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Prediction of Dementia by Symptoms amongst Older Adults in Almaty,
Kazakhstan

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Prediction of Dementia by Symptoms amongst Older Adults in Almaty, Kazakhstan

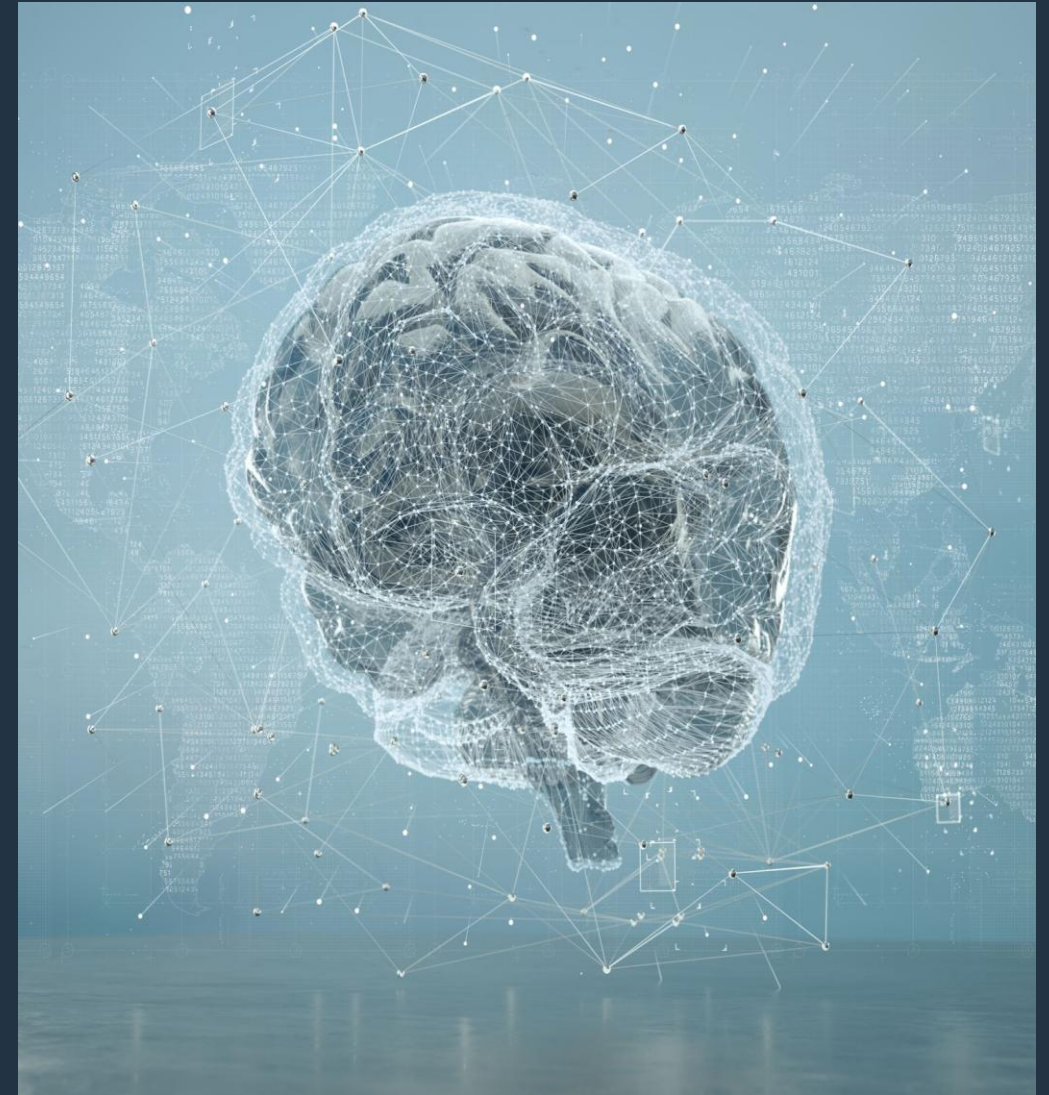
- *Early detection through analysis of social indicators and cognitive signs*



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Introduction

Dementia is a neurological disorder impairing memory, reasoning, and communication progressively over time.

