowledge. Future research is recommended to expand and clarify these preliminary results using a large sample size in a longitudinal study. Future research is important because of the important role caregivers play in an aging society.

Introduction

In 2014, an estimated 5.3 million people in the United States were diagnosed with Alzheimer's Disease (AD), a degenerative form of dementia generally associated with aging process which begins with memory loss and leads to disorientation, impaired judgment, behavioral changes, and difficulties in speaking, walking, and swallowing in later stages [1]. As Americans age, the number of persons with this condition is anticipated to rise to 16 million by 2050 [1]. Nursing staff provide the functional and psychosocial care of older adults residing in nursing homes. Without knowledge of the normal physical and psychological changes of aging, nursing staff cannot provide residents with appropriate, quality care [2,3]. Therefore, it is important to examine nursing assistants' knowledge related to older people's mental health in order to improve quality of care for older people [4].

WHO (2015) indicates that globally, the population is aging rapidly [5]. Between 2015 and 2050, the proportion of the world's population over 60 years will nearly double, from 12% to 22%. Mental health and emotional well-being are as important in older adults as at any other time of life [5]. Neuropsychiatric disorders among older adults account for 6.6% of the total disability for this age group [5]. Approximately 15% of adults aged 60 and over suffer from a mental disorder [5]. The most common mental health problems of the elderly are anxiety, cognitive impairment [1,6], loneliness, and depression or depressive symptoms [5,7]. Clinically significant symptoms of depression are evident in approximately 15% of community dwelling elders and nearly 50% of nursing home residents [8]. The following situations may cause older people's depression: poor physical health, disability, bereavement, inadequate social support, and financial problems [9]. The suicide rate for persons 85 years and older is the highest of all--- twice the overall national rate [5]. Therefore, it is very important for nursing staff in nursing homes to understand older people's mental health in order to improve their older people's psychological well-being and decrease their suicidal ideation [10].

Literature Review

Very few studies have focused on understanding the self perceptions of nursing assistants. However, studies have supported the efficacy of training interventions for staff serving the elderly [4,11-13]. Previous interventional studies focus on decreasing the belt restraint use [12,14], the attitudes about physical restraints of family caregivers of the residents in nursing home [15], using simulation program to improve attitudes toward older adults [4], and using restorative care programs to educate nursing assistants to improve residents' activity of daily living (ADL) [16].

Most family caregivers of residents of nursing home felt wrist and ankle belts as most restrictive and uncomfortable [15]. Some studies showed the effectiveness of the intervention to decrease the belt restraint use in the nursing home [12,14]. A study indicated the significant effectiveness of using a simulation program to improve nursing assistants' attitude toward older adults and knowledge about aging in Taiwan [4]. At posttest, the experimental group participants' scores of knowledge and attitude about aging were significant higher than pre-test as well as higher than the scores of control group [4].

According to the Omnibus Budget Reconciliation Act (OBRA) that "a resident's abilities in activities of daily living (ADLs) not diminish unless circumstances of the individual's clinical condition demonstrate that the decline is unavoidable [16]", therefore, Medicare supports some coverage for nursing home to develop the restorative care programs to increase nursing assistants' knowledge in order to improve residents' function, muscle strength, contractures, and quality of life [16]. Resnick et al. (2009) did a successful restorative care intervention and indicated that after this intervention, the elderly adults in nursing home have improved in their mobility, gait, balance, walking, bathing, and stair climbing [16].

Some researchers have reported high prevalence of mental health problems, especially depression, among nursing home residents [3,11]. Because nursing assistants have daily, extensive contact with their patients, their level of knowledge is very important. Without the appropriate education and training, nursing assistants cannot recognize when residents are experiencing depression, and consequently they may receive no treatment. Topics related to the aging process and mental health components in education and training programs could help nursing assistants to understand the elderly [3,11].

If nursing assistants can recognize and report signs and symptoms of depression in older adults and can understand the fundamentals of aging, mental health, and depression and the appropriate responses, elderly residents in the nursing homes will receive higher quality of care [5,7,11,17]. Nursing assistants have the desire to receive more training and experience particularly in taking care of older people with dementia, depression, and aggression, as well as communicating effectively with them [8,11,12]. A combination of instructive and interactive learning strategies is the best approach for improving the knowledge base and promoting positive attitudes of health care workers [11,18,19].

