

Willingness to Participate in Community-Based Dental Insurance in Urban Lucknow: An Analytical Cross-Sectional Study

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Abstract: Oral diseases impose a significant yet under-recognized burden on populations [1], particularly in urban India where treatment is largely financed through direct out-of-pocket payments [6]. This often leads to delayed care and increased financial stress. Innovative financing approaches such as Community-Based Dental Insurance (CBDI) can play a crucial role in addressing these challenges. The present study evaluates the readiness of urban residents in Lucknow to participate in CBDI schemes and examines factors influencing their willingness to contribute financially. A cross-sectional survey was carried out among 200 adults selected through a multistage sampling approach. Data were gathered using a structured questionnaire and analyzed using appropriate statistical techniques. Findings indicate that dental morbidity was common, with a large proportion of individuals experiencing financial strain due to treatment costs. Although awareness of dental insurance options was limited, the perceived importance of such schemes was high. A considerable proportion of participants expressed interest in enrollment, and more than half indicated willingness to pay, particularly for low-cost premium models. Socio-economic and awareness-related factors showed significant association with payment willingness. The study highlights a clear opportunity to introduce affordable, community-oriented dental insurance initiatives to strengthen oral healthcare access and financial protection.

Keywords: Community-Based Dental Insurance, Oral Health Access, Willingness to Pay, Health Financing India, Preventive Dentistry, Urban Health Systems

1. Introduction

Oral health plays a fundamental role in overall well-being [3], yet it remains inadequately prioritized within public health systems, especially in developing settings [2]. Rapid urbanization, changing dietary habits, and limited preventive awareness have contributed to a rising burden of dental conditions in India [4, 5, 7].

One of the most critical barriers to accessing oral healthcare is the reliance on out-of-pocket expenditure [6]. For many households, dental treatment represents an unexpected and often unaffordable expense, resulting in postponed care and worsening disease progression [11]. This pattern reflects broader inequities in healthcare financing [8, 9].

In recent years, attention has shifted toward alternative financing strategies such as community-based insurance mechanisms [12, 14]. Community-Based Dental Insurance (CBDI) offers a model where risk is shared among members, making care more accessible and predictable in cost. From a health economics and public health planning perspective, understanding population-level willingness to enroll and willingness to pay is essential for designing feasible interventions [10].

Urban populations provide an important context for such investigations due to their diverse socio-economic profiles and exposure to both healthcare services and risk factors. This study therefore explores these dimensions in the setting of Lucknow city.

2. Materials And Methods

A community-based analytical cross-sectional study was conducted among adult residents of urban Lucknow. Individuals aged 18 years and above who had been residing in the selected areas for a minimum duration were considered eligible.

The sample size comprised 200 participants, selected through a multistage sampling framework to ensure representation across different urban localities. Data collection was carried out using a pre-tested structured questionnaire designed to capture demographic details, oral health status, healthcare utilization, financial burden, awareness of insurance, and willingness to participate in CBDI schemes.

Data were coded and analyzed using statistical software. Descriptive measures such as proportions and averages were calculated, while inferential analysis using the Chi-square test was performed to identify associations between variables. Statistical significance was determined at a conventional threshold.

Ethical standards were strictly maintained throughout the study, including voluntary participation and confidentiality of responses.

3. Results

The study population was predominantly composed of young adults, with a balanced representation across gender and educational levels. A substantial proportion reported experiencing dental issues within the recent past.

Healthcare-seeking behavior was largely reactive rather than preventive, with many individuals visiting dental providers only when symptoms became severe. This pattern reflects limited emphasis on routine oral health maintenance.

Economic burden emerged as a recurring concern, as a notable share of respondents reported financial strain linked to dental treatment expenses. Despite this, awareness regarding dental insurance options remained relatively low.

Interestingly, perception toward the usefulness of dental insurance was positive among the majority. A significant proportion indicated their readiness to enroll in a community-based insurance scheme if made available. Similarly, willingness to contribute financially was observed in more than half of the respondents, with a clear preference for affordable premium ranges.

Further analysis demonstrated that willingness to pay was not uniform across the population but was significantly influenced by educational attainment, income level, and prior awareness of insurance concepts.

4. Discussion

The findings of this study provide important insights into the intersection of oral health needs, financial barriers, and insurance acceptance in an urban Indian context.

Although awareness of dental insurance remains limited, the high level of perceived need and willingness to enroll suggests a latent demand for structured financial protection mechanisms. This gap between awareness and acceptance indicates that informational barriers, rather than attitudinal resistance, are the primary constraint.

The association between socio-economic status and willingness to pay aligns with established theories in health financing and behavioral economics, where individuals with greater resources and knowledge are more likely to invest in preventive and protective measures [10].

From a policy standpoint, the results underscore the potential of CDBI as a viable strategy for improving oral healthcare accessibility. Integrating such models within broader health systems, along with targeted awareness campaigns, could significantly reduce dependence on out-of-pocket spending.

Moreover, promoting preventive dental care alongside insurance enrollment could shift healthcare utilization patterns from reactive to proactive, ultimately improving population-level oral health outcomes [13].

5. Conclusion

This study demonstrates that urban populations face a dual challenge of high oral disease burden and financial constraints in accessing care. While awareness of dental insurance is still evolving, the willingness to participate in community-based schemes is encouraging.

The success of such initiatives will depend on affordability, awareness generation, and integration with existing

healthcare frameworks. Community-based dental insurance holds promise as a sustainable approach to enhance financial protection and improve oral health access in India.

6. Recommendations

- Expand awareness initiatives focusing on dental insurance literacy.
- Develop low-cost, flexible premium models.
- Integrate oral healthcare into broader insurance systems.
- Encourage preventive dental practices at the community level.
- Strengthen collaboration between public health and insurance sectors.

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