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From Dementia Prevention Literacy to Preventive Agency: A Proposed Theoretical Framework for Translating Knowledge into Action

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Abstract

Dementia prevention education increasingly seeks to translate evidence about modifiable risk factors into meaningful public engagement and preventive action. However, access to information and an understanding of prevention recommendations do not necessarily enable individuals to act on them. This conceptual paper proposes dementia preventive agency as a candidate construct for examining the relationship between prevention knowledge and the capacity to undertake informed, feasible and contextually meaningful action.

Building on scholarship concerning dementia prevention literacy, preventive capacity, personal relevance, affective appraisal and knowledge translation, the paper examines whether preventive agency offers explanatory value beyond existing accounts of health literacy, behavioural readiness and self-efficacy. It provisionally conceptualises preventive agency as the situated capacity, exercised alone or with others, to interpret prevention evidence, evaluate its personal significance, exercise informed choice and identify actions that are achievable within one's circumstances. The paper distinguishes this construct from knowledge, motivation, intention and behaviour, and considers how personal, social and structural contexts enable or constrain its expression.

Rather than presenting preventive agency as an established or empirically validated theory, the paper develops six provisional propositions, each paired with the evidence that would weaken it, identifies which of them would discriminate preventive agency from existing constructs rather than merely be consistent with it, and proposes a staged research agenda spanning qualitative exploration, realist evaluation, measurement development and intervention testing. The contribution is a testable conceptual proposal intended to invite scrutiny, refinement and empirical assessment by researchers in dementia prevention, health education and public health. To support boundary-setting and testing, the paper compares preventive agency with its closest frameworks, reports a first targeted literature search, presents a provisional eight-item draft measure (DPA-8), and outlines its validation through exploratory and confirmatory factor analysis and structural equation modelling, together with a pre-specified pilot protocol. The problem of translating prevention knowledge into action is not new and is not claimed as a contribution. No empirical data are reported.

Keywords: dementia prevention, preventive agency, health literacy, capability approach, knowledge translation, health education, realist evaluation, psychometrics, DPA-8, confirmatory factor analysis

1. Introduction

Evidence on modifiable risk factors for dementia has expanded substantially. The most recent Lancet Commission estimates that up to 45% of dementia cases could theoretically be prevented or delayed by addressing 14 modifiable risk factors, including hearing loss, physical inactivity, hypertension, social isolation, air pollution and lower education (Livingston et al., 2024). In response, public health agencies, charities and researchers have invested in education that aims to make this evidence understandable and actionable.

Much of this work rests on an implicit sequence: people who understand the evidence will find it relevant, and people who find it relevant will act. Each step in that sequence is contestable. Understanding may not produce a sense of personal relevance.

Relevance may provoke fear or fatalism rather than action. And even where understanding, relevance and motivation are present, people may lack the time, money, services or support to act. This is a generic version of the well documented gap between intention and behavior (Sheeran, 2002; Webb & Sheeran, 2006; Conner & Norman, 2022); but in dementia prevention it is unusually sharp: the outcome is distant, uncertain and emotionally charged, the evidence is largely observational, and several key risk factors depend on services and environments that are not under individual control (Conner & Norman, 2022). Evaluation frameworks such as RE-AIM make a related point at programme level: reach alone does not establish adoption, implementation or sustained impact (Glasgow et al., 1999; Glasgow et al., 2019).

This paper asks whether a further construct is needed to describe what lies between knowing and acting. It proposes dementia preventive agency as a candidate, defines it, specifies how it differs from neighbouring constructs, offers a mechanism, and states propositions that would allow the construct to be shown to be useful or unnecessary. The problem of translating prevention knowledge into action is not new here. It has been set out in the author's earlier work (Carey, 2026a, 2026b, 2026c) and in wider critiques of individual-focused prevention (Walsh et al., 2022; Daly et al., 2026), and Section 2 summarises it only to motivate the construct. The contribution of this paper is confined to the construct and its test. The paper does not claim that preventive agency is validated and it is intended to make the idea clear enough to test. The paper makes five contributions, all concerning the construct and not the underlying problem. It defines preventive agency with explicit inclusions and exclusions and compares it with its nearest neighbours (Sections 3 and 4). It indicates a mechanism by which interpretation, personal relevance, perceived feasibility and contextual opportunity interact (Robinson et al, 2022) (Section 5). It offers testable propositions with disconfirming evidence, graded by how far they could show that the construct is needed (Section 6). It presents a provisional draft measure (Section 4.5 and Supplementary Appendix 1) and reports a first targeted literature search that tests the novelty claim (Supplementary Appendix 3). It outlines a research pathway, including a pre-specified pilot protocol, for evaluating the construct (Section 7 and Supplementary Appendix 4).

2. The Problem and Its Precedents

Dementia prevention education has largely proceeded on the assumption that better information leads to better action. Yet understanding a recommendation does not guarantee that a person can act on it. People may grasp the evidence for hearing care, physical activity or social engagement and still find these actions unaffordable, unavailable, personally irrelevant, frightening to contemplate, or incompatible with work and caring responsibilities. This problem has been developed in the author's earlier work (Carey, 2026a, 2026b, 2026c) and is summarised here only to motivate the construct.

Three features of the dementia context make this problem more acute than in many other areas of health promotion.

First, the evidence is probabilistic and long-latency. Risk reduction over decades cannot be observed by the individual, and the evidence base is largely observational, with reverse causation and confounding remaining live concerns. People must therefore interpret uncertain evidence and decide how much weight to give it.

