



EFFECTIVENESS OF AN AWARENESS CAMPAIGN REGARDING DEMENTIA AMONG ADULTS

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Abstract: To ascertain the impact of the awareness campaign on adults' knowledge of dementia in a particular urban community, Bankura, West Bengal, a pre-experimental study was conducted which aimed to determine the relationship between adult dementia knowledge and specific demographic variables, as well as to compare the knowledge of adults about dementia before and after the awareness program. The awareness program's effectiveness was measured by the difference in knowledge scores before and after the awareness campaign. 140 individuals (n = 18–60 years) were selected conveniently, who belonged to Kethardanga, Bankura, West Bengal, were chosen. The DKAT II, a standardized and reliable 21-item measure, was used to assess knowledge. The results showed that post-test knowledge score (20.5±3.3) was greater than their pre-test knowledge score (13.7±1.9) which was evident by the 't' value of 10.1 [3.29, df (138), p<0.05] The findings have several implications in various domains of health sciences.

Index Terms - Effectiveness, Knowledge, adults, awareness program, community, dementia.

I. INTRODUCTION, BACKGROUND AND NEED OF THE STUDY

Aging is characterized by the unavoidable, irreversible deterioration in organ function that occurs over time and accelerates when there is co-morbidity, poor lifestyle habits (e.g., improper food, sedentary lifestyle, lack of exercise, substance misuse, etc.), or risk factors. Aging is a natural occurrence that can cause several biological and psychological changes throughout time, which can lower one's ability to perform.¹

One of the most vulnerable groups in society is the elderly. Not only are they physically frail, but they also have low self-esteem, no financial resources, and a declining standing in society. As a result, as one age, their minds wrinkle more than their faces. They deal with many issues, including reliance, poor health, reduced social security, status and recognition, and a lack of opportunity for creative leisure activities. As a result, growing older calls for ongoing attention and specialized care.²

The global population of elderly individuals (60 years of age and older) is predicted to be 416 million. This is also the case in India, where life expectancy is steadily rising and 7.5% of the population is over 60.³

Dementia is a disease that primarily affects the elderly. It is defined by a progressive loss of memory and other cognitive abilities like language, comprehension, judgment, and planning. As a result, people with dementia have difficulty with both social contact and activities of daily living (ADL). People who suffer from dementia frequently lose their basic freedoms and liberties. Restraints, both pharmacological and physical, are commonly employed in acute care settings and senior living facilities.⁴

The WHO estimates that annually 10 million new cases of dementia are diagnosed globally, out of an estimated 55 million existing cases. Alzheimer's disease accounts for 60% to 70% of cases, making it the most common kind. Currently being the seventh most common cause of death worldwide, dementia is also a major factor for disability and dependency among the elderly.⁵

The several varieties of dementia associated with Alzheimer's disease (AD) include dementia with early onset, dementia with late-onset, dementia in mixed or atypical type, and dementia in indeterminate type, as per the International Classification of Diseases (ICD 10) classification.⁶

Prior until recently, the percentage of people in India who had Alzheimer's disease was lower than that of Americans over 65 who had the disease, at 4%. The anticipated projected growth in the number of Indians aged 60 and above would rise from 70 million in 2001 to 179 million in 2031 and then to 301 million in 2051. 3.2 million individuals in India suffer from Alzheimer's disease. About 46,000 people in Kolkata suffer from Alzheimer's disease. Thirty thousand patients diagnosed with Alzheimer's disease live in Bangalore, and fifty thousand in Delhi.⁷

Even though aging-related health issues are prevalent, the general public delays seeking professional assistance because of a lack of awareness, which results in late presentations of illnesses that have already occurred. The elderly's perception of and familiarity with geriatric care facilities, in addition to the quality and accessibility of services, impact how much they profit from current healthcare systems. Thus, awareness of dementia can have a big influence on how people seek medical attention, report instances, get services, and follow through on their treatment, all of which can have a big impact on the higher morbidity and death rates linked to dementia.

Owing to the aforementioned factors, the researcher evaluated adult residents of a particular urban community's awareness of dementia and developed an awareness campaign to combat the knowledge deficit associated with it.

II. PROBLEM STATEMENT

Effectiveness of the awareness campaign regarding dementia among adults in a selected urban community, Bankura, West Bengal

III. OBJECTIVES OF THE STUDY

1. To identify the knowledge regarding dementia among adults before and after the awareness campaign.
2. To evaluate the effects of the awareness campaign on knowledge regarding dementia among adults by the difference between pre-test and post-test knowledge scores.
3. To find out the association between knowledge regarding dementia with selected demographic variables.

