

# Association of Dementia and Physical Illness among the Elderly Patients in Pakistan

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## ABSTRACT

Throughout the world, elderly individuals are rapidly increasing & dementia has become the center of attention of healthcare specialists. This research aimed to explore dementia and physical illness as their correlation among the elderly patients.

**Methods:** This was an observational and Cross-sectional exploration led during the time frame from July 2018 to September 2019 in the Psychiatry department of Saidu Teaching Hospital, Swat, Pakistan. Despite some boundaries, this study delivers basic evidence about the medical conditions related to dementia in elderly patients in Pakistan. For this reason, 90 elderly patients aged 60 years appearing both in the inpatient and outpatient department meeting criteria either exclusion or inclusion were selected regardless of gender and age. The convenient sampling technique was applied for selection of individuals.

**Results:** The results of this analysis revealed that most of them (57.77%) had the co-morbid physical disorder. Hypertension is a common Co-morbid physical illness (19.2 percent). Nine (10 percent) of the respondents were existing smokers & 16 (17.8 percent) had a smoking history of more than 5 years. In the analysis, 50% of the participants detected with dementia had high blood pressure ( $c^2 = 3.8908$ ,  $P = 0.049$ ), 33% had co-morbid diabetes mellitus ( $c^2 = 2.4387$ ,  $P = 0.12013$ ), 33% had a history of cerebrovascular accident (CVA) and 27.8% had a history of smoking.

**Conclusion:** This study gives preliminary data that can be used in future research on clinical aspects related to patients with dementia in Pakistan.

**Key Words:** Dementia, elderly patients, Co-morbid physical illness.

## INTRODUCTION

A leading cause of illness in the older residents is dementia. It has high prevalence above 65 years of age but can also occur before 65<sup>1-2</sup>. Dementia is defined as a syndrome correlated with many disorders, including memory, speech, and perception, characterized by a progressive deterioration in brain function of individual & cognitive ability<sup>3</sup>. The WHO reports that 36.1 million individuals globally were existing with Dementia in 2010. Vascular dementia, Alzheimer's, traumatic brain injury, Lewy body dementia, fronto-temporal dementia, Parkinson's disease are common etiologies of dementia<sup>4</sup>. Risk factors for dementia comprise male gender, advance age, high blood pressure, smoking, dyslipidemia, diabetes, depression, genetic factors and head trauma<sup>5</sup>. In the overall people who are above sixty-five years of age, and older than 85 years have the dementia prevalence of 5% and 20-40% in chronic care facilities. Out of 50% prevalence of dementia, 15-20% cases observed during OPD basis<sup>6</sup>. This constitutes 11.9% of the number of years of non-communicable diseases. Higher mortality is associated with dementia. Several studies have shown that individuals with dementia have substantially lower rates of survival than people without dementia<sup>7-8</sup>. Of all chronic disorders, dementia contributes most to the needs of the elderly for disability and care. Pakistan gives no information on different dementia variables due to a lack of epidemiological studies<sup>9</sup>. Pakistan has the 8<sup>TH</sup> most

populous population in the world with 16 billion people, in Pakistan the proportion of individuals above 60 years is expected to rise to 10 % by 2025, & by 2050; it will rise to 21%. It is appraised that the individuals with dementia supposed to be 4, 60,000 in 2015 & 8, 34,000 by 2025, & 21, 93,000 by 2050<sup>10-11</sup>. Given the lack dementia data in Pakistan and its importance, the authors have come to conduct a study. The study aimed to clarify the physical illness & and its relationship with dementia among elderly patients.

## MATERIALS AND METHODS

This descriptive cross sectional study was conducted for one year duration, July 2018 to September 2019 in the Psychiatry department of Psychiatry, Saidu Teaching Hospital, Swat, Pakistan. For this study, 90 patients were selected. 60-years old individuals attended both outpatient and inpatient wards that met exclusion and inclusion criteria, paying little heed to age and sex, was chosen as an examination bunch with convenient sampling technique. Patients with the condition of intense disarray, intense ailment identified with physical, and serious vision or hearing weakness were excluded from this examination. Informed consent was obtained from all patients prior to registration in this study. Moral problems have been appropriately resolved. Respondents were questioned face-to-face using an organized survey comprising evidence such as type of service, physical disease, and period of

physical disease, smoking, and more. Mini-Mental State Examination (MMSE) criteria was used for assessment of Cognitive impairment. Dementia was identified rendering to the Diagnostic & Statistical Manual of Mental Disorder (DSM). The interview was conducted in quiet & safe surroundings. Editing after data collection was done physically & examined using software version 20.0 of the Statistical Package for the Social Sciences (SPSS).

## RESULTS

90 total respondents were nominated from inpatient (13.3%) and outpatient care (86.7%) department. Most men (88.6%) and women (91.2%) received outpatient care (Table 1).

Table 1: Division of respondents conferring to service types received (n=90)

Types of service	Male	Female	Total
	No. (%)	No. (%)	Number (%)
Outpatient service	43 (86.0)	35 (87.5)	78 (86.7)
Inpatient service	7 (14.0)	5 (12.5)	12 (13.3)

The majority of respondents (59%) had a physical illness. The co-morbid physical conditions in the current study were high blood pressure (19.2%), cataracts (13.5%), diabetes mellitus (13.5%), and IHD (13.5%) (Table 2).