Second, the affective load is high. Dementia is widely feared and stigmatised (Alzheimer's Disease International, 2019), and reviews of public understanding report that many people regard dementia as a normal part of ageing or as not preventable (Cations et al., 2018). A qualitative synthesis of general-population perspectives offers an integrated model of how people think about dementia risk reduction and what might support behaviour change (Curran et al., 2021). Prevention messages may therefore activate fatalism, avoidance or denial rather than engagement. Threat-appraisal research suggests that high perceived threat combined with low perceived control can lead people to manage fear rather than manage the risk (Witte, 1992).

Third, many risk factors depend on conditions outside individual choice. Hearing care depends on access to assessment and affordable devices. Air quality depends on where a person lives. Social isolation depends on community and family circumstances. Framing prevention only as personal behaviour risks directing responsibility toward people with the least capacity to act. This critique is established in the dementia prevention literature (Walsh et al., 2022; Daly et al., 2026).

Existing constructs address parts of this problem. Literacy describes access to and understanding of information. Self-efficacy describes belief in one's capability. Intention describes motivation. What remains unclear is how interpretation, personal significance, emotional appraisal and real opportunity combine to determine whether knowledge becomes feasible, chosen action. That question is the focus of this paper.

3. Related Constructs and the Gap They Leave

This section examines existing constructs, such as health agency, self-efficacy and preventive health behaviour, selected deliberately rather than through a systematic search because they pose the strongest potential challenge to the conceptual distinctiveness of dementia preventive agency. For each, I identify the additional contribution needed to justify the proposed

construct. Section 4 defines the construct formally, and section 6 shows how its distinct contribution can be tested empirically.

3.1 Health literacy

Health literacy is traditionally defined as the personal characteristics and social resources needed for individuals and communities to access, understand, appraise and use information and services to make decisions about health (Nutbeam, 2000; Sørensen et al., 2012). Critical health literacy extends this definition toward analysing the social and structural determinants of health and engaging in action to overcome structural barriers (Nutbeam, 2008). Domain-specific applications, such as dementia prevention literacy, tailor these skills to modifiable risk factor reduction (Carey, 2026a–p). While critical health literacy acknowledges social context, health literacy frameworks fundamentally treat literacy as an operational competency or skill set. The health literacy literature widely acknowledges that literacy is a necessary prerequisite or input to action, however, literacy by itself does not ensure that people have the contextual ability to negotiate, choose, or act when faced with conflicting life priorities and environmental limitations.

3.2 Self-efficacy and agency in social cognitive theory

Bandura's social cognitive theory positions self-efficacy, an individual's belief in their capability to execute specific actions—as a primary determinant of human agency (Bandura, 2006). Bandura distinguishes personal, proxy, and collective modes of agency, which directly apply to dementia risk factors that rely on health systems, family support, or built environments (e.g., accessing hearing healthcare or navigating urban air quality). However, self-efficacy is explicitly a cognitive belief system measured as subjectively perceived capability. Standard self-efficacy measures do not evaluate the accuracy of these beliefs against real-world opportunities and structural obstacles, nor do they capture the complex cognitive and affective processes involved in interpreting uncertain, long-latency evidence. Calibration of self-efficacy against performance is an established topic in education research (Talsma et al., 2019), and Bandura (1997) argued that modest overestimation can be adaptive. The step proposed here is different: calibration of perceived feasibility against external opportunity and not against personal performance capacity.

3.3 Behavioural models

Integrated health behaviour frameworks, such as the COM-B model (Capability, Opportunity, Motivation – Behaviour) (Michie et al., 2011) and the Health Action Process Approach (HAPA) (Schwarzer, 2008), explicitly model the transition from intention to behaviour. COM-B includes physical and psychological capability and physical and social opportunity, while HAPA incorporates pre-intentional risk perception, action planning and coping self-efficacy. To justify its introduction, preventive agency must offer explanatory utility beyond these models rather than relabelling their components for a dementia-specific context. The claim made here is narrower than it may first appear. COM-B and HAPA are domain-agnostic and treat the interpretation of evidence largely as an input to motivation. Preventive agency treats the interpretation of probabilistic, long-latency evidence and its emotional appraisal as part of the capacity itself, and asks how well a person's perception of feasibility matches the feasibility that actually exists. Whether this adds anything beyond the capability and opportunity components of COM-B is an empirical question (see P1 and P6).

3.4 Planned behaviour and threat-appraisal models

The theory of planned behaviour (Ajzen, 1991) is the closest existing treatment of the distinction between perceived and actual feasibility and perceived behavioural control captures a person's judgement of the difficulty of performing a behaviour (Ajzen, 1991).

Ajzen treated it as closely related to self-efficacy and argued that it can stand in for actual control when the perception is accurate, and a meta-analysis notes that most studies use it as a proxy for actual control (Hagger et al., 2022). Preventive agency differs in making the accuracy of that perception, and not only its level, an object of measurement, and in placing the interpretation of uncertain evidence and emotional appraisal upstream of it. This is the boundary most likely to be contested, and it is why P6 is framed as a test of the perceived–actual gap rather than of perceived feasibility alone.