Most previous studies focus on ADL and physical health of older people. Few studies concern the psychological well-being and mental illnesses of elderly adults. Therefore, the purpose of the this study was to examine the self-perceptions of nursing assistants for caring elderly clients and to evaluate the effectiveness of an intervention on nursing assistants' knowledge related to mental health issues in an elderly population.

Research Questions

1. What were the nursing assistants' self-perceptions of caregiving for elderly clients?

2. What was the nursing assistants' knowledge level of mental health issues of elderly clients?

3. What was the effectiveness of an educational intervention on the nursing assistants' knowledge?

Methods

Design

There were two phases of this study. The first phase, the cross-sectional research design was conducted in 2014. The second phase, a quasi-experimental research design was used to examine the effectiveness of nursing intervention on nursing assistants' knowledge and perceptions related to older people's mental health in 2015. Data were collected using structured questionnaires.

Sample and setting

Nursing assistants were defined as those "helping patients perform the most basic daily tasks. They work under a nurse's supervision, and since they have extensive daily contact with each patient, they play a key role in the activity of daily living of the older people or patients. They report the important information about the patients' conditions to nurses" [20]. The sampling criteria for nursing assistants were as follows: (a) a minimum age of 18 years; (b) ability to read and write English; (c) taking care of older people; (d) willing to participate this study.

The Director of Nursing in two nursing homes and the Nursing Supervisors of Medical/Surgical units in two hospitals reviewed and approved a demographic survey and two questionnaires to be completed by the assistants: one questionnaire to assess the assistants' self-perceptions and one to assess the impact of an intervention on their knowledge. It was estimated that 15-20 minutes were needed to complete the questionnaire. Individual envelopes, each containing a questionnaire and an Informed Consent to be completed anonymously, were distributed to the units with instructions to be returned within two weeks. Participants for this study were 73 volunteers who agreed to answer a questionnaire that was given to them by director of nursing in nursing homes or nursing supervisors of medical/surgical units in the hospitals. They worked in two nursing homes and in medical-surgical units of two hospitals. Their mean age was 35.02 (SD = 10.68). There were 14 male (19.2%), 59 female (80.8%).

Process

This study was approved by researcher's University IRB committee. After the explanations and the participants' agreement, they were recruited into this study. There were two phases of this study. In the first phase of this study, a convenience sample of 60 nursing assistants was recruited from nursing homes and Medical and Surgical nursing units. These 60 participants did not received nursing intervention and no post-knowledge test. This phase was a cross-sectional design to understand the phenomenon of nursing assistants' care giving attitude and knowledge related to taking care of older people. In the first phase, the questionnaire and the 10 questions of the knowledge quiz were examined reliability and validity. In the first phase, the participants received a pack of chocolate after they completed the questionnaire and the knowledge quiz.

In the second phase of this study, a convenience sample of 13 nursing assistants was recruited from a nursing home. The researcher contacted with the director of nursing of this nursing home and explained this study. This Director of Nursing agreed to have the pre-test, the knowledge intervention, and post-test administered in the facility. The 13 nursing assistants completed the pre-test, and then the researcher provided the intervention. After the intervention, the 13 participants completed the post-test. The process was held in the nursing home. The content of educational intervention included a review of older people's common mental health problems and care plans developed by Frisch and Frisch, 2011 [13]. The intervention also included the signs and symptoms of delirium, depression, dementia, and Alzheimer's disease, as well as these illness' etiology and treatments [13]. The intervention took about one hour and most in lecture format. PowerPoint handouts were provided. The post test took 15 minutes. After the post-test, the nursing assistants received $10 gift cards.

Instruments

The instruments included demographic data, the Caregiver Reaction Assessment (CRA) [17], and 10 multiple choice questions of knowledge test (Frisch & Frisch, 2011) [13]. The Caregiver Reaction Assessment (CRA) [17] was used to exam the nursing assistants' self-perceptions related to take care older people. The ten multiple choice questions of knowledge test [13] were used to exam the nursing assistants' older people's mental health knowledge. The ten multiple choice questions were listed in the table 1 and the content was related to the handout of educational intervention developed by Frisch and Frisch (2011) [13].