Global Impact

Over 55 million people worldwide live with dementia, with numbers expected to rise sharply in coming decades.

Importance of Early Detection

Early detection allows timely intervention and improved patient care, as symptoms appear years before diagnosis.

Symptom-Based Prediction

Using clinical and technological methods to identify early signs improves dementia diagnosis and management.



Common Early Symptoms of Dementia

Memory Loss Symptoms

Early dementia typically involves loss of recent memories, complicating daily life and relationships.

Communication Difficulties

Patients often experience impaired language skills and difficulty communicating effectively.

Cognitive and Judgment Impairment

Impaired judgment and problem-solving skills negatively affect decision-making abilities.

Mood and Orientation Changes

Mood swings, personality changes, and disorientation in time and place are common early signs.



Background

Dementia as Public Health Concern

Dementia is increasingly recognized as a critical health issue in Kazakhstan and worldwide, especially with aging populations.

Demographic Shifts in Kazakhstan

Kazakhstan faces demographic changes with elderly population projected to reach 25% by 2050, increasing dementia risk.

Cultural Caregiving Practices

Family-based caregiving influenced by cultural values like filial piety dominates, with limited institutional support.

Research Gaps in Dementia

There is limited research on dementia symptoms in Central Asia, especially in Almaty.

Aim

The aim of the study was to estimate dementia cases by selected behavioural and cognitive symptoms of older adults.

Objectives:

- Investigate age and sex patterns in dementia symptoms among older adults in Almaty, Kazakhstan.*
- Explore the role and extent of family participation in dementia care within the population studied.*

Methodology

Study Design and Population

A cross-sectional design targeted adults aged 60 and above in Almaty to gather relevant data.

Data Collection Methods

Data were gathered using structured questionnaires via Google Forms and face-to-face interviews.

Ethical Approval

Ethical approval was secured from the Local Ethics Committee of a medical university ensuring study compliance.

