

Nonverbal Solace: A Study on Bodily Practices and Emotional Connection through Agarwood Aroma in Dementia Care Spaces

HUANG Yun

Senior Engineer, China

PENG Zhu

Yuxi Normal University, Yuxi, China

This paper aims to transcend the conventional pharmacological paradigm of agarwood intervention in Alzheimer's disease (AD). From a humanistic and social science perspective, it explores how agarwood, as a culturally significant sensory medium, constructs novel relationships and experiences within specific caregiving contexts. Grounded in sensory anthropology, phenomenology of the body, and medical humanities, and integrating the established neuropharmacological activities of agarwood, this study proposes that the core value of its "aroma-assisted therapy" lies not only in its multi-target molecular effects, but more profoundly in its role as a **nonverbal, embodied communication medium**. Such a medium can reshape the bodily experience of AD patients and foster **emotional connection** between caregivers and patients beyond the barriers of language. Through a systematic review of the traditional Chinese medicine (TCM) cultural implications and modern pharmacological evidence of agarwood, situated within the theoretical frameworks of non-pharmacological interventions and sensory stimulation therapy, this paper argues that the introduction of agarwood aroma can construct a shared sensory environment within care spaces. This, in turn, alleviates behavioral and psychological symptoms of dementia (BPSD), improves the quality of interpersonal interaction, and offers new insights for developing culturally rooted, person-centered dementia care models.

Keywords: Alzheimer's disease, agarwood, sensory anthropology, bodily practice, nonverbal communication, emotional labor, humanistic care

Introduction: From "Repairing the Brain" to "Sustaining Connection" —A Paradigm Shift in Care Perspectives

The cruelty of Alzheimer's disease (AD) as a neurodegenerative condition extends far beyond the loss of neurons and synapses; it more profoundly erodes the very foundations of being human: memory, language, identity, and the social relations built upon them. Mainstream biomedical models and their corresponding drug developments (e.g., cholinesterase inhibitors, anti-A β monoclonal antibodies) focus on "repairing the brain" at the pathological level. While this can partially alleviate symptoms, it struggles to address the increasingly

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HUANG Yun, Bs, Senior Engineer, China.

PENG Zhu, Ph.D. of History, Lecture, School of Foreign Language, Yuxi Normal University, Yuxi, China.

prominent emotional isolation, communication breakdown, and existential anxiety that emerge during the disease course. The gap between “treatment” and “care” calls for a more holistic intervention perspective.

Against this backdrop, the value of non-pharmacological interventions (NPI) has become increasingly prominent. Research confirms that methods such as aromatherapy and sensory stimulation can safely and effectively improve the behavioral and psychological symptoms, mood, and quality of life of AD patients, serving as important complements or alternatives to pharmacological treatment. Among these, olfactory stimulation demonstrates unique advantages due to its direct connection with the brain’s limbic system, which governs emotion and memory. This provides a crucial interface for re-examining a traditional aromatic Chinese medicine—agarwood.

Existing research has systematically demonstrated the potential of agarwood for AD intervention from a natural science perspective: its TCM theory of “aromatic orifice-opening and mind-awakening” aligns closely with AD pathogenesis; its active components (e.g., agarospirol, agarotetrol) exert neuroprotective effects through multi-target mechanisms. However, most of these studies reduce the “aroma” of agarwood to a mere carrier for delivering active ingredients, thereby obscuring the cultural and practical meanings of “aromatic orifice-opening” beneath molecular pathways.

Therefore, this study aims to achieve a fundamental **paradigm shift**. We abandon the objectifying perspective that treats agarwood solely as a “drug” and instead reconceptualize it as a **cultural sensory symbol** and **relational medium**. The central research question is: In the micro-social space of AD care, fraught with emotional tension, how does the introduction of agarwood aroma, through the shaping of concrete **bodily practices** and a shared **sensory environment**, influence the embodied experiences of both patients and caregivers, and reconstruct their **nonverbal emotional connection**? This paper argues that the value of agarwood lies not only in its agarospirol molecules that cross the blood-brain barrier, but also in the tranquility, glimmers of memory, and the bridge of communication silently built by its curling wisps of fragrance.

