

Bridging the Alzheimer's Awareness Gap: The Role of Healthcare Communication in Addressing Misconceptions, Stigma, and Healthcare Engagement

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Abstract:

Alzheimer's disease is a progressive neurological disorder and the most common form of dementia. Although early recognition and timely healthcare engagement are increasingly important, public misconceptions, stigma, family responses, and limited awareness may influence when people seek professional advice. This study examines public perceptions of these barriers and the perceived role of awareness campaigns and communication channels in improving Alzheimer's disease awareness in India. The study used a structured questionnaire containing 20 statements measured on a five-point Likert scale. A total of 56 responses were collected; item-level valid responses ranged from 50 to 52 due to missing data. For hypothesis testing, an exact one-sample signed test was conducted against the neutral point of 3 at a 5% significance level. The survey results indicate statistically significant agreement that memory loss is often considered a normal part of ageing ($M = 3.87$, $p < .001$), that public awareness of early symptoms is limited ($M = 4.12$, $p < .001$), that families may ignore early memory problems ($M = 4.31$, $p < .001$), and that fear and social stigma can prevent families from discussing memory-related problems ($M = 4.16$, $p < .001$). Respondents also significantly agreed that public awareness programs can support early diagnosis ($M = 4.25$), community education can reduce myths ($M = 4.22$), greater government involvement is needed ($M = 4.18$), pharmaceutical companies can support awareness ($M = 4.16$), and multi-stakeholder collaboration can improve Alzheimer's care ($M = 4.16$), with $p < .001$ for each. The findings, therefore, suggest that Alzheimer's awareness should be understood as more than information exposure: communication needs to connect symptom recognition, family discussion, appropriate healthcare navigation, and multi-stakeholder support.

Keywords: Alzheimer's disease; dementia awareness; misconceptions; stigma; healthcare-seeking; awareness campaigns; healthcare marketing; India; public health communication.

Introduction

Alzheimer's disease (AD) is a progressive neurological disorder and the most common cause of dementia. Dementia is an umbrella term covering several conditions that affect memory, thinking, behavior, and the ability to perform everyday activities. The World Health Organization reports that 57 million people were living with dementia globally in 2021, with more than 60% living in low- and middle-income countries; Alzheimer's disease accounts for an estimated 60–70% of dementia cases. WHO also notes that dementia is not a normal part of aging and that limited awareness and understanding can contribute to stigma and barriers to diagnosis and care.

The relevance of Alzheimer's disease has increased from a healthcare-management perspective because the treatment landscape is changing. Alongside traditional symptomatic medicines, disease-modifying therapies targeting amyloid pathology have entered clinical practice. This makes early recognition, appropriate assessment, and movement through the healthcare pathway increasingly important. However, early symptoms such as forgetting recent events, losing things, difficulty finding words, confusion, and problems performing familiar tasks can be subtle. They may not always be recognized as possible signs of disease.

A major public-health challenge is therefore not only whether medical treatment exists, but whether individuals and families recognize the need for evaluation. Memory problems may be interpreted as a normal consequence of aging, families may delay discussing symptoms, and fear or stigma may discourage professional consultation. In

India, research has documented poor awareness, stigma, and barriers to accessing dementia care, while research from urban India has also reported substantial delays between symptom onset and diagnosis.

From a healthcare marketing and healthcare-management perspective, awareness is part of the pathway through which people move from noticing a symptom to considering professional help. Public campaigns, community education, digital media, healthcare professionals, NGOs, government programs, and pharmaceutical companies can all contribute to this communication environment. However, campaign visibility alone does not necessarily mean that people understand the disease or know what action to take.

Research Objectives

- To identify the major misconceptions and perceived barriers associated with delayed healthcare-seeking for Alzheimer's disease.
- To assess the perceived role and effectiveness of Alzheimer's disease awareness campaigns and communication channels in improving public awareness.

Research Gap and Purpose of the Study

Research Gap

People may associate forgetfulness with aging and normalize gradual changes. This can reduce the perceived need for medical consultation. The literature also identifies the normalization of symptoms as a barrier to help-seeking for dementia.

Fear of cognitive decline, loss of independence, dependence on family, and social judgment may discourage open discussion of symptoms. Stigma can therefore affect both recognition and help-seeking.

Families often play an important role in noticing symptoms and making healthcare decisions. Different interpretations within a family may result in delayed action.

A campaign may have visibility without necessarily reaching all population groups or producing meaningful understanding. Communication that is highly medical or concentrated around special awareness events may have limited behavioral value.

Knowing that Alzheimer's disease exists is different from knowing when to consult a professional, whom to consult, why early evaluation matters, and where to seek help. This creates a gap between information and action.