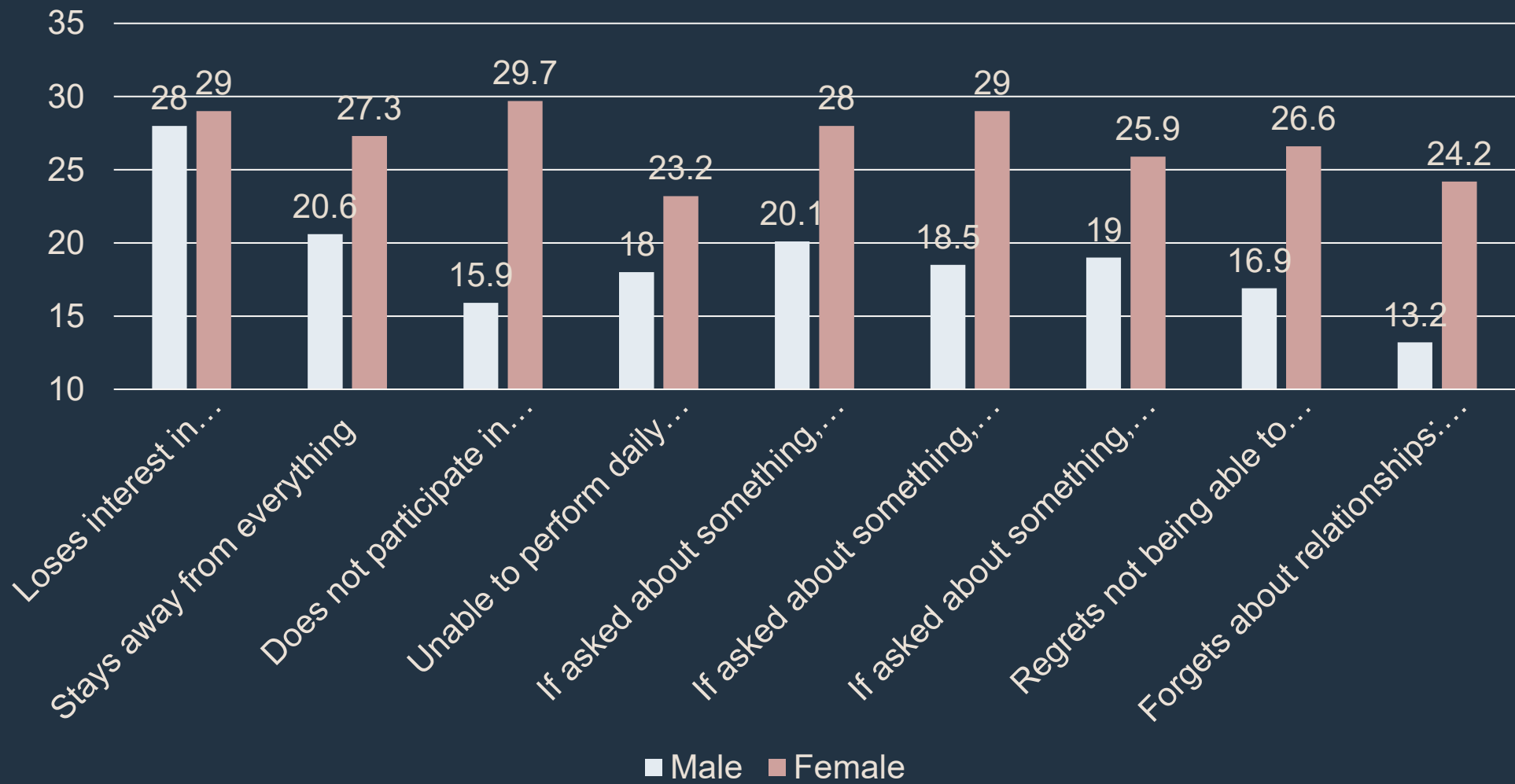
Data Analysis Techniques

SPSS software was used for data analysis. Descriptive statistics summarized sample traits, while chi-square tests explored symptom-demographic associations.