IV. HYPOTHESIS

Research and null hypothesis was formulated to assess effectiveness, which as follows-

H0: There is no significant difference between the pre-test knowledge score and post-test knowledge score of participants at 0.05 level of significance.

H1: There is a significant difference between the pre-test knowledge score and post-test knowledge score of participants at 0.05 level of significance.

V. RESEARCH METHODOLOGY

The pre-experimental one-group pre-test post-test study was conducted applying a quantitative research approach, among 140 adults (n =18-60 years) who were selected conveniently residing in Kethardanga, Bankura, West Bengal. A semi-structured validated (CVI-0.97) interview schedule containing five (5) items was prepared to assess demographic data that includes, age, sex, education, socioeconomic status, and sources of knowledge. Knowledge regarding dementia was assessed by a standardized tool, DKAT II (Dementia Knowledge Assessment Tool Version II) which was valid (CVI-1), reliable (split half method-0.79) twenty-one (21) items questionnaire. Ethical clearance and administrative approval were obtained. The investigator introduced herself. Participants were provided with an information sheet and were explained regarding the nature, and course of study. Informed Consent was obtained from the subjects. Confidentiality as well as anonymity was assured. A separate code number was used for each subject. An interview was conducted to collect data using two tools. After obtaining pre-test scores, the subjects were gathered in a nearby community house, and the awareness campaign was delivered. Post-test was taken after one week. Information was recorded.

5.1. Population and Sample

In this study population was adults residing in rural community. One hundred forty (140) adults were chosen as a sample using non-probability convenience sampling technique.

5.2. Data and Sources of Data

Data was collected from samples before and after administration of awareness campaign regarding dementia

5.3. Variables

Variables of the study contains dependent and independent variable.

Independent variable- Awareness campaign regarding dementia

Dependent variable- Knowledge regarding dementia

5.4. Tool

DKAT II (Dementia Knowledge Assessment Tool Version II) a valid (CVI-1), reliable (split half method-0.79) twenty-one (21) items questionnaire was applied to assess knowledge regarding dementia.

VI. RESULTS AND DISCUSSION

6.1. Findings of the knowledge of adults regarding Dementia

Table 6.1.1: Distribution of scores of respondents according to their pre-test and post-test knowledge scores

n=140

| Degree of score | Range of score | Pre-test | | Post-test | |
|-----------------|-----------------|-----------|----------------|-----------|----------------|
| | | Frequency | Percentage (%) | Frequency | Percentage (%) |
| Excellent | >17 (>80%) | 11 | 7.5 | 88 | 62.5 |
| Good | 15-17 (65%-80%) | 42 | 30 | 32 | 22.85 |
| Average | 11-15 (50%-64%) | 63 | 45 | 15 | 10.70 |
| Poor | <11(<50%) | 24 | 17.5 | 05 | 3.57 |

Data obtained from Table 6.1.1. revealed that a maximum (45%) of respondents scored 'average' in the pre-test but in the post-test majority (62.5%) of the respondents scored 'excellent'.

Table 6.1.2. : Mean, Median, and Standard deviation of the pre-test and post-test knowledge scores of participants.

n=140

| Group | Mean | | Median | | SD | |
|--------|----------|-----------|----------|-----------|----------|-----------|
| | Pre-test | Post-test | pre-test | Post-test | Pre-test | Post-test |
| Adults | 13.7 | 20.5 | 13 | 21 | 3.3 | 1.9 |

Data represented in Table 6.1.2. depicted that the mean post-test knowledge score of participants was higher than the mean pre-test knowledge score.

6.2. Findings of the effects of awareness campaign regarding Dementia among adults in an urban community

To find out significant differences, a paired 't' test was conducted between pre-test and post-test knowledge scores, and a hypothesis was formulated

H₀: There is no significant difference between the pre-test knowledge score and post-test knowledge score of participants at 0.05 level of significance.

H₁: There is a significant difference between the pre-test knowledge score and post-test knowledge score of participants at 0.05 level of significance.