Threat-appraisal models, including the Health Belief Model (see Sutton, 2008), protection motivation theory (Rogers, 1975), the extended parallel process model (Witte, 1992) and the common-sense model of illness representation (Leventhal et al., 1980), explain how perceived threat and perceived coping capacity shape protective responses. They are the main theoretical source for P3. Of these, the Health Belief Model has been applied most directly to dementia risk reduction. An Australian scale of motivation to change lifestyle for dementia risk reduction is built on it and includes perceived barriers and self-efficacy subscales (Kim et al., 2014), and Choi and Seo (2022) examined factors associated with intentions to engage in dementia-preventive behaviours among middle-aged Korean adults using an expanded Health Belief Model. In these studies, perceived barriers and self-efficacy are close relatives of perceived feasibility. They are treated as perceptions, and comparison with actual feasibility was not evident in the studies identified (Supplementary Appendix 3). More generally, these models treat appraisal as a determinant of motivation, whereas preventive

agency treats it as one component of a capacity that is also shaped by interpretation and by real opportunity.

3.5 The capability approach

Sen's capability approach emphasises the real freedoms (capabilities) that individuals possess to achieve valued ways of living (functionings), and it highlights conversion factors—the personal, social, and environmental conditions that determine whether raw resources become actionable freedoms (Sen, 1999; Robeyns, 2005; Anand et al., 2009). The approach provides a rigorous, principled foundation for embedding structural context within behavioural analysis, but it is predominantly an economic and philosophical framework (Binder, 2024). As a consequence of this high-level normative focus, it lacks a specific cognitive or affective account of how individuals process probabilistic risk evidence or manage emotional responses such as fear, fatalism or stigma under conditions of scientific uncertainty (Carey, 2026o). Broad social and structural factors, such as income, housing, and access to care, profoundly shape individual health agency, making it impossible to evaluate personal agency in isolation (Solar & Irwin, 2010; Braveman & Gottlieb, 2014; National Academies of Sciences, Engineering, and Medicine [NASEM], 2021). A related literature on adaptive preferences (Elster, 1983; Nussbaum, 2000) shows that people living with persistent constraint may lower their expectations of what is possible. This is close to the underestimated feasibility that P6 predicts will produce inaction despite available opportunities.

3.6 Empowerment

Health empowerment frameworks focus on individuals or communities gaining greater control over decisions and actions affecting their health. Empowerment operates at several levels. Psychological empowerment at the individual level (Zimmerman, 1995), which combines a sense of control, critical awareness of one's context and participation in action, is the nearest relative of preventive agency. Empowerment frameworks are, however, general. They do not specify how people interpret uncertain risk evidence, manage fear or fatalism about a stigmatised disease, or calibrate perceived against actual feasibility, which is where preventive agency makes its specific claim.

3.7 Realist explanation

Realist evaluation explains complex outcomes through Context–Mechanism–Outcome (CMO) configurations (Pawson and Tilley, 1997). Rather than asking whether an intervention works, realism investigates what works, for whom, in what circumstances, and why. Realist theory provides the methodological underpinning for examining how, where, and why agency is activated, forming the foundation of the empirical research pathway detailed in Section 7.

The table compares preventive agency with the frameworks closest to it **(Table 1)**. The entries are the author's reading of the literature and not the results of a systematic review. Each states what the framework already offers and what preventive agency would need to add for the construct to be worthwhile. A first targeted search is reported in Supplementary Appendix 3.

Framework	Key constructs	What it already offers	What preventive agency would need to add
Theory of planned behaviour (Ajzen, 1991)	Perceived behavioural control, subjective norms, attitudes	Treats perceived control as a proxy for actual control when it is accurate. Applied to dementia screening intentions.	Accuracy of perceived feasibility against independent indicators, with evidence interpretation and emotional appraisal placed upstream (P1, P6).
Social cognitive theory (Bandura, 1997, 2006)	Self-efficacy, outcome expectations; personal, proxy and collective agency	Includes proxy and collective agency. Holds that modest overestimation of capability can be adaptive. Calibration of self-efficacy is studied in education.	Calibration against external opportunity and not personal performance, and interpretation of long-latency, uncertain evidence (P6).
Health Belief Model (see Sutton, 2008; Kim et al., 2014)	Susceptibility, severity, benefits, barriers, self-efficacy, cues to action	Well developed in dementia risk reduction, including a dedicated scale. Perceived barriers are measured as perceptions.	Accuracy of perceived barriers against actual barriers, and the interpretive component (P1, P6).
COM-B model (Michie et al., 2011)	Capability, opportunity, motivation	Models physical and social opportunity explicitly alongside capability and motivation.	Whether interpretation of uncertain evidence and emotional appraisal add explanatory value beyond capability and motivation (P1).
Health Action Process Approach (Schwarzer, 2008)	Risk perception, action self-efficacy, planning, maintenance self-efficacy	Models the phases from intention to action and maintenance, with planning and coping.	Whether a situated judgement of feasibility adds beyond action and maintenance self-efficacy (P1, P6).
Capability approach (Sen, 1999)	Functionings, capabilities, conversion factors	Gives a principled account of how context converts resources into real freedoms. Widely used in health equity research.	A cognitive and affective account of how uncertain evidence is interpreted, in a form that can be measured (P1).

Table 1: Closest frameworks and what preventive agency would need to add.

3.8 Existing work in the dementia prevention series

Prior scholarship across this research programme has examined dementia prevention literacy, Midlife Preventive Capacity, personal relevance, affective appraisal, realist explanation and digital prevention education (Carey, 2026a–p). This summary is deliberately brief. Within this body of work:

- Midlife preventive capacity is defined as the baseline reservoir of resources, structural opportunities, cognitive bandwidth, and readiness available to an individual at a specific developmental life stage (midlife, ages 40–65) (Carey, 2026k). It encompasses the structural, social, digital, and cognitive capital required to manage and coordinate multiple risk-reduction strategies simultaneously (Carey, 2026b, 2026k).