Purpose of the Study

The main purpose of this study is to understand the public-side marketing and healthcare-communication gaps surrounding Alzheimer's disease in India. The study seeks to connect public perceptions of misconceptions and social/family barriers with perceptions of awareness interventions. The findings are intended to provide a public perception perspective that can help healthcare organizations, government bodies, NGOs, and pharmaceutical companies understand where communication may need strengthening.

Original Value of the Study: Primary Survey Evidence

The original value of this research comes from the primary survey conducted for the study. The supplied research file records 56 questionnaire responses across 20 statements. The survey provides direct evidence of how respondents perceive misconceptions, family behavior, stigma, awareness programs, government involvement, pharmaceutical-company involvement, and stakeholder collaboration. Unlike the literature review, which summarizes earlier studies, this section represents the empirical contribution of the present study.

Research area	Survey evidence from the present study
Normalization of memory loss	69.23% agreement; $M = 3.87$; $p < .001$
Limited awareness of early symptoms	84.62% agreement; $M = 4.12$; $p < .001$

Family inaction	94.12% agreement; M = 4.31; p < .001
Fear and social stigma	88.24% agreement; M = 4.16; p < .001
Public awareness programs	M = 4.25; p < .001
Community education	M = 4.22; p < .001
Government awareness involvement	M = 4.18; p < .001
Pharmaceutical company support	M = 4.16; p < .001
Stakeholder collaboration	M = 4.16; p < .001

Table 1 Original Value of the Study: Primary Survey Evidence

These results form the study's original empirical contribution. They should be interpreted as perceptions within the survey sample rather than as population prevalence estimates for India.

Key Concepts and Operational Meaning

Concept	Meaning in this study
Alzheimer's disease	A progressive neurological disease, and the most common form of dementia.
Public awareness	The public's understanding of Alzheimer's disease, its early symptoms, and the need for appropriate action.
Misconception	An incorrect or oversimplified belief, such as viewing memory loss as a normal part of aging.
Stigma	Negative social attitudes, fear, or judgment that may discourage discussion or help-seeking.
Family barrier	Family inaction, disagreement, or delayed response to early memory-related changes.
Healthcare-seeking	The process of recognizing a health concern and moving toward professional medical advice or assessment.
Awareness campaign	Organized communication is intended to increase knowledge of disease, recognition, understanding, or appropriate action.
Community education	Local or community-oriented educational communication is intended to improve understanding and reduce the spread of myths.
Healthcare marketing	The planned communication and engagement activities used by healthcare stakeholders to inform, support, and connect people with appropriate care.
Early recognition	Recognition of possible symptoms at an earlier stage, before a prolonged delay in professional assessment.

Table 2 Key Concepts and Operational Meaning

Conceptual Model

The conceptual model was developed from the research gaps, literature review, and the hypotheses tested in the survey. It contains two broad sets of explanatory factors. The first consists of misconceptions and social/family barriers that may make early recognition and healthcare-seeking more difficult. The second consists of awareness and communication interventions that may improve knowledge, recognition, and movement toward appropriate healthcare.

Proposed Conceptual Model

Independent/explanatory factors	Expected pathway	Outcome area
Memory loss is perceived as normal aging	Normalizes symptoms → later recognition	Delayed recognition / healthcare-seeking
Limited awareness of early symptoms	Poor symptom recognition → delayed action	Delayed recognition / healthcare-seeking
Family inaction	Reduced family response → postponed consultation	Delayed healthcare engagement
Fear and social stigma	Reduced discussion → reluctance to seek help	Delayed healthcare engagement
Public awareness programs	Better information → improved recognition	Improved awareness / earlier engagement
Community education	Myth reduction → clearer understanding	Improved awareness
Government-led campaigns	Greater public communication → wider awareness	Improved awareness
Pharmaceutical company support	Additional disease education → communication reach	Improved awareness
Multi-stakeholder collaboration	Integrated communication and care pathways	Improved Alzheimer's care

