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Evaluation of the Knowledge, Attitudes, and Practices of Caregivers of Elderly Individuals Suffering from Alzheimer's Disease at Selected Hospitals in Delhi

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Abstract: ***Background: Neurons in the cerebral cortex and some subcortical areas gradually and selectively degenerate in Alzheimer's disease, a chronic neurological condition. It has no known cure and is the primary cause of impairment in the elderly. A little over half of those with Alzheimer's get help from friends and family at home. Family members bear a large portion of the responsibility for caring for patients with Alzheimer's disease.***
Aim: The objective of this research was to evaluate the knowledge, attitudes, and practices (KAP) of caregivers for elderly individuals with Alzheimer's disease at selected hospitals in Delhi.
Material and Methods: This study was descriptive in nature and involved 30 caregivers of elderly individuals diagnosed with Alzheimer's disease. The researcher created a questionnaire that consisted of four sections for data collection. Section A focused on the demographic characteristics of the participants. Section B examined the knowledge of caregivers regarding elderly individuals with Alzheimer's disease. Section C evaluates the attitudes of caregivers towards elderly individuals with Alzheimer's disease using a rating scale. Section D assessed the practices of caregivers dealing with Alzheimer's disease. Both descriptive and inferential statistics were used to analyze the data.
Results: The research indicated that 53.3% of participants possessed a strong understanding, while 33.3% demonstrated an average level of knowledge, and merely 13.4% exhibited below-average knowledge. A significant number of caregivers displayed a negative attitude towards client care, with only 50% exhibiting positive attitudes. The majority of caregivers were observed to engage in poor practices, with just 10% adhering to good practices.
Conclusion: There is a recognized necessity for the education and support of caregivers for individuals with Alzheimer's disease. The research indicated that while caregivers possessed a solid understanding of Alzheimer's disease, most expressed feelings of stress related to their caregiving responsibilities, and a significant number were observed to engage in inadequate practices. Therefore, it is essential to provide caregivers with education regarding the characteristics of the disease and its progression.
Keywords: Alzheimer's disease, Elderly, Caregivers, Knowledge, Attitude, Perception.

I. INTRODUCTION

Aging is a universal phenomenon and a natural biological process within the life cycle. The elderly undergo various changes in multiple aspects of their lives. It is evident that individuals become increasingly vulnerable to chronic diseases, physical disabilities, and mental incapacities as they age. Alzheimer's disease is a progressive, irreversible, degenerative neurological condition that starts subtly and is marked by a gradual decline in cognitive abilities along with changes in behavior and emotional responses. This condition can impact individuals aged 40 and above, although it is predominantly observed in those who are 65 years or older.

The fundamental pathophysiological mechanisms underlying brain damage associated with Alzheimer's disease remain unclear. The most extensively debated and investigated theory regarding the etiology of Alzheimer's disease is the amyloid cascade hypothesis. The most compelling evidence in favor of the amyloid cascade hypothesis is derived from research on early-onset familial

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Alzheimer's disease. Genetic mutations linked to Alzheimer's disease have been identified in approximately fifty percent of individuals with early-onset forms of the disease. In all these cases, the mutation results in the overproduction in the brain of a particular variant of a small protein fragment known as A-Beta.

The pathophysiological characteristics of the disease consist of distinct neuropathological and biochemical alterations observed in individuals diagnosed with Alzheimer's disease. These alterations encompass neurofibrillary tangles and senile or neurotic plaques. The degeneration of neuronal cells primarily occurs in the cerebral cortex, leading to a reduction in brain size. Comparable changes are noted, albeit to a lesser degree, in the normal brain tissue of older adults. The cells that are predominantly impacted by this disease are those that utilize the neurotransmitter acetylcholine. From a biochemical perspective, the enzyme responsible for the synthesis of acetylcholine is diminished. Acetylcholine plays a crucial role in the processing of memory.

Alzheimer's disease impacts not only the individual diagnosed but also their family members, as the ongoing stress of witnessing a loved one's gradual decline affects everyone involved. A significant portion of the responsibility for caring for individuals with Alzheimer's disease rests on family members, especially spouses and adult children, who are predominantly female.