Caregiver Reaction Assessment (CRA). Given et al. (1992) [17] developed CRA that includes 24 items and consists of the following five subscales: (a) Caregiver's Esteem, (b) Lack of Family Support, (c) Impact on Health, (d) Impact on Schedule, and (e) Impact on Finances to measure perceptions of caregiving. The CRA has been examined by rigorous psychometric tests including content validity, construct validity, exploratory validity, and confirmatory factor analysis. Participants were asked to rate each item on a five-point Likert scale ranging from strongly agree (6) to strongly disagree (1).

In previous research, internal consistency reliability for each subscale based on a sample of 377 caregivers of cancer or Alzheimer's patients revealed a high degree of reliability for each subscale with Cronbach's alphas ranging from 0.80 to 0.90. The Cronbach's alpha was 0.90 for Esteem Subscale, 0.85 for Lack of Support Subscale, 0.80 for Impact on Health Subscale, 0.82 for Impact on Schedule Subscale, and 0.81 for Impact on Finances Subscale [17].

Construct validity support was evidenced through establishment of stable factor structures across comparison groups: diseases (Alzheimer's & cancer), patient-caregiver relationships (spouses vs. non-spouses), and three cross-sectional comparisons. The results of the comparison were highly significant, large, and remarkably stable over time [17]. Also, the construct validity of the CRA instrument has been supported by correlations between the CRA subscales and depression. These correlations were consistent with the notion that specific caregiver burdens may result in overall caregiver depression [17].

The CRA was revised by the researcher in order to be used among nursing assistants. **Caregiver's Esteem subscale** was revised to measure nursing assistants' *quality of relationship* between nursing assistants and older people. **Lack of Family support subscale** was revised to measure nursing assistants' *Lack of Team Member's support*. **Impact on Health subscale** was revised to measure how much *nursing assistants' health* impacted by being a caregiver. **Impact on Schedule subscale** was revised to measure how much *nursing assistants' schedule* impacted by being a caregiver. The Impact on Finances subscale was not used in this study. In this study, the internal consistence reliabilities were as follow: (a) Caregiver's Esteem subscale: Cronbach's alpha = 0.718, (b) Lack of Team Member's Support subscale: Cronbach's alpha = 0.667, (c) Impact on Health subscale: Cronbach's alpha = 0.681, (d) Impact on Schedule subscale: Cronbach's alpha = 0.681.

Data analysis

SPSS 20 version was used to conduct the data analysis. Descriptive statistics and analysis with paired t-tests were applied to answer the research questions.

Results

Sample characteristics

There were 73 participants in this study. Their mean age was 35.02 ($SD = 10.68$). There were 14 male (19.2%), 59 female (80.8%), and most of them were married ($n = 33$, 45.2%) and single ($n = 31$, 42.5%). Forty-four participants (60.3%) had high school education, and the majority of the participants ($n = 53$, 72.6%) were Christians. The participants felt their health status is worse after being a caregiver. There were significant differences in health status between before and after being a caregiver ($t = 3.61$, $p \leq 0.001$) (Table 2).

Nursing assistants' caregiving self-perceptions

In table 2, it showed the nursing assistants' perception of caregiving. It can be categorized as 1) Quality of relationship between nursing assistants and their clients, 2) Nursing assistants' competence including their physical health and knowledge, and 3) Teamwork.

Table 1: Nursing Assistants' Knowledge related to Geriatric Mental Health pre-test (*N* = 73)