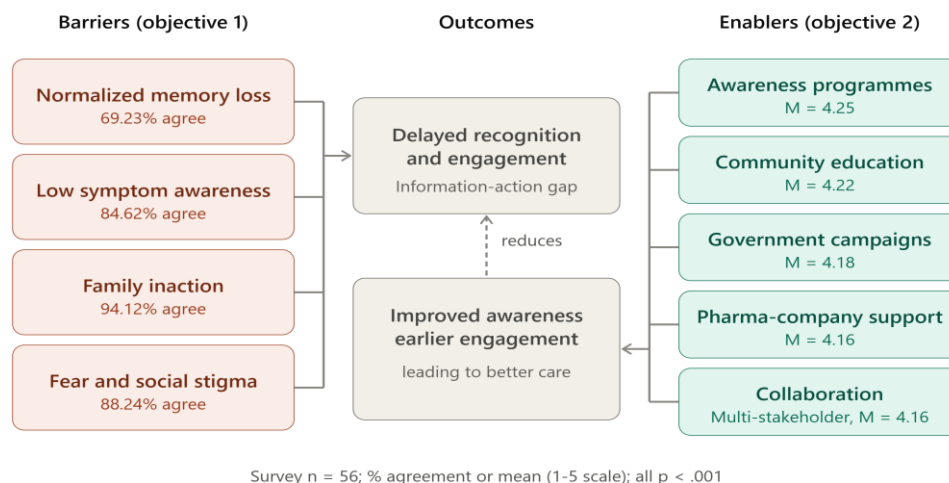


Figure 1 Proposed Conceptual Model

The model is intentionally framed as a perceived influence model rather than a causal model. The cross-sectional survey can show whether respondents significantly agree or disagree with statements, but it cannot independently establish that one factor causes delayed healthcare-seeking.

Conceptual model: awareness and healthcare-seeking

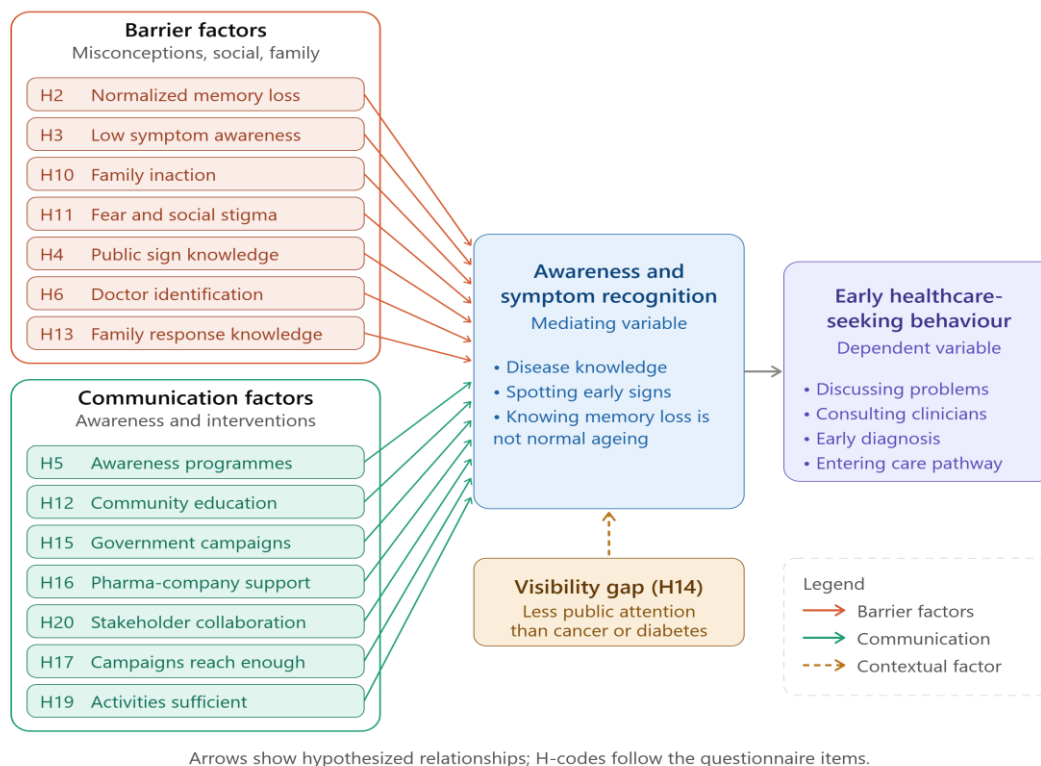


Figure 2 Conceptual model based on a hypothesis

The conceptual model proposes that public awareness and symptom recognition act as mediators between social and communication factors and early healthcare-seeking behavior in Alzheimer's disease. Two groups of antecedents are hypothesized to influence this mediator.

The first group covers misconceptions and social or family barriers: normalization of memory loss as ageing (H2), limited awareness of early symptoms (H3), public knowledge of early signs (H4), doctors' ability to identify early disease (H6), family inaction (H10), fear and social stigma (H11), and family knowledge of how to respond (H13). These factors are expected to weaken recognition by normalizing symptoms, reducing discussion, or delaying family action.

The second group covers awareness and communication interventions: public awareness programs (H5), community education (H12), government-led campaigns (H15), pharmaceutical company support (H16), stakeholder collaboration (H20), campaign reach (H17), and the sufficiency of existing activities (H19). These factors are expected to improve information quality, reduce myths, and broaden communication reach.