Caring for a patient with Alzheimer's disease is a lengthy and challenging endeavor. The caregiving process in these situations is both intensive and extended. Many caregivers of individuals with Alzheimer's disease experience feelings of depression, anxiety, and other health issues. Therefore, it is essential for caregivers to receive education regarding the nature of the disease and its progression.

II. METHODS

The research methodology chosen for this study was a quantitative approach utilizing a descriptive design. The study took place across two hospitals in Delhi. Data collection occurred and employing a purposive sampling technique. Formal permission was secured from all two centers. A total of 30 caregivers participated in the study. The focus of this research was on caregivers of elderly individuals diagnosed with Alzheimer's disease, specifically those aged 30 and above 60 years.

A. Sample Size

The sample consisted of 30 caregivers of elderly individuals diagnosed with Alzheimer's disease.

B. Sampling Technique

A purposive sampling technique was employed to select the participants.

C. Tool for data collection

The data collection tool was created by the researcher and comprised of four sections: -

Section-A focused on the demographic characteristics of the participants.

Section-B included a questionnaire assessing the knowledge of caregivers of elderly individuals with Alzheimer's disease.

Section-C presented a rating scale evaluating the attitudes of caregivers of elderly individuals with Alzheimer's disease.

Section-D contained a questionnaire regarding the practices of caregivers dealing with Alzheimer's disease. Descriptive and inferential statistics were utilized to analyze the data.

D. Method of Data Collection

Data was gathered through a structured interview schedule.

E. Procedure for Data Collection

Informed consent was secured from the participants prior to the interview. The caregivers were informed about the study's purpose, and assurances of anonymity and confidentiality were provided, followed by obtaining their written consent. The participants were interviewed using the questionnaires developed by the investigator. The total duration of each interview was 30 minutes.

III. DATA ANALYSIS

The gathered data were examined and interpreted according to the study's objectives through the application of descriptive and inferential statistical techniques.

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The reliability of the instrument was assessed using the test-retest method, employing Pearson's correlation coefficient, which yielded a value of r = 0.88, indicating reliability. The relationship between categorical variables was investigated using the Chi-square test. A p-value of less than 0.05 was deemed statistically significant.

IV. RESULTS

The research indicated that a significant portion (46.7%) of the caregivers were over 60 years old. Additionally, 26.6% of them fell within the 30-40 age range, while 20% belonged to the 41-50 age group. A notably small percentage, specifically 6.7%, of the sample was in the 51-60 age range. A majority (60%) of the caregivers were female, with only 40% being male. Most (43.3%) of the caregivers held a graduate degree, while 26.7% had completed higher secondary education, 16.6% had secondary education, 6.7% had primary education, and the remaining 6.7% were illiterate. In terms of religion, 73.3% of the caregivers identified as Hindu, 6.7% as Muslim, and 20% as Christian. A large majority (86.6%) reported an income exceeding 15,000 per month, whereas the remaining 13.4% had an income below this threshold. Concerning their relationship with the clients, 36.6% of the participants were wives, 20% were daughters, 13.4% were sons, and 30% were husbands. Regarding the duration of illness, 56.6% of the clients suffered from Alzheimer's for less than one year, 16.7% for 1-3 years, 23.3% for 4-6 years, and 3.4% for more than 6 years. In terms of the duration of caregiving, 53.3% of the participants had been caring for the client for less than one year, 20% for 1-3 years, 23.3% for 4-6 years, and 3.4% for more than 6 years, respectively.

The findings of the research indicated that among 30 caregivers of elderly individuals with Alzheimer's disease, the majority (53.3%) possess above-average knowledge, while (33.3%) have an average level of knowledge, and only (13.4%) exhibit a knowledge level that is below average. A significant correlation exists between knowledge and factors such as educational status, family income, and the duration of care provided to the client.

A significant portion of caregivers (50%) reported experiencing stress occasionally while caring for the client, (30%) stated that they never feel stressed in their caregiving role, and the remaining (20%) indicated that they often feel stressed when taking care of the client. There is a notable association between attitude and both educational status and the duration of caregiving.

In terms of practice, a large majority (66.7%) of caregivers demonstrated poor practices, (23.3%) exhibited fair practices, and only (10%) of caregivers displayed good practices. A significant relationship was found between practice and both educational status and family income.