- Dementia preventive agency differs from preventive capacity in that it describes the situated capacity to interpret evidence, judge its personal significance and appraise feasibility so as to make informed choices within an individual's immediate lived context (Carey, 2026e, 2026n).

The distinction to be evaluated is therefore between the resources and readiness available at a given life stage (preventive capacity) and the situated judgement exercised with them (preventive agency). The word "capacity" is used in two senses: in Midlife Preventive Capacity it denotes a stock of resources and readiness, and in the definition of preventive agency it denotes a situated ability to judge and choose. Midlife is the life stage for which preventive capacity was defined, and preventive agency is not restricted to it (Section 8).

The figure shows the earlier conceptual chain on which this paper builds **(Figure 1)**, and the table summarises the constructs developed across the series **(Table 2)**.

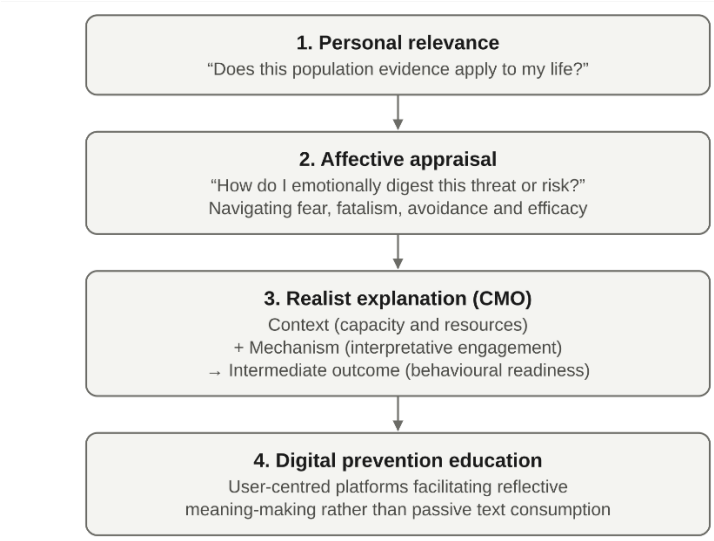


Figure 1: Conceptual chain from personal relevance to digital prevention education enactment. **Note:** Source data modified from Carey (2026a). Additional context on this topic can be found in Carey's multi-part series on dementia prevention (2026a–p).

Dimension	Definition and role in the series	Primary reference
Personal relevance	The cognitive shift from knowing population-level risk factors (knowing) to recognising that the evidence applies directly to one's own current circumstances (recognising).	Carey (2026m)
Affective appraisal	The emotional filtering process (evaluating fear, fatalism, perceived control and stigma) that determines whether a user continues engaging with an intervention or disengages through avoidance.	Carey (2026o)
Realist explanation (CMO)	A Context–Mechanism–Outcome configuration where digital tools act as resources (Context),	Carey (2026a, 2026d)

	driving interpretative engagement and reflection (Mechanism), leading to behavioural readiness (Outcome).	
Midlife preventive capacity	The structural, social, digital and cognitive readiness required to juggle multiple modifiable risk factors (e.g., cardiovascular health, sleep, social engagement) during midlife.	Carey (2026k)
Digital prevention education	Context-sensitive digital architectures that use futures thinking and interactive elements to support the translation of literacy into action among midlife adults.	Carey (2026a, 2026c, 2026n)

Table 2: Core constructs developed across the dementia prevention series (Carey, 2026a–p).

3.9 The gap

Taken together, these literatures address understanding (literacy), belief (self-efficacy), motivation (intention), general determinants of behaviour (COM-B, HAPA), perceived control (the theory of planned behaviour), threat appraisal, real freedoms (capability) and explanation (realism). None of the sources identified combines the interpretation of uncertain evidence, personal and emotional significance, and the calibration of perceived against actual feasibility in a single construct applied to dementia prevention. The targeted search in Supplementary Appendix 3 showed, however, that each feature has precedent: the intention–action gap in dementia risk reduction, the calibration of self-efficacy in education, and structural critiques of individual-focused prevention. The claim of novelty is therefore limited to the combination and to calibration against external opportunity. It is a claim about a targeted comparison and not about an exhaustive search of the literature. Whether the gap is real is the question that Phase 1 of the research pathway (Section 7) must answer.

4. Defining Dementia Preventive Agency

4.1 Provisional definition

Dementia preventive agency is the situated capacity of a person, alone or with others, to interpret dementia prevention evidence, judge its personal significance, and appraise which risk-reduction actions are feasible and worthwhile in their circumstances, so as to make informed choices, including a choice not to act.

The phrase "alone or with others" is deliberate. It allows for proxy and collective agency, which matters where risk reduction depends on clinicians, families, employers or the built environment. Enacting and sustaining those choices is treated as the exercise of agency and as a separate step shaped by conversion factors (Section 5). It is not part of the construct, so that agency can be measured independently of the action against which it is tested.

4.2 What the construct includes

Dementia preventive agency is conceptualised as a multi-dimensional construct. It comprises three interacting components (the first three items below), which together support informed choice (the fourth), reached alone or with others (the fifth). Rather than viewing health decision-making as a purely rational calculation, the construct integrates the cognitive, affective and structural realities faced by adults navigating long-term health risks. Specifically, it encompasses:

- Interpreting probabilistic, long-latency evidence
- Appraising personal significance, including emotional responses such as fear, fatalism and stigma
- Perceived feasibility, together with the accuracy of that perception. Accuracy is a relation between perceived feasibility and actual feasibility, which is set by conditions outside the person and assessed against external indicators
- Informed choice, including an informed decision not to act, formed from the three components above
- Exercise with others, including family, clinicians and communities, where proxy or collective agency is involved.