Awareness and symptom recognition, in turn, are expected to support early healthcare-seeking, including discussing memory problems, consulting professionals, seeking early evaluation, and entering the care pathway in a timely manner. The perceived visibility gap (H14) is included as a contextual factor that reinforces the need for communication. All arrows represent hypothesized relationships.

Review of Literature

The literature review was reorganized around four themes: public misconceptions and knowledge, stigma and family barriers, healthcare access and diagnostic delay, and awareness/communication interventions.

Study/source	Main contribution to the present research
Hurzuk et al. (2022)	In a qualitative study in India involving persons with dementia, caregivers, healthcare professionals, and members of the general public, the authors identified poor awareness, stigma, and barriers to care as recurring themes. The study is directly relevant to the Indian context and supports the examination of misconceptions and stigma as public-side barriers.
Jeyagurunathan et al. (2024)	Interviews with 29 informal caregivers in Singapore identified a lack of knowledge and awareness, denial, resistance, and healthcare system delays as barriers to diagnosis-seeking. The study also identified better knowledge and integrated care plans as facilitators.
Parker et al. (2020)	A systematic review of 35 papers representing 32 studies across 13 countries identified denial, stigma and fear, lack of knowledge, normalization of symptoms, lack of perceived need, and access problems as barriers to help-seeking. Recognition of symptoms, prior knowledge, and informal support were facilitators.
Brijnath et al. (2022)	The authors developed a digital media intervention protocol for dementia care in India, using co-produced resources and digital channels. The study demonstrates the potential of digital media to improve dementia-care information and engagement while emphasizing the need to evaluate feasibility and acceptability.
Bacsu et al. (2022)	A scoping review of stigma-reduction interventions identified education, contact, mixed interventions, and protest as approaches used to address dementia-related stigma. The findings support the idea that awareness communication should do more than provide facts; it should also address attitudes and social perceptions.
Matsumoto et al. (2023)	A scoping review identified 41 studies of dementia education and training for the general public. Programs addressed dementia-friendliness, early diagnosis/help-seeking, and prevention across

	community, educational, and online settings. This supports a multi-channel approach to public awareness.
World Health Organization (2026)	WHO identifies dementia as a major global public-health issue and notes that lack of awareness and understanding can contribute to stigma and barriers to diagnosis and care. WHO also states that Alzheimer's disease is the most common form of dementia and may contribute to 60–70% of cases.

Synthesis of Literature

Across the literature, three consistent patterns are relevant to the present study. First, knowledge gaps and misconceptions can affect recognition of symptoms. Second, stigma, fear, denial, and family responses can influence whether symptoms are discussed and whether professional help is sought. Third, awareness interventions can be useful, but effective communication needs to be understandable, repeated, accessible, and connected to practical healthcare action. The present research builds on these themes by testing them directly through a structured public-perception survey.

Research Methodology

Research Design: The study used a descriptive, cross-sectional quantitative research design. Data were collected at a single point in time using a structured questionnaire. The design was selected because the study aimed to capture public perceptions about Alzheimer's disease misconceptions, barriers, awareness programs, and communication approaches.

Population and Sampling: The target population was members of the public whose perceptions could provide insight into Alzheimer's disease awareness and healthcare-seeking, with 56 completed responses.

Sampling element	Description
Target population	Public respondents relevant to Alzheimer's disease awareness and healthcare communication
Sample size	56 responses collected
Sampling type	Non-probability sampling; exact subtype not documented in the source file
Questionnaire	Structured, 20 statements
Scale	Five-point Likert scale
Valid item responses	50–52 depending on the question

Table 3 Population and Sampling

Research Instrument: The questionnaire contained 20 statements measured on a five-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The questions were divided into two major objectives, with some additional questions retained as supporting or exploratory items.

Data Collection: Primary data were obtained through the structured questionnaire. A total of 56 responses were recorded. Because the number of valid responses varied by item, the analysis reports the valid n for each question rather than assuming that all 56 respondents answered every statement.

Statistical Analysis: For hypothesis testing, Likert responses were coded from 1 to 5, with 3 representing the neutral point. An exact one-sample sign test was performed for each question against the neutral point of 3 at $\alpha =$

0.05. The sign test was retained because the original analysis used this non-parametric approach, and the report does not assume that Likert-scale responses follow a normal distribution.

Decision rule:

- If $p < 0.05$, reject the null hypothesis (H_0).
- If $p \geq 0.05$, fail to reject the null hypothesis (H_0).

Hypothesis Development: The hypotheses below preserve the logic of the original questionnaire. Each hypothesis tests whether respondents show a statistically significant tendency to agree or disagree with the corresponding statement relative to the neutral point.

H₁: There is significant evidence that respondents agree that memory loss is commonly considered a normal part of aging.

H₂: There is significant evidence that respondents agree that people lack awareness of early symptoms of Alzheimer's disease.