Table: 1. Participants Socio-Demographic Variables n= 30

S.No.	Demographics Variables	Frequency	Percentage
1	Age of care givers		
	(a) 30- 40 years	8	26.6
	(b) 41- 50 years	6	20
	(c) 51-60 years	2	6.7
	(d) Above 60 years	14	46.7
2	Gender		
	(a)Male	12	40
	(b)Female	18	60
3	Educational Status		
	(a)Illiterate	2	6.7
	(b)Primary	2	6.7
	(c)Secondary	5	16.6
	(d)Higher Secondary	8	26.7
	(e)Graduation	13	43.3
4	Religion		
	(a) Hindu	22	73.3
	(b) Muslim	2	6.7
	(c) Christian	6	20
5	Family Income		

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	(a)Below 5000 (b)5001-10000 (c)10001-15000 (d)Above 15000	0 0 4 26	0 0 13.4 86.6
6	Relationship with the Client (a)Son (b)Daughter (c)Husband (d)Wife	 4 6 9 11	 13.4 20 30 36.6
7	Duration of Illness (a)<1 year (b)1-3 years (c)4-6 years (d)>6 year	 17 5 7 1	 56.6 16.7 23.3 3.4
8	Duration of taking care of the Client (a)<1 year (b)1-3 years (c)4-6 years (d)>6 year	 16 6 7 1	 53.3 20 23.3 3.4

The findings of the research indicated that among 30 caregivers of elderly individuals with Alzheimer's disease, the majority (53.3%) possess above-average knowledge, (33.3%) have an average level of knowledge, and only (13.4%) exhibit a knowledge level that is below average, as illustrated in Table 2.

Table 2 Knowledge Level of Care Givers of Elderly with Alzheimer's Disease n= 30

Level of Knowledge	Score Range	Frequency	Percentage
Below Average	≤33.3%	4	13.4
Average	33.4%- 66.6%	10	33.3
Above Average	>66.7%	16	53.3

As indicated in Table 3, the majority of caregivers (50%) reported that they occasionally experience stress while caring for the client. In contrast, (30%) of caregivers stated that they never feel stressed when attending to the client, while the remaining (20%) indicated that they often feel stress in their caregiving role.

Table 3 Attitude Level of Care Givers of Elderly with Alzheimer's Disease n= 30

Level of Attitude	Score Range	Frequency	Percentage
Most of the times	≤6	6	20
Sometimes	7-13	15	50
Never	>13	9	30

Table 4 indicates that a majority (66.7%) of caregivers exhibited poor practices, while (23.3%) demonstrated fair practices, and only (10%) of caregivers adhered to good practices.

Table 4 Practice Level of Care Givers of Elderly with Alzheimer's Disease n= 30

Practice Level	Score Range	Frequency	Percentage
Poor	≤33.3%	20	66.7
Fair	33.4%- 66.6%	7	23.3
Good	>66.7%	3	10

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V. DISCUSSION

In this research, a total of 30 caregivers participated. To assess the significant relationship between knowledge, attitudes, and practices with selected variables, the Chi-square test was employed.

The computed Chi-square values for demographic variables such as age, gender, religion, relationship with the client, duration of illness, and duration of caregiving for clients with Alzheimer's disease were not significant at the 0.05 level concerning knowledge scores. Conversely, other variables like education and family income exhibited a significant association with knowledge scores.

The computed Chi-square values for demographic variables such as age, gender, religion, relationship with the client, duration of illness, and duration of caregiving for clients with Alzheimer's disease were not significant at the 0.05 level concerning attitude scores. In contrast, other variables such as education and family income demonstrated a significant association with attitude scores.

The computed Chi-square values for demographic variables such as gender, religion, family income, relationship with the client, duration of illness, and duration of caregiving for clients with Alzheimer's disease were not significant at the 0.05 level concerning practice scores. However, other variables such as age and education showed a significant association with practice scores.