Questions for Geriatric Mental Health	Correct Answer	*n*	*%*
5. A visiting nurse observes signs of anxiety and stress in a newly widowed elderly client who lives alone. The MOST likely plan of intervention would be to:	provide resources to maintain a safe, comfortable, familiar home environment	61	83.6
7. When one of your assigned clients complains about the boredom and confinement associated with being in a wheelchair, you could BEST provide a respite for the client by:	sharing laughter or discussing current events of the day	57	78.1
6. The nurse has admitted a man who was brought to the emergency room by his daughter. The daughter says she noticed that something was wrong with her father when he began talking about her mother, who had died nearly 8 months ago, as if she were still alive	illusions or hallucinations	56	76.7
4. The nurse caring for elderly clients recognizes that which of the following is TRUE regarding the elderly and substance abuse?	Drugs with long half-lives and anticholinergic side effects are especially problematic for elderly clients.	52	71.2
1. An elderly couple, no longer able to safely manage by themselves in their own home, elects to move in with their daughter, who assumes the role of primary caregiver for both of them. A nurse case manager is working with this family. The nurse counsels the daughter to expect:	decreased self-worth and personal identity in both parents	51	69.9
3. A home health nurse visits an elderly client. The spouse reports that the client has recently begun to behave in an "abusive" manner and describes "catastrophic reactions" to minor events. The nurse assesses the client for which of the following as the MOST likely source of these behaviors?	untreated pain	48	65.8
2. The strongest predictors of first-time depression in the older adult are which of the following factors?	poor physical health and inadequate social support	43	58.9
9. You are working with an elderly client in a nursing home. The client is in a wheelchair most of the day, sitting alone in the corner of the dayroom, either grabbing at everyone who passes by or yelling out to people. This client has no visitors. The only living relative is a distant cousin who only communicates with the administrator of the home. Based on what you know about this client, you would put which of the following diagnoses in the highest priority?	Loneliness	38	52.1
10. Which antidepressant medications are commonly used in the elderly because of diminished risk of adverse effects?	selective serotonin reuptake inhibitors (SSRIs)	36	49.3
8. An assessment tool that is widely used for baseline mental status but not designed specifically as a screening device for delirium or acute confusional states is the:	Mini-Mental State Exam (MMSE)	32	43.8
9. You are working with an elderly client in a nursing home. The client is in a wheelchair most of the day, sitting alone in the corner of the dayroom, either grabbing at everyone who passes by or yelling out to people. This client has no visitors. The only living relative is a distant cousin who only communicates with the administrator of the home. Based on what you know about this client, you would put which of the following diagnoses in the highest priority?	Loneliness	38	52.1
10. Which antidepressant medications are commonly used in the elderly because of diminished risk of adverse effects?	selective serotonin reuptake inhibitors (SSRIs)	36	49.3

Table 2: Demographic Data (N = 73)

Variable	n	%	M	SD
Age (19 - 60 years)			35.02	10.68
How many years be a caregiver (0.5 - 40 years)			7.45	7.66
Gender				
Male	14	19.2		
Female	59	80.8		
Marriage				
Single	31	42.5		
Married	33	45.2		
Divorced	7	9.2		
Widowed	1	1.4		
Education				
High School	44	60.3		
Two-Year Technical School	17	23.3		
Undergraduate	12	16.4		
Religion				
Believe in Jesus Christ	53	72.6		
Income per month				
USD 667-999	9	12.3		
USD 1,000-1,333	29	39.7		
USD 1,334-1,666	13	17.8		
USD 1,667-1,999	8	11.0		
USD 2,000-2,333	4	5.5		
Above USD 2,333	8	11.0		
Knowledge about caring care receivers (7-35)			29.81	4.03
Geriatric Mental Health Pre-test (Range 0-10)			N = 73 M = 6.44	1.65
Pre-test (n = 13)			6.42	1.63
Post-test (n = 13)	t = -3.64** (p = 0.003)		7.58	1.58
Health Before being a caregiver[a]			4.78	1.05
Health After being a caregiver	t = 3.61*** (p = 0.001)		4.27	1.15

*** P ≤ 0.001   [a]Health status (1= poor, 5= excellent).

1) Quality of relationship between nursing assistants and their clients

Question number: 1, 17, 20, and 23; 87.7%-90.4% agreed or strongly agreed they had a positive relationship with care receivers and it is important to take care of the care receivers (Table 2).

2) Nursing assistants' competence including their physical health and knowledge

Question number: 3 and 19; 83.5-86.3% agreed or strongly agreed they had good health status and enough knowledge to take care of their clients (Table 3).

3) Teamwork.

Question number: 13; 72.7% of nursing assistants agreed or strongly agreed they had good teamwork to take care of care receivers (Table 3).