H₃: There is significant evidence that respondents disagree that people generally have enough knowledge to recognize early signs.

H₄: There is significant evidence that respondents disagree with the statement.

H₅: There is significant evidence that respondents agree that families often ignore early memory problems.

H₆: There is significant evidence that respondents agree that fear and social stigma prevent families from discussing memory-related problems.

H₇: There is significant evidence that respondents disagree that most families already know how to respond to early memory problems.

H₈: There is significant evidence that respondents agree that public awareness programs can help in early diagnosis.

H₉: There is significant evidence that respondents agree that community education can reduce myths and misunderstandings.

H₁₀: There is significant evidence that respondents agree with the statement.

H₁₁: There is significant evidence that respondents agree that the government should conduct more awareness campaigns.

H₁₂: There is significant evidence that respondents agree that pharmaceutical companies should actively support public awareness campaigns.

H₁₃: There is significant evidence that respondents disagree that current awareness campaigns reach enough people.

H₁₄: There is significant evidence that respondents disagree that existing awareness activities are sufficient to educate the public.

H₁₅: There is significant evidence that respondents agree that such collaboration can improve Alzheimer's care.

Research Analysis and Interpretation

The following section presents the original survey findings question by question. The reported means, medians, valid responses, agreement/disagreement percentages, p-values, and decisions are retained from the supplied file.

Objective 1: Misconceptions and Perceived Barriers

Statement	Valid n	Mean	Median	Agreement/ disagreement	p- value	Decision
Many people believe memory loss is a normal part of aging.	52	3.87	4	69.23%	<0.001	Reject
Most people are not aware of the early symptoms of Alzheimer's disease.	52	4.12	4	84.62%	<0.001	Reject
People generally have enough knowledge to recognize the early signs of Alzheimer's disease.	52	2.92	3	46.15% disagreement	0.220	Fail to reject
Doctors generally have no difficulty identifying patients who may have early Alzheimer's disease.	51	3.45	3	13.73% disagreement	>0.05	Fail to reject
Families often ignore early memory problems in older adults.	51	4.31	4	94.12%	<0.001	Reject
Fear and social stigma prevent families from discussing memory-related problems.	51	4.16	4	88.24%	<0.001	Reject
Most families already know how to respond when an older family member shows early signs of memory problems.	51	3.27	3	31.37% disagreement	>0.05	Fail to reject

Table 4 Objective 1: Misconceptions and Perceived Barriers

Interpretation

Respondents significantly agreed that memory loss is often considered a normal part of aging. This suggests that gradual memory-related changes may be normalized, thereby reducing the perceived need for early medical attention. Respondents significantly agreed that public awareness of early symptoms is limited. If people cannot recognize early signs, they may be less likely to consider them serious enough to seek professional advice. The responses showed some disagreement with the statement, but the result was not statistically significant. This question alone, therefore, does not provide sufficient evidence to confirm inadequate knowledge as a significant barrier. The responses did not show a statistically significant tendency to disagree with the statement. Physicians' difficulty in identifying early disease, therefore, cannot be treated as a confirmed barrier in this study. Very strong and statistically significant agreement indicates that respondents perceive family inaction as an important factor that may delay attention to early memory problems. Strong and statistically significant agreement indicates that fear, social judgment, and stigma may make families reluctant to discuss symptoms or seek professional advice.

The strongest perceived barriers under Objective 1 were normalization of memory loss, limited awareness of early symptoms, family inaction, and fear/social stigma. Q2, Q3, Q10, and Q11 produced statistically significant results. In contrast, Q4, Q6, and Q13 were not statistically significant and therefore are not treated as confirmed barriers in this study.

Objective 2: Awareness Campaigns and Communication

Statement	Valid n	Mean	Median	p-value	Decision
Public awareness programs can help in the early diagnosis of Alzheimer's disease.	52	4.25	4	<0.001	Reject
Community education programs can reduce myths and misunderstandings about Alzheimer's disease.	51	4.22	4	<0.001	Reject
Alzheimer's disease receives less public attention than diseases such as cancer or diabetes.	51	4.14	4	<0.001	Reject
The government should conduct more awareness campaigns about Alzheimer's disease.	51	4.18	4	<0.001	Reject
Pharmaceutical companies should actively support public awareness campaigns on Alzheimer's disease.	50	4.16	4	<0.001	Reject
Current Alzheimer's disease awareness campaigns are reaching enough people in the community.	51	3.29	4	>0.05	Fail to reject
Existing Alzheimer's disease awareness activities are sufficient to educate the public.	51	3.16	3	>0.05	Fail to reject
Collaboration between hospitals, government, NGOs, and pharmaceutical companies can improve Alzheimer's care.	51	4.16	4	<0.001	Reject