4.3 What the construct excludes

To guard against conceptual inflation and ensure discriminant validity during empirical testing, it is equally vital to state what dementia preventive agency does not represent. Confounding agency with its preconditions, its psychological precursors, or its eventual behavioural outcomes risks reducing its analytical precision and misattributing structural barriers to individual deficits. To establish strict conceptual boundaries, the construct explicitly excludes:

- Knowledge itself. Literacy is an input to agency, not the same thing.
- Motivation or intention as a state. A person can intend to act and lack agency, or have agency and choose not to act.
- Behaviour or outcomes. Agency is a capacity, not an action. The enactment of choices, and the preventive action that follows, are the outcomes against which agency is tested.

Incidental or coerced behaviour is not an expression of agency.
- A fixed personality trait. The proposal is that agency is situated and domain-specific.
- A guarantee of reduced dementia risk. The construct concerns informed risk reduction under uncertainty.
- Personal responsibility for outcomes. Contextual constraint is part of the definition, so the construct cannot coherently be used to attribute blame.

4.4 Distinction from neighbouring constructs

A key requirement for any candidate construct is establishing discriminant validity against established theoretical counterparts. Dementia preventive agency operates alongside several related concepts in health promotion and behavioural science, but it maintains distinct analytical boundaries in its definition, its operational focus and its explicit treatment of contextual constraints. The table summarises these boundaries, showing how preventive agency diverges from literacy, self-efficacy, perceived behavioural control, behavioural intention, empowerment, Sen's capability framework and Midlife Preventive Capacity **(Table 3)**.

Construct	Core idea	Treatment of context	Proposed distinction from preventive agency
Dementia prevention literacy	Access, understanding and appraisal of information	Largely background	Literacy is an input. Agency is the capacity to judge and choose on the basis of it, within feasible options.
Self-efficacy	Belief in one's ability to perform a behaviour	Mostly absent	Self-efficacy is a belief. Agency includes how well that belief matches real feasibility.
Perceived behavioural control (theory of planned behaviour)	Perceived ease or difficulty of performing a behaviour; can stand in for actual control when the perception is accurate	Actual control acknowledged but usually unmeasured	Perceived control is a perception whose accuracy is rarely assessed. Agency treats the perceived–actual gap as a measurable quantity and places evidence interpretation and emotional appraisal upstream of it.
Health belief model (perceived barriers, self-efficacy)	Beliefs about susceptibility, severity, benefits and barriers, with self-efficacy and cues to action	Barriers are perceived and not independently assessed	The model treats barriers as perceptions. Agency adds the interpretation of uncertain evidence and the accuracy of perceived feasibility against actual feasibility.
Behavioural intention	Motivation to act	Absent or distal	Intention is motivation. Agency includes the interpretation and opportunity that determine whether intention can be enacted.
Empowerment	Control over decisions affecting one's life	Central but broad	Empowerment, including psychological empowerment, is general. It does not specify how risk evidence is interpreted, appraised emotionally or checked against real feasibility.
Capability (Sen)	Real freedoms to achieve valued functioning	Central (conversion factors)	Capability has no account of evidence interpretation or affective appraisal.
Midlife preventive capacity	Reservoir of baseline resources, structural opportunities, cognitive bandwidth, and readiness available at a life stage (midlife, ages 40–65) to manage multiple risk-reduction strategies (Carey, 2026k).	Central (defines structural, social, and economic baseline constraints)	Preventive capacity describes the resources and readiness available at a life stage, whereas preventive agency describes the situated judgement exercised with those resources to reach informed choices (Carey, 2026e, 2026k).

Table 3: Distinction between preventive agency and neighbouring constructs.

The most vulnerable boundaries are with self-efficacy and with perceived behavioural control, since perceived feasibility overlaps with both. The paper's answer is that preventive agency is distinguished by treating perceived and actual feasibility as separable, measurable quantities and by examining their gap (see Proposition 6). If that gap adds nothing beyond perceived feasibility alone, the distinction fails.

4.5 Operationalisation: a provisional draft measure

To make the construct measurable, a provisional eight-item draft measure, the Dementia Preventive Agency Scale (DPA-8), is proposed **(Table 4)**. Its three subscales correspond to the three components shown in the figure **(Figure 2)**: interpretive capacity (IC), personal significance (PS) and perceived feasibility (PF). Items are rated on a five-point agreement scale (1 = strongly disagree, 5 = strongly agree). To avoid overlap with the excluded constructs detailed in Section 4.3, the items were specifically designed to omit references to self-efficacy (such as confidence in carrying out tasks), as well as participant motivation or intent. The draft has not been reviewed by experts

or tested with respondents. The personal significance subscale has only two items and will need at least three for factor analysis. Informed choice, including a choice not to act, and exercise with others are not yet covered. The perceived feasibility items measure perception only. Calibration is assessed by comparing them with an independent indicator of actual feasibility (Section 7, Phase 4), and no item in the scale measures calibration directly.