Nursing assistants' knowledge related to older people's mental health

The participants answered 10 questions for their knowledge related to older people's mental health test (range of score was from 0 to 10). There were 73 participates completed the pre-test, and only 13 of these participants completed the post-test. The mean score of these 13 participants' older people's mental health pre-test score was 6.42 (SD = 1.63) and the post-test score was 7.58 (SD = 1.58). There was a significant increase in knowledge related to older people's mental health between pre-test and post-test (t = -3.64, p = 0.003) (Table 2). The top 5 questions answered correctly were as follows (Table 1). "A visiting nurse observes signs of anxiety and stress in a newly widowed elderly client who lives alone. The MOST likely plan of intervention would be to:" and the correct answer was "provide resources to maintain a safe, comfortable, familiar home environment" (83.6% correct) (Table 1).

Table 3: Nursing Assistants' Caregiving Self Perceptions who answered "agree and strongly agree" (N = 73) *indicate positive reactions

Nursing Assistants' Caregiving Reactions	n	%
*17. Caring for him/her makes me feel good	66	90.4
*20. Caring for him/her is important to me	66	90.4
*23. I enjoy caring for him/her	65	89.1
*1. I feel privileged to care for him/her	64	87.7
*15. I have enough physical strength to care for him/her	64	87.6
*19. I am healthy enough to care for him/her	63	86.3
*3. My knowledge is adequate to being a nursing assistant	61	83.5
*9. I really want to care for him/her	57	78.1
4. My activities are centered around care of him/her	55	75.4
*13. My co- workers come together at caring for him/her	53	72.7
*12. I can do a better job for him/her	32	43.9
14. I have eliminated things from my schedule since being a nursing assistant.	32	43.8
11. I visit family and friends less since I have been a nursing assistant	27	37
18. The constant interruptions make it difficult to find time for relaxation	27	37.0
2. Others have dumped caring for him/her onto me	21	28.7
10. My health has gotten worse since I've been a nursing assistant	20	27.4
5. Since caring for him/her, it seems like I'm tired all of the time	18	24.6
6. It is very difficult to get help from my co-workers in taking care of him/her	13	17.8
8. I have to stop in the middle of work	13	17.8
22. My co-workers left me alone to care for him/her	8	10.9
7. I resent having to take care of him/her	4	5.4
16. Since caring for him/her, I feel my co-workers did not help me	3	4.1

"When one of your assigned clients complains about the boredom and confinement associated with being in a wheelchair, you could BEST provide a respite for the client by:" and the correct answer was "sharing laughter or discussing current events of the day" (78.1% correct). "The nurse has admitted a man who was brought to the emergency room by his daughter. The daughter says she noticed that something was wrong with her father when he began talking about her mother, who had died nearly 8 months ago, as if she were still alive" and the correct answer was "illusions or hallucinations" (76.7% correct) (Table 1).

"The nurse caring for elderly clients recognizes that which of the following is TRUE regarding the elderly and substance abuse?" and the correct answer was "Drugs with long half-lives and ant cholinergic side effects are especially problematic for elderly clients" (71.2% correct). "An elderly couple, no longer able to safely manage by themselves in their own home, elects to move in with their daughter, who assumes the role of primary caregiver for both of them. A nurse case manager is working with this family. The nurse counsels the" and the correct answer was "decreased self-worth and personal identity in both parents" (69.9% correct) (Table 1).

Discussion

This study offers an insight into the nursing assistant's self-perceptions related to taking care of older people and knowledge of older people's mental health.

Nursing assistants' caregiving self-perceptions

Table 3 shows the nursing assistants' self-perceptions in three topic areas: 1) Quality of relationship between nursing assistants and their clients; 2) Nursing assistants' competence including their physical health and knowledge; 3) Quality of Teamwork. Most of the participants in this study have positive responses in all three areas. The nursing assistants reported that they had a good relationship with their care receivers. They also reported that they themselves had good health status and appropriate knowledge to take care the older people. They also reported a good teamwork among their colleagues.

These findings concerning teamwork differ from the results of Holmberg et al. study (2013) [21] which indicated that focus groups were conducted with over 150 certified **nursing assistants** (CNAs)

in seven **nursing** homes to obtain their opinions on how the work environment supported or impeded their **care giving** to residents. Strong opinions emerged about work environment interference with CNAs' ability to provide quality and comprehensive care. Participants also believed that their supervisors did not respect the value of the care and nurturing that CNAs provided. Their findings highlight the need for improved relationships between CNAs and management in **nursing** homes [21].