Table 2: Types of physical illness (n= 52)

Types of physical illness	Male	Female	Total
Hypertension	6(20.0%)	4(18.2%)	10(19.2%)
Diabetes mellitus	4(13.3%)	3(13.6%)	7(13.5%)
Cataract	3(10.0%)	4(18.2%)	7(13.5%)
Chronic obstructive pulmonary disease	3(10.0%)	2(9.1%)	5(9.6%)
Ischemic heart disease	5(16.7%)	2(9.1%)	7(13.5%)
Rheumatological disorders	2(6.7%)	2(4.5%)	3(5.8%)
Urological disorders	3(10.0%)	2(4.5%)	4(7.7%)
CVA	1(3.3%)	2(9.1%)	3(5.8%)
Anemia	1(3.3%)	2(9.1%)	3(5.8%)
Parkinson's disease	2(6.7%)	2(4.5%)	3(5.8%)
Total	30 (100%)	22 (100%)	52 (100%)

Of the respondents, 9 (10.0%) were now smokers, and 16 (17.8%) had previously smoked for at least 5 years (Table 3).

Table 3: The respondents with History of smoking (n= 90)

History of smoking	Frequency	Percentage
Non Smoker	65	72.2%
Existing smoker	9	10.0%
Previous smoker	16	17.8%

Two patients (33.33%) had a history of smoking ( $\chi^2 = 0.0093$ ,  $P = 0.92653$ ) (Table 4).

Table 4: Relation between smoking with dementia (n= 90)

Smoking	No dementia (n=84)	Dementia (n=6)	p value
No	62 (73.81%)	4 (66.67%)	$\chi^2 = 0.0093$
Yes	22 (26.19%)	2 (33.33%)	$p = 0.92653$

Only 6 patients (6.66%) were diagnosed with dementia rendering to the respondent's MMSE score. Three respondents (50%) diagnosed with dementia had high blood pressure ( $c^2 = 3.8908$ ,  $p = 0.04984$ ). Two patients (33.3%) with dementia had comorbid diabetes mellitus ( $c^2 = 2.4387$ ,  $p = 0.12013$ ) and two (33.3%) had a history of cerebrovascular disease (CVA) (Table 5).

Table 5: Relation between dementia and physical illness (n= 90)

Physical illness	No dementia (n=84)	Dementia (n=6)	p value
Hypertension			
No	69 (82.1%)	3 (50%)	$c^2 = 3.8908$
Yes	15 (17.9%)	3 (50%)	$p = 0.04984$
Diabetes mellitus			
No	75 (89.3%)	4 (66.7%)	$c^2 = 2.4387$
Yes	9 (10.7%)	2 (33.3%)	$p = 0.12013$
CVA			
No	81 (96.4%)	4 (66.7%)	$c^2 = 8.5048$
Yes	3 (3.6%)	2 (33.3%)	$p = 0.00456$
Ischemic heart disease			
No	77 (91.7%)	5 (83.3%)	$c^2 = 0.2988$
Yes	7 (8.3%)	1 (16.7%)	$p = 0.59200$
Rheumatological disorders			
No	79 (94.0%)	5 (83.3%)	$c^2 = 0.1786$
Yes	5 (6.0%)	1 (16.7%)	$p = 0.68232$

## DISCUSSION

In the ebb and flow study, 60.01% of respondents knew about substantial sickness. Normal actual problems were hypertension (26.9%), waterfall (19.57%), diabetes (10.87%), and ischemic coronary illness (10.87%)<sup>11-13</sup>. In this investigation, two more established grown-ups (half) with dementia had hypertension and were discovered to be critical ( $c2 = 3.8908$ ,  $p = 0.049$ ). Diabetes happened in twopatient (33.3%) with dementia. As per an examination in Spain, hypertension, and diabetes were the most well-known comorbidities among more seasoned individuals with dementia<sup>14</sup>. Analysis shows that these conditions were by and large regular in more established individuals, yet different conditions seem, by all accounts, to be identified with dementia, for example, Parkinson's infection. Comparative discoveries have been acquired from other global exploration, including disease, cardiovascular breakdown, cerebrovascular turmoil, osteoporosis, and sleep deprivation<sup>15</sup>. On the other hand, hypertension has been linked with an expansive assortment of intellectual weaknesses, comprising diminished logical ideas (leader brokenness), helpless memory, heedlessness, and languid mental preparation. Some longitudinal examinations have demonstrated that individuals with dementia have a history of high blood pressure<sup>16-17</sup>. Thus, type 2 diabetes has been demonstrated to be related to an expanded danger of dementia. In many investigations, a higher blood proportion has been indicated with dementia. The past study revealed that higher rate of cognitive decline in diabetic patients as compared to non-diabetic patients but some have discovered no relationship between the cognitive deterioration rate and their status of diabetes<sup>18-19</sup>. Differences between studies can be connected to the subject's psychological status and age gathering, just as the tests used to survey intellectual status and to quantify psychological impairment<sup>20-21</sup>. These distinctions may likewise be identified with hazard factors (diabetes) for dementia and illness movement. As it mirrors the different parts of diabetes. In the current investigation of respondents, 9 (10.0%) were present smokers & 16 (17.8%) had recently smoked for at any rate 5 years. 33.3% of patients had a background history of smoking among dementia ( $p = 0.93$ ). Past investigations have demonstrated an expanded danger of dementia because of ecological openness to tobacco smoke.

## CONCLUSION

Despite some limitations, this research provides basic information on dementia-related physical diseases/disorders in elderly patients in Pakistan. The prevalence of dementia must every time be taken into deliberation when assessing elderly patients, and further attempts should be made to diagnose and manage the condition.

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