Table 6.2.1. Mean, standard deviation, mean difference, and paired 't' value of the pre-test and post-test knowledge score of participants.

| Knowledge score | Mean | SD | Mean difference | t-value |
|-----------------|------|-----|-----------------|---------|
| Pre-test | 13.7 | 3.3 | 6.8 | 10.1 |
| Post-test | 20.5 | 1.9 | | |

$t'_{0.001,139}=3.29$; $p=0.001$,

Based on the information shown in Table 6.2.1, it was determined that the participants' post-test knowledge score (20.5 ± 1.9) was significantly higher than their pre-test knowledge score (13.7 ± 3.3). This difference, or 6.8, was found to be statistically significant. The corresponding 't' value (10.1) further supported the conclusion that the mean difference was real and not the result of chance.

As a result, the research hypothesis was supported but the null hypothesis was rejected. Therefore, it concludes the success of the awareness campaign in raising community members' awareness of dementia in Kethardanga.

6.3. Findings related to the association between the pre-test knowledge score of participants and selected demographic variables

Table 6.3.1 χ^2 values showing the association between pre-test knowledge score and the age, and educational status of participants.

| Demographic variables | Knowledge scores | | Chi-square value (χ^2) | Degree of freedom | P value | Inferences |
|-----------------------|------------------|------------|-------------------------------|-------------------|---------|------------|
| | \leq Median | $>$ Median | | | | |
| Age (in years) | | | 2.59 | 1 | 0.1 | NS |
| <40 | 42 | 33 | | | | |
| \geq 40 | 45 | 20 | | | | |
| Educational status | | | 1.28 | 1 | 0.3 | NS |
| < Madhyamik | 67 | 45 | | | | |
| \geq Madhyamik | 20 | 08 | | | | |

$\chi^2_{0.05,1}=3.84$; $p=0.05$

The data in Table 6.3.1 demonstrated that there was no significant correlation between the participants' pre-test knowledge score and age or level of education. This suggests that the participants' pre-test knowledge score was independent of both of these variables.

6.4. Summary:

The above findings concluded that adults gained knowledge after conducting the awareness campaign, and it was effective which is evident from the use of descriptive and inferential statistics.

DISCUSSION

In this discussion section, several studies have shown that structured teaching programs can significantly improve knowledge about dementia among adults. The results of this study also indicate a significant increase in knowledge scores after the awareness campaign. It is done under following headings-

Discussion related to knowledge scores regarding dementia among adults

Yadav S. conducted a study in April 2019 to evaluate the impact of a structured teaching program (STP) on adults' knowledge about dementia in a chosen community area in Delhi NCR. The data from the aforementioned study showed that, in the pre-test, the majority of participants (83.33%) had "poor knowledge," the maximum (16.66%) had "average knowledge," and none of them had "very good knowledge" or "good knowledge." In the post-test, on the other hand, the maximum (23.33%) had "good knowledge," the maximum (13.33%) had "poor knowledge," and 3.33 percent of them had "very good knowledge." Thus, the study's pre- and post-test knowledge scores are allocated in accordance with the results. ⁸

Another descriptive cross-sectional study on college students' awareness about Alzheimer's disease in Kathmandu, Nepal was carried out by Baral K, Dahal M, and Pradhan S. The study's findings indicated that college students' understanding of the disease was below moderate.⁹

The results of the present study also showed that, in the pre-test and post-test, the majority of participants (62.5%) and the highest (7.5%) of people scored Excellent knowledge. The greatest percentage of participants (30%) and maximum percentage of participants (37.5%) in the pre-test and post-test, respectively, achieved an excellent knowledge score. Only 45% of the participants achieved an average knowledge score on the pretest, whereas none of them received a score on the post-test. Only a maximum of 17.5% of the participants received a poor knowledge score.

Discussion related to the effects of the awareness campaign by the difference of pre-test and post-test knowledge scores regarding the prevention of dementia among adults before and after the awareness campaign

Yadav S. conducted a study in April 2019 to evaluate the impact of a structured teaching program (STP) on adults' knowledge about dementia in a chosen community area in Delhi NCR. The mean post-test knowledge score (20) exceeded the mean pre-test score (20), according to the data. At the 0.05% level, the mean difference in the knowledge pre-test score (6.8) was significant at the " $t=7.42 * P < 0.05$ " level.⁸

The effectiveness of structured training programs on knowledge about Alzheimer's disease among family members of the elderly in a chosen urban community at Mangalore was the subject of a second study by Rodrigues L. and Mathias T. in March 2016. According to analysis, the mean scores for post-test knowledge (20.78 ± 3.31) were greater than the mean scores for pretest knowledge (12.90 ± 2.43). Using a paired "t" test, the statistical significance of the difference between the pretest and post-test was examined, and the results showed that the difference was extremely significant ($t = 40.85, P < 0.05$).¹⁰

Additionally, the current study found that young people's mean post-test knowledge score (20.5 ± 3.3) was higher than their pre-test knowledge score (13.7 ± 1.9). This difference was supported by the 't' value of 10.1 [$3.29, df (139), p < 0.05$], which shows that the mean difference was caused by true variation rather than chance. As a result, the research hypothesis was supported and the null hypothesis was rejected. Therefore, it can be said that the awareness campaign was successful in raising community members' awareness of dementia in Kethardanga.