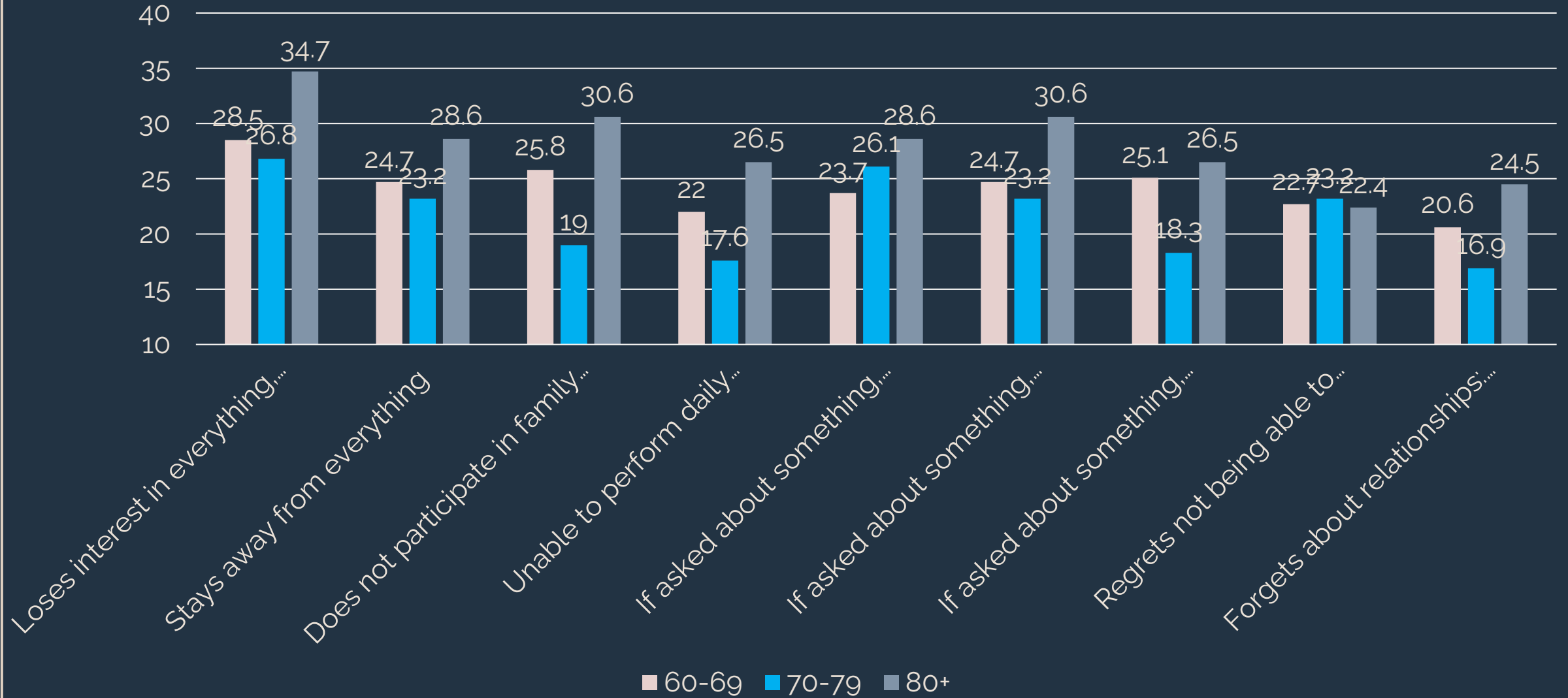
Symptom Distribution

Symptom	Prevalence (%)
Loses interest in everything	28.6
Stays away from everything	24.7
If asked about something, s/he cannot find correct answers	24.9
If asked about something, s/he does not dare to answer	24.9i
Does not participate in family and social events	24.3
If asked about something, s/he avoids answering	23.2
Regrets inability to respond properly	22.8
Unable to perform daily personal tasks	21.2
Forgets relationships, for example call parents or relatives	19.9

Sex Differences



Age Differences



Prediction of dementia based on symptoms and care received from family

	Categories	Number of cases	Percent
Dementia symptoms	No symptom	282	58.5
	1-8 symptoms	155	32.2
	All symptoms	45	9.3
Respondent suffering from dementia	Yes	27	5.6
	No	455	94.4
Respondents suffering from dementia who receive medical care from family	Yes	66	28.3
	No	167	71.7

Key Findings

Symptom Prevalence

41.5% of respondents reported dementia symptoms, with loss of interest as the most common symptom.

Diagnosis Rate

Only 5.6% of those with symptoms were formally diagnosed with dementia.

Gender Differences

Females reported higher symptom prevalence and significant sex-based differences in social withdrawal and forgetfulness.

Age Differences

There is a clear age difference in reporting dementia symptoms.

Caregiving Support Gap

Only 28.3% of diagnosed individuals received family caregiving, indicating gaps in support.

Discussion

Symptom Reporting Complexity

Predicting dementia is complex due to variability in symptom reporting and low formal diagnosis rates.

Sex-Based Differences

Females reported more dementia symptoms than males, indicating important gender differences.

Caregiving Gaps

Low family caregiving rates highlight systemic gaps in dementia support and caregiving availability.

Need for Multi-Level Screening

Effective dementia detection requires multi-level screening and culturally sensitive interventions.

Limitations

Self-Report Bias

Reliance on self-reported data increases the risk of subjective bias affecting study results.

Limited Diagnostic Accuracy

Lack of clinical verification restricts the accuracy of diagnoses within the study.

Restricted Geographic Sample

Sample limited to Almaty reduces the ability to generalize findings to broader populations.

Design and Participation Limits

Cross-sectional design prevents causal conclusions; low male participation affects sex-based comparisons.

Conclusions

➤ Symptom Distribution Insights

Dementia symptoms are common among older adults with higher reports from females, while age shows less influence.

➤ Diagnosis and Caregiving Gaps

Formal dementia diagnosis rates are low and family caregiving is prevalent, indicating awareness and support deficiencies.

➤ Recommendations for Improvement

Early screening, gender-sensitive approaches, and enhanced caregiving infrastructure are essential to address dementia effectively.

Policy Implications



Early Detection and Screening

Promote early detection and gender-sensitive screening to effectively address dementia in Kazakhstan.

Support for Caregivers

Provide support and resources to informal caregivers to enhance dementia care quality.

Community-Based Interventions

Community programmes reduce social isolation and encourage symptom reporting among older adults.

Cultural Integration in Care

Integrate cultural values into care models to improve effectiveness and acceptance of dementia care.

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Questions & Answers