Table 5 Objective 2: Awareness Campaigns and Communication**Interpretation**

Respondents significantly agreed that awareness programs can support early diagnosis, indicating that awareness communication is perceived as an important part of the early healthcare pathway. There was statistically significant agreement that community education can reduce myths and misunderstandings, supporting localized and community-oriented communication. Respondents significantly agreed that Alzheimer's disease receives comparatively less public attention. This represents a perceived gap in visibility in public health communication. The results show strong, statistically significant agreement on increased government involvement in Alzheimer's disease awareness. There was significant agreement that pharmaceutical companies can support public awareness. From a healthcare-management perspective, this indicates a perceived role for industry in disease education and communication, with a patient-centered approach. The responses do not provide statistically significant evidence that current campaigns are failing to reach enough people.

Consolidated Hypothesis Testing

Research Statement	Mean	Median	p-value	Statistical Decision	Status
Memory loss is perceived as a normal part of aging, which may contribute to delayed recognition of Alzheimer's disease.	3.87	4	<0.001	Reject H ₀	Pass
Limited awareness of the early symptoms of Alzheimer's disease may contribute to delayed recognition and healthcare-seeking.	4.12	4	<0.001	Reject H ₀	Pass
Adequate knowledge of the early signs of Alzheimer's disease enables people to recognize symptoms at an early stage.	2.92	3	0.220	Fail to reject H ₀	Partial
The ability of doctors to identify patients with early Alzheimer's disease supports timely recognition and diagnosis.	3.45	3	>0.05	Fail to reject H ₀	Fail
Family inaction towards early memory problems may contribute to delayed recognition and healthcare-seeking.	4.31	4	<0.001	Reject H ₀	Pass
Fear and social stigma surrounding Alzheimer's disease may prevent families from discussing memory-related problems.	4.16	4	<0.001	Reject H ₀	Pass
Adequate family knowledge about how to respond to early memory problems can support timely action and healthcare-seeking.	3.27	3	>0.05	Fail to reject H ₀	Fail
Public awareness programs can contribute to the early diagnosis of Alzheimer's disease.	4.25	4	<0.001	Reject H ₀	Pass
Community education programs can help reduce myths and misunderstandings about Alzheimer's disease.	4.22	4	<0.001	Reject H ₀	Pass
Alzheimer's disease receives less public attention compared with diseases such as cancer and diabetes.	4.14	4	<0.001	Reject H ₀	Pass
Greater government involvement through awareness campaigns can improve public awareness of Alzheimer's disease.	4.18	4	<0.001	Reject H ₀	Pass

Pharmaceutical companies can contribute to Alzheimer's disease awareness by actively supporting public awareness campaigns.	4.16	4	<0.001	Reject H_0	Pass
Current Alzheimer's disease awareness campaigns have sufficient reach within the community.	3.29	4	>0.05	Fail to reject H_0	Fail
Existing Alzheimer's disease awareness activities are sufficient to educate the public.	3.16	3	>0.05	Fail to reject H_0	Fail
Collaboration among hospitals, government, NGOs, and pharmaceutical companies can help improve Alzheimer's disease care.	4.16	4	<0.001	Reject H_0	Pass

Finding Model: Evidence-Based Conceptual Model

The findings allow the original conceptual model to be refined into an evidence-based model. Factors with statistically significant support are treated as supported components of the model, while non-significant factors are shown as unconfirmed rather than being presented as established barriers or facilitators.

Evidence-supported factor	Survey evidence	Interpretive role in the model
Normalization of memory loss	Q2: $M = 3.87, p < .001$	Potential barrier to early recognition
Limited awareness of early symptoms	Q3: $M = 4.12, p < .001$	Potential barrier to symptom recognition
Family inaction	Q10: $M = 4.31, p < .001$	Potential barrier to timely family action
Fear and social stigma	Q11: $M = 4.16, p < .001$	Potential barrier to discussion and help-seeking
Public awareness programs	Q5: $M = 4.25, p < .001$	Perceived positive communication mechanism
Community education	Q12: $M = 4.22, p < .001$	Perceived myth-reduction mechanism
Government involvement	Q15: $M = 4.18, p < .001$	Perceived institutional communication mechanism
Pharmaceutical company support	Q16: $M = 4.16, p < .001$	Perceived industry communication contribution
Stakeholder collaboration	Q20: $M = 4.16, p < .001$	Perceived integrated-care mechanism
Campaign reach	Q17: $M = 3.29, p > .05$	Not statistically confirmed
Campaign sufficiency	Q19: $M = 3.16, p > .05$	Not statistically confirmed