Nursing assistants' knowledge related to older people's mental health

This study provides the evidence of the effectiveness of nursing intervention to improve the nursing assistants' knowledge related to older people's mental health. Although only 13 nursing assistants in the nursing home received the nursing intervention, there was a significant difference between pre-test and post-test scores.

It is difficult to recruit nursing assistants to participate in educational intervention studies because they are very busy at work. They may not be motivated to stay after work to complete questionnaires on their own time. Researchers may need to create some kinds of external or internal motivation for the nursing assistants. A strong relationship between researchers and nursing home administrators or nurses may also provide ways to conduct interventional research.

The study by Morgan and Konrad (2008) is a successful example of doing research in nursing home [18]. The significant results in this study indicated the positive effects of an educational intervention on nursing assistants. In the future, the interventions can be more interactive activities to increase the participants' interest. For example, watching the DVD and discuss what they have learned and their opinions after watching the DVD. The time and environment are important factors to be considered [18]. For example, providing several sessions of lessons at different schedules for nursing assistants to choose their available time to participate the nursing educational activities [18]. To provide a certificate and a gift will increase people's motivation to participate. The results are similar to the study of Pesut et al. (2015) [19].

This pilot study is important because few researchers have reported on the nursing assistants' knowledge related to older people's mental health. In this study, the top 5 highest percentages of answering correct questions. The top 5 responses ranged from 69.9% to 83.6%. These responses indicated the nursing assistants who were caring for elderly patients understood 1) how to respond to signs of anxiety and stress; 2) how to respond to boredom; 3) how to recognize illusions and hallucinations; 4) the dangers of drugs with long half-lives and anticholingeric side effects; and 5) reactions of the elderly who must be cared for by family members. The questions with the 5 lowest correct responses indicate knowledge areas to be addressed in future interventions. Few studies have reported these results, although some studies also examined nursing assistants' knowledge [21].

Limitations

The participants in this study were a convenience sample, recruited from nursing homes and medical and surgical units. Therefore there are limitations in the generalizability beyond a similar population. Also, the results of this study had small sample size to complete the intervention part. In the future, the author should increase the sample size and improve the teaching strategies to be more interactive in order to recruit more participants.

An additional limitation is the low reliabilities in the CRA instrument. Because few study examined the nursing assistants' caregiving reaction, the CRA was used in this study. It has been used to the informal caregivers who took care of older people with very good internal consistency reliability. The instruments with low reliability might "have too few items", "employed with a too homogeneous group", and "small sample size [21]". The subjects in this study were limited in the nursing assistants. Therefore they had a homogeneous

tendency that also contributes to the low reliability of subscale. The low internal consistency reliability reflected the low consistency attitude of nursing assistants about the caregiving attitude.

Conclusion

Nursing assistants play a vital role in the care of older people in nursing homes and medical facilities. Their self-perceptions about their job responsibilities and their knowledge of mental health issues for the elderly are, therefore, very important. Additionally, without knowledge of mental health issues in the elderly, nursing assistants may not provide appropriate, quality care or alert nurses when help is needed. This study involved two phases. Phase 1 indicates that the self-perceptions of the nursing assistants are generally positive about their relationships with their clients, their own competence and health status, and the quality of teamwork in their facilities. Additional research should be conducted to further investigate self-perceptions of teamwork in workplace, because current results differ from a previously published study by Holmberg et al. (2013) [21]. In the second, quasi-experimental pilot study, there was a significant difference/improvement of knowledge about mental health of the elderly between a pre-test and a post-test following a knowledge intervention. One of the biggest challenges in this study was the time needed for the nursing assistants to complete the questionnaires and participate in the intervention. Addressing this issue will also impact how to recruit additional subjects for a larger sample. Working closely with medical and nursing home managers to find ways in which they can support the participation of the nursing assistants may help widen the sample size. These results in this research suggest some avenues for future study. For example, interventions should include video, discussion, and interactive components with a longevity feature to test retention of new knowledge.

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