Discussion on the association between pre-test knowledge scores and selected demographic characteristics.

Age, education, and the majority of other variables do not significantly affect pre-test knowledge scores, according to a study by Rodrigues L. and Mathias T. on the effectiveness of planned teaching programs on knowledge regarding Alzheimer's disease among the family members of the elderly in a selected urban community in Mangalore conducted in March 2016.¹⁰

The current study could not find a significant correlation between age or education level and pre-test knowledge levels.

Implication of the study

Nursing practice

- As the study revealed that varying degree of knowledge deficit exist among older adult regarding basic concept of dementia, risk factors for dementia, sign and symptoms of dementia and prevention of dementia. They need to be educated in this matter it was found the education was an effective method to aid the older adult to gain knowledge regarding prevention of dementia. The investigator as nurse felt the need that the nurse, Community Health officer, ANM, ASHA, multipurpose health workers should be educated on this, so that they could be used as resource personnel to impart this knowledge. Nursing personnel in the community should be equipped with adequate knowledge to educate the older adult individually and in group regarding prevention of dementia. Embarrassment, misconceptions, false beliefs and ignorance must be removed from the society by planned education with scientific basis. Nursing personnel who are working in the hospital or community should carry out individual health teaching and group teaching regarding prevention of dementia.

Nursing education

The current trends in the health care delivery system emphasize more on prevention than curative aspect. The study also implies that health personnel have to be properly trained as how to teach the women regarding prevention of dementia. Nursing curriculum should be such that if prepared the prospective nursing student to assist people in hospital and community in all aspect of preventive, Promotive and curative care. Nursing students must aware of their role in health promotion and disease prevention in the present and future era. Since dementia is one of the major mental health problem in the community, the nursing curriculum should include more control on prevention of dementia. The student nurse should have greater involvement in the current workshop and seminar related to prevention of dementia organized by WHO, etc.

Nursing administration

- The health administrator of nursing at the national, state, district, institutional and local level should focus their attention on making the public conscious about the prevention of dementia and awareness programme regarding prevention dementia. She should arrange seminar for nurses working under her in order to highlight the magnitude of the problem among geriatric population.
- Nursing administrator should co-ordinate with other health team administrator in planning, implementing evaluating the health programme related to prevention of dementia

Nursing research

- There is a vast scope of nursing research in relation to dementia. The general aspect of study result can be made by further replication of the study helps the nurse researcher to develop insight to the development of teaching module and set of information for various aspect of prevention of dementia.

Limitation

The limitation of the present study were as follows

- Small convenient sample in this study limits the generalization of the findings.
- As the study was conducted only area under Ketherdanga community , Bankura, west Bengal. So there is lack of diverse population and thus the generalization of finding is limited.
- Due to data collection time number of sample was low (140), this also limited the diversification of study population and generalization of the findings.
- The study was limited on only older adult not to whole family.

Recommendations

- A true experimental study can be conducted on dementia among adults using larger samples.
- The incidence of dementia can be reduced through undertaking appropriate health measures including information, public education, lifestyle modification, healthy diet, regular exercise, common campaigns to the community and family levels to rise awareness about disease.
- Adult's education should be improved by self-help group and could be motivated by nursing personnel as part of the health care services. Health education module related to important of prevention of dementia can be imparted to all the age group. Health education regarding prevention of dementia can be given to the ASHA because they are the caregiver to the community people.
- A retrospective study can be conducted on patients suffering from dementia to identify the other risk factors.
- A study can be conducted to find out the prevalence of dementia among high risk group.

Conclusion

The study reflects a lack of knowledge among adults in urban communities regarding dementia. It also showed significant changes in knowledge regarding dementia after attending the awareness campaign. The study emphasizes providing compassionate care for the elderly and organizing more awareness campaigns by strengthening community health services to improve health-seeking behavior among the general population. The study has important implications for various domains of health sciences.

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