

TRENDS IN ALZHEIMER'S DISEASE AND OTHER DEMENTIAS MORTALITY IN ASIA, 1990-2021: A GENDER BASED ANALYSIS

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INTRODUCTION

Dementia cases are growing world wide, and Asia faces growing burden with limited resources. Alzheimer's disease remains the leading cause with increasing mortality, low awareness, and worsening outcomes.

OBJECTIVES

This study aimed to analyse trends in age-standardised dementia mortality rates in six Asian countries from 1990-2021. It compared mortality trends between males and females and identified significant changes in mortality trajectories using Joinpoint regression (APC and AAPC). This study also provided evidence for future gender-responsive dementia prevention and policy planning in Asia.

METHODS

We analysed GBD 1990-2021 gender-segregated ASMR data of ADoD for six countries and applied Joinpoint regression to estimate APC and AAPC across regions and sexes.

KEY TAKEAWAYS

- This study found that dementia mortality trends across Asia are highly variable, with important differences between countries and genders.
- Overall, the findings highlight a growing female burden of dementia mortality and emphasise the urgent need for gender-responsive dementia policies, especially in Pakistan, to prevent future increases in dementia-related deaths.

RESULTS

India experienced the highest and most sustained increase in dementia mortality from 1990-2021, with the rise being more pronounced among females. Bangladesh displayed fluctuating but overall increasing trends in both males and females, resembling the variability observed in India, whereas, Afghanistan showed the most favourable trend, with a long-term decline in mortality of both sexes, except for a brief increase among females between 2014 and 2019. Similarly, Iran also demonstrated an overall decline in mortality among males, while female mortality showed minor fluctuations. China maintained relatively stable mortality rates over the long term but experienced a significant increase after 2019 in both sexes. Pakistan showed a declining trend among males but a rising trend among females, placing it between the high-burden countries (India and Bangladesh) and declining rate countries (Afghanistan and Iran).

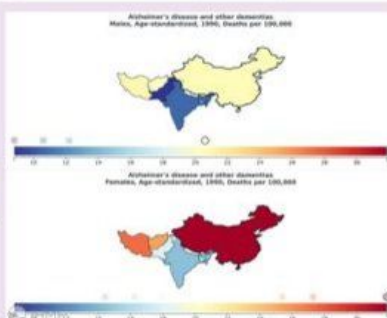


Fig 1.A: illustrates the spatial distribution of dementia mortality burden (ASMR) and its temporal trends in 1990, separately for males and females.

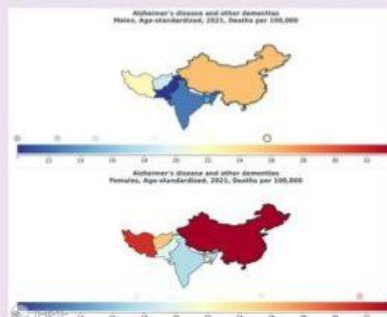


Fig 1.B: illustrates the spatial distribution of dementia mortality burden (ASMR) and its temporal trends in 2021, separately for males and females.

AAPC SUMMARY - SOUTH ASIAN COUNTRIES

COUNTRY	GENDER	AAPC (%/YR)	95% CL
PAKISTAN	Male	-0.3990	-0.5169 to -0.2809
	Female	0.3911	0.3151 to 0.4670
INDIA	Male	0.6903	0.4661 to 0.9150
	Female	0.8342	0.5791 to 1.0900
AFGHANISTAN	Male	-0.3375	-0.3559 to -0.3190
	Female	-0.1742	-0.2052 to -0.1432
IRAN	Male	-0.2805	-0.2993 to -0.2617
	Female	-0.1760	-0.1996 to -0.1525
BANGLADESH	Male	0.3421	0.1996 to 0.4848
	Female	0.3741	0.1734 to 0.5753
CHINA	Male	0.0914	0.0126 to 0.1702
	Female	-0.1006	-0.1989 to -0.0022

Fig 1.C: illustrates the summary of AAPC values of the South Asian countries discussed in this research

LIMITATIONS

The study relied on secondary data source, GBD modelled data, which may be affected by reporting inconsistencies and different diagnostic practices across countries. Only six Asian countries were included, limiting the generalisability of the findings. Additionally, the ecological study design does not allow conclusions about individual-level risk factors or causality.

CONCLUSION

Among the countries in question Pakistan stands at a pivotal moment— only urgent, gender-responsive dementia policy can prevent its shift into a high-mortality future.

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