Item code	Subscale	Item statement
DPA-1	Interpretive capacity (IC)	"I can tell which of the dementia risk factors I read or hear about are supported by strong evidence and which are less certain".
DPA-2	Interpretive capacity (IC)	"When advice about brain health seems to conflict or change, I can decide how much weight to give each piece of advice".
DPA-3	Interpretive capacity (IC)	"I can work out which dementia risk factors are relevant to my own circumstances".
DPA-4	Personal significance (PS)	"The evidence on reducing dementia risk is relevant to my own life".
DPA-5	Personal significance (PS)	"When I think about my own risk of dementia, I would rather not think about it. (reverse-scored)".
DPA-6	Perceived feasibility (PF)	"In my circumstances, there are realistic ways for me to reduce my risk of dementia".
DPA-7	Perceived feasibility (PF)	"The services, people and places I would need in order to reduce my risk of dementia are available to me".
DPA-8	Perceived feasibility (PF)	"My time, money and other commitments leave room for actions that could reduce my risk of dementia".

Table 4: The provisional eight-item dementia preventive agency scale (DPA-8). **Note:** Items adapted from Carey (2026a).

5. Proposed Mechanism

The proposed model has five elements, summarised here in text: prevention knowledge, the three components that make up preventive agency, enacted choice, conversion factors and preventive action. The figure shows how they fit together **(Figure 2)**.

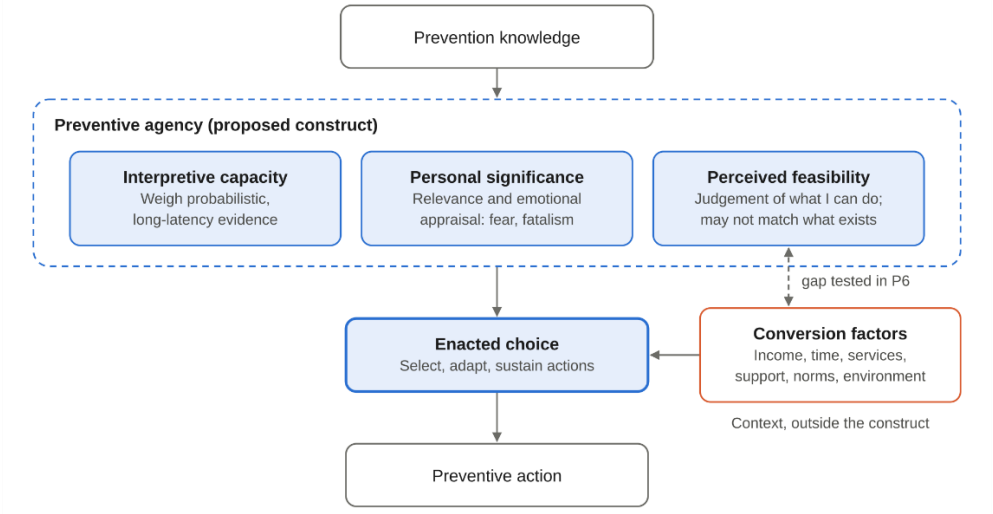


Figure 2: Conceptual model of dementia preventive agency. **Note:** The dashed outline marks the proposed construct. Conversion factors are contextual conditions outside it and shape whether enacted choice becomes preventive action. The dashed double-headed arrow marks the gap between perceived and actual feasibility examined in Proposition 6.

Prevention knowledge is the input. It includes the information a person has accessed and understood, and corresponds to dementia prevention literacy.

Three interacting components make up preventive agency:

1. Interpretive capacity: making sense of probabilistic, long-latency and sometimes contested evidence, and deciding how much weight it deserves.
2. Personal significance: judging the relevance of the evidence to one's own life, including emotional appraisal such as concern, fear, fatalism and stigma.

3. Perceived feasibility: a person's judgement of what they can do, which may or may not match what is actually available to them.

These components are not sequential. Interpretation shapes significance, significance shapes which actions are considered, and perceived feasibility shapes both how evidence is interpreted and whether concern is converted into action or avoidance. For example, a person who believes no feasible action exists may interpret the same evidence more fatalistically.

Enacted choice represents the practical application of agency, involving how individuals choose, modify, and maintain specific behaviours independently or collaboratively. It sits outside the dashed outline in **Figure 2** because it is the exercise of agency and not part of the capacity itself. Keeping the two apart allows agency to be measured through its components and then tested against action (P1), rather than being inferred from the action it is meant to explain.

Conversion factors lie outside the construct and shape whether enacted choice becomes preventive action. These include income, time, caring responsibilities, access to services, social support, cultural norms and the physical environment. Placing them outside the construct is a deliberate choice. It prevents agency from being treated as a property of the individual alone and guards against responsibilising people for constraints they do not control.

Calibration. Perceived feasibility belongs to the person and sits inside the construct. Actual feasibility is set by conversion factors and sits outside it. Calibration is the relation between the two. It is therefore not a further component of agency but a property of how accurately perceived feasibility represents the person's real circumstances, and it can only be assessed against an independent indicator of actual feasibility (Section 7, Phase 4).

Dynamics. The model is not one-directional. Acting changes feasibility and appraisal: successful action may increase perceived feasibility and relevance, while unsuccessful or costly action may deepen fatalism. A fuller treatment of these feedback processes is a priority for future development.

6. Theoretical Propositions

The following propositions are provisional. Each states a relationship that should be observable if the construct is useful, and specifies findings that would weaken it. They differ in how far they can show that the construct is needed. Items P1 and P6 demonstrate distinct discriminant validity, predicting outcomes that adjacent constructs fail to capture. P3 is partly discriminating, because threat-appraisal models already predict non-linear responses to fear, so its contribution is to locate such responses within agency. P2, P4 and P5 are consistent with preventive agency but would also follow from the capability approach, COM-B and domain-specific self-efficacy respectively, so supporting them would not by itself justify the construct. They are included because they specify the contextual, interventional and domain-specific boundaries of the account. Throughout, preventive agency is to be measured through its components (interpretive capacity, personal significance and perceived feasibility) and not through reported action, so that tests against action are not circular.

