

Original Article**Prevalence of Acute Confusional State in Elderly and Compare the Effectiveness of Non-Pharmacological and Pharmacological Measures in a Patient Visiting Tertiary Center****Bibek Subedi**

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Article Received: 30th April, 2026; Accepted: 28th June, 2026; Published: 30th June, 2026**DOI: <https://doi.org/10.3126/jonmc.v15i1.96188>****Abstract****Background**

Delirium, an acute disorder of attention and cognition, is a common, serious, costly, under-recognized and often fatal condition for seniors. Pharmacological intervention, neither for prevention nor for treatment, has been proven effective unanimously. This article reviews the current clinical practice for delirium in geriatric patients, including etiology, diagnosis, prognosis, treatment, prevention, and outcomes.

Materials and Methods

A Cross-sectional descriptive study was done to recruit the individual for this study among 98 subjects diagnosed with delirium of age group 60 and above visiting Psychiatric department and inpatient ward of College of Medical Sciences Teaching Hospital for 6 months (1st October 2025-30th March 2026). Sociodemographic characteristics and confusion assessment method-long form and confusion assessment method-short Form were administered to the subjects. The data collected was entered in Microsoft excel and analysis was done using Statistical Package for Social Services 20. The result was obtained to provide an inference.

Results

Data was collected from a total of 450 patients. The prevalence of delirium was found to be 21.7%. The mean age group of study was 68.04 ± 0.7 (maximum=98; minimum=60). Female of age group 60-70, unemployed, illiterate, married and residing in urban areas were most affected.

Conclusion

Delirium was common in females of age group 60-70, unemployed, illiterate, married and residing in urban areas.

Keywords: Acute confusional state, Elderly, Tertiary care hospital

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Introduction

Delirium, derived from the Latin word *delirare* ('to go out of the furrow') [1] is a distressing [2] neuropsychiatric syndrome triggered by acute illness, drug use or withdrawal, trauma or surgery. It affects 14–56% of all hospitalized elderly patients, and up to 20% of individuals [3-5] over 65 years in the US experience delirium-related complications each year [6-8].

Delirium or acute confusional state is often underdiagnosed despite its high incidence leading to consequences such as prolonged hospital stay, increased morbidity and mortality, higher healthcare cost and long-term cognitive decline. This study aims to evaluate and compare the effectiveness of non-pharmacological and pharmacological intervention in managing delirium in elderly and guide evidence-based practice. DSM-V [9] defines delirium as a clear disturbance in attention and awareness and presents in three forms [10]: hyperactive, hypoactive and mixed. Primary prevention is the most effective strategy, for delirium with Hospital Elder Life Program (HELP) [11], a multicomponent intervention strategy including reorientation, therapeutic activities, reduced use and doses of psychoactive drugs, early mobilization, sleep promotion, adequate hydration and nutrition, and sensory support.

Few randomized, controlled trials of drug treatments have been performed to date [12] based largely on case series and retrospective reports [13,14]. Medications are usually reserved for patients in hyperactive delirium.

Materials and Methods

Hospital based Cross-sectional descriptive study was done to recruit the individual for this study among 98 subjects diagnosed with delirium of age group 60 and above visiting Psychiatric Department and inpatient ward of college of medical sciences Teaching Hospital. Adults aged 60 years and above and a case diagnosed as delirium according to International Classification of Disease -11/Diagnostic and Statistical Manual V were included for the study while Inability to communicate or cooperate with assessment,

history or substance use or withdrawal, pre-existing dementia or severe cognitive impairment and severe Neurological disorder and patient requiring mechanical ventilation were excluded. The data was collected after informed consent was obtained from all participants. Data collection tools included a demographic questionnaire and the Confusion Assessment Method -Long form and Confusion Assessment Method-Short form The collected data was entered in Microsoft-Excel and the data analysis was done via Statistical Package for Social Sciences 20 to obtain the result.

Sample size calculation: A sample size of 98 participants will be recruited, considering previous studies and aiming for adequate statistical power $p=14\%=0.14$ [from reference (3-5)]. It affects 14–56% of all hospitalized elderly patients, and up to 20% of individuals [3-5] over 65 years $n=z^2 \times pq/d^2=1.96^2 \times 0.14 \times 0.86/0.05^2=94$, total $=94+5\%$ of $94=98$. Consecutive sampling technique was used. It is the most used technique, especially in clinical trials. It consists of selecting participants who meet our selection criteria during the recruitment period in which we are going to carry out the study. It is usually used to recruit patients who come to the clinic and are diagnosed or admitted within a certain time.

Results

Delirium was screened among 450 patients using ICD-11 and 98 patients were diagnosed as delirium who were administered Confusion Assessment Method (CAM), 21.7% patient were found to be delirious and female of age group 60-70, illiterate, unemployed, married with multiple comorbidity were seen to be most affected by delirium which was short lived approximately 5 days and it resolved by non-pharmacological means (orientation, stimulation, avoiding sensory deprivation, nutrition, bladder and bowel care, family and nursing care) in most of the patients and pharmacological treatment (low dose quetiapine and haloperidol) in fewer cases.