VI. CONCLUSION

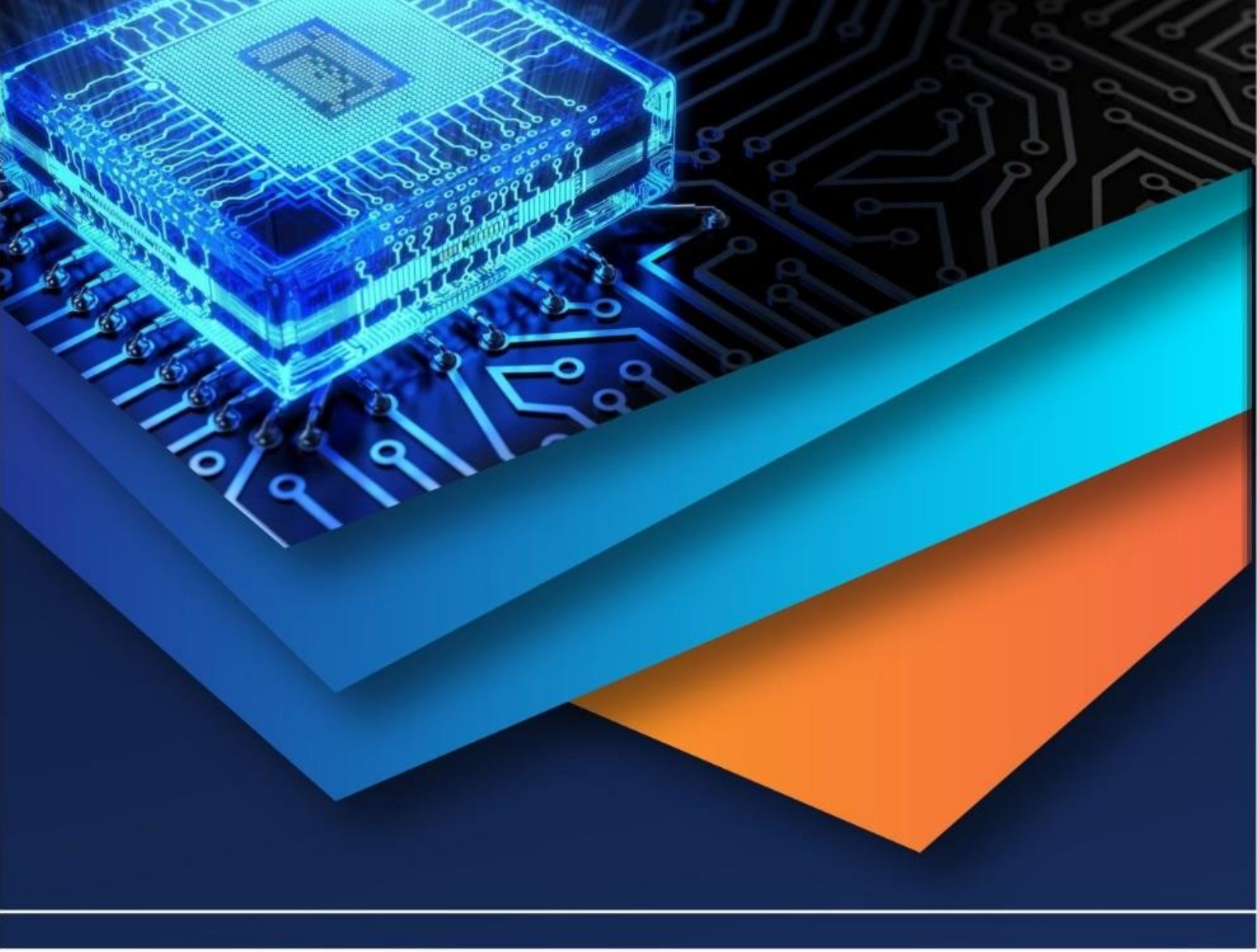
The research aimed to evaluate the knowledge, attitudes, and practices of caregivers for elderly individuals with Alzheimer's disease. It was discovered that while the caregivers possessed a good level of knowledge, a significant number reported experiencing stress related to their caregiving responsibilities. Furthermore, many exhibited suboptimal practices in caring for their clients. Given that there is currently no cure for Alzheimer's disease, it is crucial to enhance and support the quality of life for patients, their families, and their caregivers to the greatest extent possible. The strain on caregivers can be alleviated through education on appropriate care techniques and by implementing necessary measures to safeguard the caregivers' social lives and mental well-being.

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