6.1 P1 Incremental explanatory value (discriminating)

Preventive agency, measured through its components, will explain variance in dementia risk-reduction action beyond that explained by dementia prevention literacy, self-efficacy (including perceived behavioural control) and behavioural intention.

Rationale. While these constructs evaluate an individual's readiness, seminal reviews by Sheeran (2002) as well as Webb and Sheeran (2006) demonstrate that holding an intention rarely guarantees corresponding action. If preventive agency captures something these do not, it should add predictive value when all are modelled together. Agency must be measured independently of action. If it can be assessed only through the behaviour it is meant to predict, the proposition is circular.

Weakened if preventive agency contributes no unique variance once the other constructs are controlled, or correlates so highly with them that discriminant validity cannot be shown, or can be measured only through the action it is meant to predict. Supplementary Appendix 4 details the pre-specified decision rules established for the pilot test.

6.2 P2 Contextual moderation (consistent)

The relationship between prevention literacy and action will be moderated by conversion factors, so that equal literacy produces unequal action across contexts.

Rationale. The capability approach holds that the same resources convert into different real freedoms depending on personal, social and environmental conditions (Sen, 1999). Several recognised dementia risk factors depend heavily on services and environments rather than individual decisions alone (Livingston et al., 2024).

Weakened if literacy predicts action equally across socioeconomic and structural contexts.

6.3 P3 Non-linear role of affective appraisal (partly discriminating)

Emotional responses to dementia risk will relate to preventive agency non-linearly. Moderate, personally relevant concern will be associated with higher agency, while very low concern (indifference) and very high concern (fear, fatalism, stigma avoidance) will be associated with lower agency.

Rationale. Threat-appraisal research suggests that high threat with low perceived control can provoke avoidance (Witte, 1992). Dementia carries unusually strong fatalistic and stigmatising associations (Alzheimer's Disease International, 2019), which makes this pattern plausible.

Weakened if concern relates monotonically to agency, or if affective appraisal adds nothing once personal relevance is modelled.

6.4 P4 Feasibility-expanding interventions (consistent)

Interventions that expand feasible opportunities, for example by linking people to hearing assessments, adapting activity options to their circumstances, or reducing cost and time barriers, will produce larger and more sustained change than knowledge-only interventions.

Rationale. If agency depends on real as well as perceived feasibility, informing people without changing what they can do should have limited effect.

Weakened if knowledge-only interventions perform equivalently, or if feasibility-expanding components work only through increases in self-efficacy.

6.5 P5 Domain specificity (consistent)

Within a single individual, the capacity for preventive agency fluctuates depending on the specific risk factor and someone may have high agency for physical activity and low agency for hearing care.

Rationale. Risk factors differ in visibility, stigma, cost and social support, so interpretation, relevance and feasibility differ across domains.

Weakened if within-person variation across risk factors is small and a single stable factor accounts for most of the variance. That would suggest a general disposition rather than a situated capacity.

6.6 P6 Calibration of feasibility (discriminating)

The gap between perceived and actual feasibility will predict outcomes in distinct ways. Large overestimation of feasibility will predict failed attempts and discouragement, and underestimation will predict inaction despite available opportunities. Modest overestimation may be neutral or adaptive, so the relationship is expected to be curvilinear and not linear.

Rationale. Self-efficacy literature predominantly focuses on internal agency while overlooking how objective structural barriers and available resources constrain or enable actual behavior. Calibration of self-efficacy against performance is an established topic in education research (Talsma et al., 2019), and Bandura (1997) argued that modest overestimation can be adaptive. The distinct step here is calibration against external opportunity and not against personal performance capacity. Agency defined as a situated capacity implies that accurate perception matters, not only high perception. This tendency mirrors what Elster (1983) and Nussbaum (2000) describe as adaptive preference formation, where individuals facing ongoing environmental barriers unconsciously scale back their expectations of achievable goals. Due to the statistical limitations associated with algebraic difference scores, this proposition is best evaluated by modeling perceived and actual feasibility independently, such as through response surface methodology (Edwards & Parry, 1993; Edwards, 2001).

Weakened. This hypothesis is disconfirmed if perceived feasibility alone explains the variance in outcomes, leaving the discrepancy between perceived and objective feasibility with no added predictive power.

7. Research Pathway

The following pathway is framed as work that other researchers could undertake.

7.1 Phase 1: conceptual testing

A structured review across agency, capability, self-efficacy, empowerment, health literacy and dementia prevention research, including work that does not use this paper's terminology. The central question is whether an existing construct already covers what preventive agency claims. If so, the construct should be refined or abandoned. A first targeted search is reported in Supplementary Appendix 3, and Phase 1 is its systematic version, run in bibliographic databases with the strings given there. Particular attention should go to the theory of planned behaviour, the Health Belief Model in dementia research, the calibration of self-efficacy, and the adaptive-preferences literature.

7.2 Phase 2: qualitative exploration

Interviews or think-aloud studies with people who have similar knowledge but different actions. These would examine the processes Propositions 3 and 6 predict: how people appraise relevance and fear, and how they judge what is feasible compared with what is available to them.

7.3 Phase 3: realist evaluation

Examination of existing and new education interventions through context, mechanism and outcome configurations. Conversion factors map onto context, the three components onto mechanisms, and action onto outcomes. This approach asks for whom and in what circumstances agency is expressed.