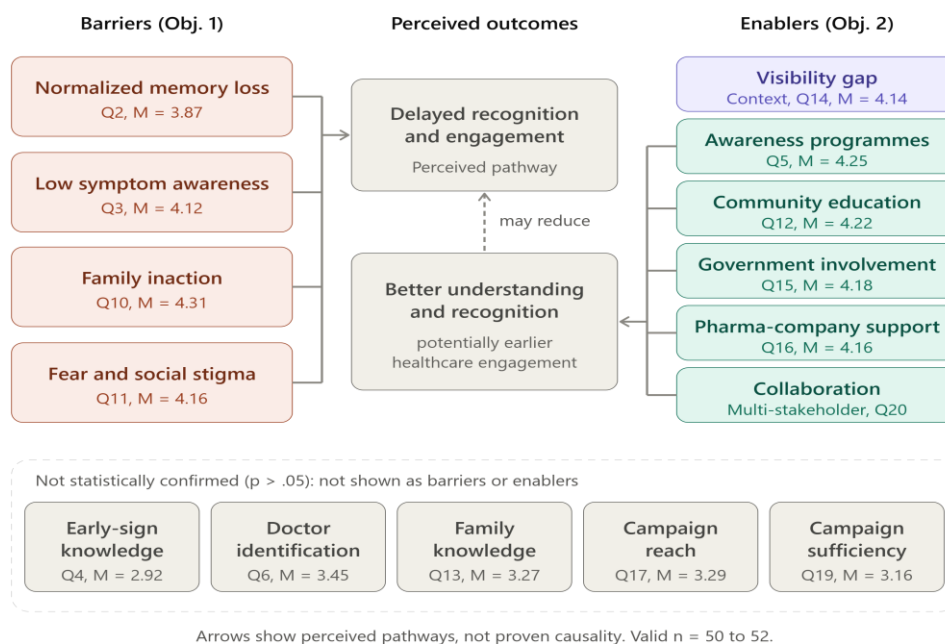


Figure 3 Finding Model: Evidence-Based Conceptual Model

Integrated finding model: Misconceptions and social/family barriers → delayed recognition and delayed healthcare engagement; Awareness and communication interventions → improved understanding and recognition → potentially earlier healthcare engagement. The arrows represent hypothesized or perceived pathways, not proven causality.

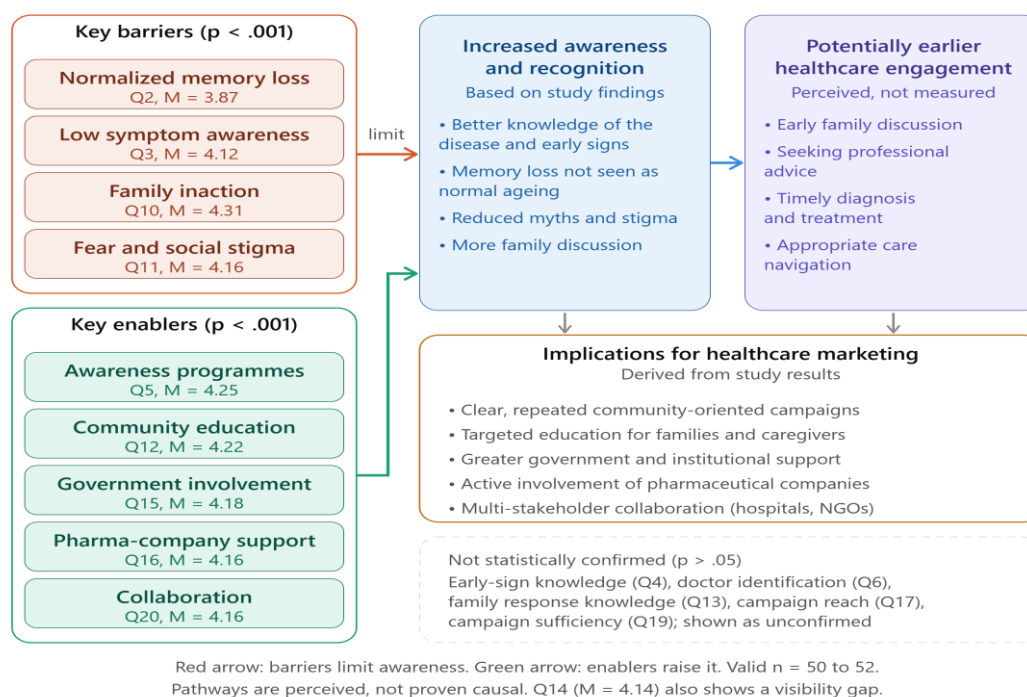


Figure 4 Finding Model

The final model refines the conceptual model using the primary survey evidence ($n = 56$; valid responses: 50-52). Only factors with statistically significant support ($p < .001$) are retained in the main pathway.