The sociodemographic data of study group is described in table below:



Table 1: Socio-demographic characteristics of the subjects

Variable	Frequency (%)
Age-group	
60-70	70(71.4)
71-80	22(22.4%)
>80	6(6.1)
Sex	
Male	28(28.6)
Female	70(71.4)
Education	
Illiterate	25(25.5)
Primary	27(27.6)
Lower Secondary	16(16.3)
Higher Secondary	11(11.2)
Intermediate	11(11.2)
Bachelor	8(8.2)
Marital Status	
Married	95(96.9)
Unmarried	3(3.1)
Occupation	
Business	8(8.2)
Farming	7(7.1)
Labour	1(1)
Unemployed	82(83.7)

Table 2: Association of socio-demographic profile with type of delirium

Variable	Type of Delirium		
	Hyperactive	Hypoactive	Mixed
Age-group			
60-70	41	22	7
71-80	8	6	3
>80	4	1	1
Sex			
Male	18	8	2
Female	40	21	9
Chi-Square	0.03	0.03	0.07

p-value<0.05 is clinically significant

Table 3: Types of delirium

Delirium	n (%)
Hyperactive	58(59.2)
Hypoactive	29(29.6)
Mixed	11(11.2)

Most of the delirious patients were admitted in ICU followed by medical ward, postoperative ward and then surgical ward. Female, illiterate, unemployed, married, residing in urban areas were the most affected by delirium picture and hyperactive delirium was seen in those patients of age group 60-70 mainly.

Discussion

Delirium is an acute and fluctuating disorder characterized by a disturbance in attention and

cognition. Delirium is underdiagnosed by clinicians, but there are excellent diagnostic tools using history and physical examination that can assist clinicians in making the diagnosis in multiple settings. The prevalence of delirium varies widely depending on the patient population and care environment. The point prevalence of delirium in elderly is 23% in a meta-analysis study [15] conducted in 2020 by Gibb et al. whereas a study done in Nepal [16] for 1 month at BP-KIHS, Dharan showed prevalence of delirium to be 13.2% and another study carried out in Manipal College of Medical Sciences [17], Pokhara, Nepal found 16% of patient to be delirious out of 95 cases. A study done in our setting depicted prevalence of delirium to be 21.7% and had significant association with female sex aged 60-70 years who were found to be hyperactive and required a combination treatment approach to deal with it. In our study, female of age group 60-70, illiterate, unemployed, married and residing in urban areas with multiple comorbidity (Alcohol Dependence Syndrome, Bodily distress disorder, anxiety disorder, Diabetes mellitus, Chronic Kidney disease, Chronic Obstructive Pulmonary Disease, dyselectrolytemia) were the ones to be affected by delirium which was usually short lived approximately 5 days. The delirium picture is resolved in most cases by non-pharmacological means compared to pharmacological means in fewer hyperactive delirium cases.

The data obtained through this study helps in the reinforcement of the complexity of delirium's pathophysiology, multifactorial causation, heterogeneity in clinical presentation. Because delirium is associated with serious complications and rising healthcare costs, preventing it is a key priority in clinical care. Research suggests that up to one-third of delirium cases could be avoided, highlighting the importance of early and effective intervention. Current guidelines emphasize prevention as not only clinically beneficial but also cost-effective. They recommend that older adults who are at higher risk such as those of advanced age, with cognitive impairment or dementia, hip fractures, or severe illness should be evaluated within the first 24 hours of hospital admission. This early assessment should focus on identifying common risk factors that may trigger delirium. These include issues such as confusion or disorientation, dehydration and constipation, low oxygen levels, reduced mobility, infections, multiple medication



use, unmanaged pain, poor nutrition, sensory deficits, and disrupted sleep. Once these factors are identified, a coordinated care plan should be developed by a trained multidisciplinary team. This plan should use non-drug; multicomponent strategies tailored to the patient's individual needs and care environment.

The effectiveness of this approach lies in addressing the multiple underlying causes of delirium simultaneously. Since delirium often results from a combination of contributing factors, a comprehensive and collaborative strategy is essential for successful prevention. Preventive strategies, especially multicomponent nonpharmacological interventions, remain the cornerstone of delirium care. Programs emphasizing orientation, sleep hygiene, mobilization, sensory support, medication review, and environmental structuring have demonstrated substantial reduction in delirium incidence and duration. Treatment in a specialized geriatric unit reduces the absolute risk by 20% and shortens the average duration of delirium by 5 days. Pharmacologically, the nightly administration of melatonin showed preventive effects in older. Antipsychotics which are commonly used for symptom control in case of severe agitation or psychosis offer no benefits in terms of delirium resolution and must be prescribed with caution due to potential adverse effects.

Delirium independently predicts higher mortality, increased rates of institutionalization, and persistent cognitive deficits. Prevention of this potentially life-threatening problem includes recognition of patients at risk, avoidance of casual factors, and timely response to prodromal symptoms. Despite its high prevalence and clinical impact, delirium remains insufficiently integrated into routine hospital practice. Implementation of multidisciplinary delirium care, staff training and routine use of validated screening tools is required to reduce the mortality and morbidity burden. The study was based on a small sample size and the young adult age group was not included in the study.

Conclusion

Female of age group 60-70, illiterate, unemployed, married with multiple comorbidities were seen to be most affected by delirium in our study which was short lived approximately 5 days and it resolved by non-pharmacological means. Prompt recognition of underlying causes

and the implementation of non-pharmacological interventions are key strategies for effective prevention and management of delirium.

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Conflict of interest: None

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