7.4 Phase 4: measurement development and psychometric testing

Item generation, expert review and cognitive interviewing, to revise the draft DPA-8 and to add items for informed choice and for exercise with others. The revised items would then be administered to a validation sample ($N \geq 500$), split so that exploratory factor analysis is run on one half and confirmatory factor analysis on the other. Fit would be judged against commonly used benchmarks (CFI and TLI above .95, RMSEA below .06, SRMR below .08; Hu & Bentler, 1999), recognising that these are guides and not strict thresholds (Shi et al., 2019). Key tests are discriminant validity from literacy, self-efficacy, perceived behavioural control and intention (P1), domain-specific forms (P5), and an independent indicator of actual feasibility (P6). Incremental validity (P1) would be tested with hierarchical regression or structural equation modelling, with agency measured through its components and not through reported action, so that the test is not circular. Measuring actual feasibility is likely to be the hardest problem. Options include objective indicators such as service availability, cost and travel time, structured assessment of circumstances, and triangulation with practitioner judgement. Because P6 relies on an evaluated discrepancy between perceived and actual measures, standard difference scores should be avoided. Instead, models such as polynomial regression coupled with response surface analysis are recommended, treating both dimensions independently (Edwards & Parry, 1993; Shanock et al., 2010; Sirion, 2026). Supplementary Appendix 4 details a pre-specified pilot protocol (currently unconducted), while Supplementary Appendix 1 provides preliminary scoring guidelines for the DPA-8.

7.5 Phase 5: intervention testing

Comparison of feasibility-expanding interventions with knowledge-only interventions (P4), with agency examined as a mediator.

8.Limitations and Ethical Considerations

8.1 Status of the construct

Preventive agency is proposed here as a conceptual model. Either the construct will prove superfluous alongside established measures, or its main assertions will fail to gain support outcomes this paper treats as equally informative. No empirical data are reported. Supplementary Appendix 4 pre-specifies a pilot study that has not yet been conducted.

8.2 Novelty claim

The targeted search in Supplementary Appendix 3 did not identify a construct that combines the three features, but it showed that each has precedent: the intention–action gap in dementia risk reduction, the calibration of self-efficacy, and structural critiques of individual-focused prevention. The search used a general web search tool and not bibliographic databases, so it cannot show that no relevant work exists. The nearest neighbours, notably perceived behavioural control and the perceived barriers of the Health Belief Model, may already account for much of what is proposed. P1 and P6 are designed to test this.

8.3 Evidence on prevention

The evidence on modifiable risk factors is largely observational and the causal contribution of individual risk factors remains uncertain. The paper therefore frames prevention as informed risk reduction under uncertainty. Preventive agency does not imply that acting will prevent dementia.

8.4 Responsibilisation

There is a risk that a construct centred on agency will be used to place responsibility for dementia risk on individuals, particularly those facing structural disadvantage. The model addresses this by treating conversion factors as external conditions and by including informed decisions not to act within the definition. Researchers using the construct should report contextual constraints alongside agency scores, and should avoid interpreting low agency as individual deficit. The concern itself is not new (Walsh et al., 2022; Daly et al., 2026). The contribution here is to build it into the definition of the construct.

8.5 Scope

The construct is developed for adults considering their own dementia risk. Its application to older adults, carers, and people already living with cognitive impairment would require separate consideration. Preventive capacity was defined for midlife (ages 40–65), and midlife adults are the main application in the author's earlier work. Preventive agency is not restricted to that life stage, but its relationship to age and life stage has not been examined here.

8.6 Self-citation and terminology

The paper builds on a prior series by the author. To reduce insularity, the literature review must engage extensively with work outside that series and outside its terminology. For this reason the comparison in Section 3 draws mainly on external literature, and the summary of the author's earlier work has been kept brief.

9. Conclusion

Knowing about dementia risk reduction and being able to act on it are different things. This paper has proposed dementia preventive agency as a candidate construct for the space between them, defined it with explicit boundaries, offered a mechanism in which interpretation, personal significance and perceived feasibility interact within real contextual constraints, and stated six propositions with the evidence that would weaken each, graded by how far they can

discriminate the construct from its neighbours. A first targeted literature search found that each element of the construct has precedent. The claim that remains is a narrower one: that calibrating perceived feasibility against actual opportunity, within a single account that also covers evidence interpretation and emotional appraisal, explains something that existing constructs do not. Whether the construct earns a place alongside existing accounts is an empirical question. A provisional draft measure and a pre-specified pilot protocol are provided, and the paper's purpose is to make it possible to ask.

Use of generative AI

This paper was led and developed by the author. Generative AI (OpenAI ChatGPT, GPT-5.5; Anthropic Claude Sonnet 5.5) was used to assist with figure design and refinement, with the targeted web-based literature search reported in Supplementary Appendix 3. All conceptual content, interpretation and editing decisions were undertaken by the author, who takes responsibility for the content.

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Conflicts of Interest

The author declares no conflicts of interest.

Ethics Approval

Not applicable. This is a conceptual paper and did not involve human participants, animal subjects, or the collection of new empirical data. The pilot study outlined in Supplementary Appendix 4 would require human research ethics approval before any data collection.

Figures

Figure 1 is adapted from the author's earlier work (Carey, 2026a). **Figure 2** was created for this article.

Data Availability

No new datasets were generated or analysed for this conceptual article.

Supplementary Material

The supplementary material for this article can be found online at: https://seriesscience.com/wp-content/uploads/2026/11/Supplementary-Material-MCRR.pdf

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