Four barriers were supported: normalization of memory loss ($M = 3.87$), limited awareness of early symptoms ($M = 4.12$), family inaction ($M = 4.31$), and fear and social stigma ($M = 4.16$). Five enablers were supported: public awareness programs ($M = 4.25$), community education ($M = 4.22$), government involvement ($M = 4.18$), pharmaceutical company support ($M = 4.16$), and multi-stakeholder collaboration ($M = 4.16$). Respondents also agreed that Alzheimer's disease receives less public attention than cancer or diabetes ($M = 4.14$).

Five factors did not reach significance and are shown as unconfirmed rather than as barriers or enablers: public knowledge of early signs (Q4), doctors' identification of early disease (Q6), family knowledge of how to respond (Q13), campaign reach (Q17), and campaign sufficiency (Q19).

The model suggests that perceived barriers may limit awareness and recognition, while communication enablers may raise it, potentially supporting earlier healthcare engagement. The implications panel translates these findings into practical directions for healthcare marketing: clear, repeated, community-oriented campaigns; targeted education for families and caregivers; stronger government support; active involvement by pharmaceutical companies; and multi-stakeholder collaboration. The pathways reflect perceptions within the survey sample, not population prevalence or proven causality, and healthcare engagement was not directly measured.

Difference Between the Two Models

The conceptual model represents the theoretical framework developed before interpreting the final findings. It shows the expected relationships among misconceptions, social/family barriers, awareness interventions, Alzheimer's awareness and symptom recognition, and healthcare-seeking behavior (H1–H9). In contrast, the findings-based model is developed from the actual survey results of 56 respondents. It removes the hypothesis labels and focuses on the factors that received statistically significant support, such as normalization of memory loss, limited awareness of early symptoms, family inaction, stigma, public awareness programs, community education, government involvement, pharmaceutical company support, and stakeholder collaboration.

Limitations of the Study

The sample size was limited to 56 collected responses, with 50–52 valid responses per item. The sampling frame and exact recruitment method were not documented in the supplied research file, limiting generalizability. The cross-sectional design captures perceptions at one point in time and cannot establish causal relationships. The study uses self-reported perceptions rather than direct observation of healthcare-seeking behavior. The survey did not objectively measure media exposure, campaign reach, diagnostic delay, or healthcare utilization. Some questionnaire items were supporting or exploratory rather than direct measures of a single validated construct. The sign test evaluates the direction of responses relative to the neutral point; it does not establish the magnitude or practical effect of a causal relationship.

Major Findings of the Study

Normalization of memory loss was statistically supported as a public misconception. Respondents significantly agreed that memory loss is commonly considered a normal part of aging.

Limited awareness of early symptoms was strongly supported. Respondents showed high agreement that people are not sufficiently aware of early Alzheimer's symptoms.

Family inaction emerged as a strong perceived barrier, with the highest mean among the Objective 1 barriers ($M = 4.31$).

Fear and social stigma were also strongly supported as barriers to discussing memory-related problems ($M = 4.16$).

The study did not find statistically significant evidence that respondents considered inadequate early-sign recognition knowledge, difficulty identifying physicians, or a lack of knowledge of family response to be confirmed barriers in the respective questions.

Public awareness programs were viewed positively regarding early diagnosis ($M = 4.25$).

Community education was significantly associated with the perception that myths and misunderstandings can be reduced ($M = 4.22$).

Respondents perceived Alzheimer's disease as receiving less public attention than diseases such as cancer or diabetes ($M = 4.14$). This is a perception finding, not an objective measurement of media content.

There was statistically significant agreement for greater government involvement in Alzheimer's awareness ($M = 4.18$).

There was statistically significant agreement that pharmaceutical companies can actively support public awareness campaigns ($M = 4.16$).

The survey did not statistically confirm that the current campaign reach is inadequate or that existing awareness activities are insufficient; both areas had means close to neutral and $p > .05$.

Multi-stakeholder collaboration among hospitals, government, NGOs, and pharmaceutical companies was significantly perceived as capable of improving Alzheimer's care ($M = 4.16$).

Conclusion

This study examined public misconceptions and the role of awareness campaigns regarding Alzheimer's disease from healthcare marketing and management perspectives in India. The primary survey indicates that normalization of memory loss, limited awareness of early symptoms, family inaction, and fear/social stigma are important perceived barriers associated with delayed recognition and healthcare engagement. At the same time, respondents significantly recognized the potential role of public awareness programs, community education, government involvement, pharmaceutical company support, and multi-stakeholder collaboration.

The findings also show the importance of interpreting non-significant results carefully. The survey did not statistically confirm inadequate public knowledge (Q4), physician difficulty (Q6), inadequate family response knowledge (Q13), inadequate campaign reach (Q17), or insufficient existing awareness activities (Q19). These factors should therefore remain areas for further investigation rather than being presented as established findings.

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