Literature Review and Theoretical Framework: Integrating the Senses, Body, and Culture

Sensory Stimulation and Aromatherapy as Non-Pharmacological Interventions

Current AD treatment strategies have shifted from a single-drug approach to a comprehensive framework combining pharmacological and non-pharmacological methods. Sensory stimulation therapy, particularly olfactory stimulation, has become an ideal complementary intervention due to its non-invasive nature, ease of implementation, and low side effects. Its mechanisms are thought to involve enhancing neuroprotection, increasing brain plasticity, and regulating mood and circadian rhythms. Aromatherapy, as one such form, alleviates anxiety and agitation by inhaling specific aromatic molecules that directly act on the olfactory pathway and influence the limbic system, potentially leading to indirect improvements in cognition and sleep. This provides a modern rehabilitative medical theoretical foundation for the application of agarwood incense fumigation.

Sensory Anthropology and the Construction of the “Smellscape”

Sensory anthropology posits that the senses are not purely biological receivers but channels deeply shaped by culture that actively participate in the construction of meaning. Olfaction, as an ancient and powerful trigger of emotion and memory, constructs the “smellscape” of both individuals and collectives. In East Asian cultures, the

aroma of agarwood has long transcended its physical scent, intertwining with cultural practices such as meditation, elegant gatherings, and health cultivation, and being imbued with complex connotations of tranquility, refinement, and spirituality. Introducing agarwood into a care space essentially implants a specific, culturally-coded “smellscape,” which may activate deep-seated cultural bodily memories of the patient, or create a perceptual environment culturally recognized as “peaceful.”

Phenomenology of the Body and “Embodied Cognition”

Merleau-Ponty’s phenomenology of the body emphasizes that the body is our primordial medium for perceiving the world and expressing the self. For AD patients with severely impaired language abilities, “embodied cognition” is particularly crucial—their emotions, needs, and perception of the world are primarily and predominantly expressed through bodily states (e.g., tension, relaxation, facial expressions, movements). Chronic stress is a major factor exacerbating various health conditions, including AD. Aroma can directly elicit pre-reflective, bodily responses (e.g., deep breathing, muscle relaxation) through the olfactory pathway, bypassing damaged cognitive-linguistic pathways and providing patients with a direct, bodily form of solace and “anchoring.”

Nonverbal Communication and “Emotional Labor” in Caregiving

A core challenge in AD care is communication breakdown. A vast amount of meaningful interaction relies on nonverbal cues: eye contact, facial expressions, touch, tone of voice, and the shared ambient atmosphere. Caregiving work itself constitutes high-intensity “emotional labor,” requiring caregivers to manage their own emotions and actively cultivate an emotional environment conducive to the patient’s well-being. As a pervasive environmental element, agarwood aroma can serve as a gentle, neutral **nonverbal communication medium** and **emotion regulation tool**, lowering ambient tension and creating a “background” more conducive to positive interaction for both parties.

The Dual Nature of Agarwood: Integrating Pharmacological Activity and Cultural Medium

Pharmacological “Material Basis” and the Cultural “Meaning Enhancer”

Existing pharmacological research has thoroughly elucidated the modern mechanisms of agarwood in AD intervention: inhibiting A β production, enhancing microglial phagocytosis, repairing the cholinergic system, exerting anti-inflammatory and antioxidant effects, among others. These mechanisms constitute the “material basis” through which agarwood operates. From a humanistic perspective, these mechanisms support the scientific plausibility that its aroma may produce positive physiological-psychological effects. More importantly, when this empirically promising substance is combined with the culturally ingrained narrative of “aromatic orifice-opening,” a “meaning enhancement” effect occurs. For caregivers, using agarwood is not merely applying a “potentially useful essential oil,” but invoking a practice imbued with millennia of wisdom and cultural identity. This can strengthen their confidence and sense of ritual in its use, thereby more actively conveying calmness and positive expectation during interactions.

The Uniqueness of Agarwood’s Olfactory Notes and Its Fit with Care Practices

Compared to other aromatic substances (e.g., sandalwood), the aroma of agarwood is more subtle, profound, and richly varied, requiring heating to be fully released—a process that demands a degree of stillness and

patience. This characteristic forms a beneficial counterbalance to the “fast-paced” pressure and “instant problem-solving” anxiety commonly found in AD care. The act of lighting a coil of agarwood incense can become a simple daily ritual, signaling to both caregiving parties an entry into a “slowed-down,” shared sensory time-space. Agarwood’s fragrance “induces calmness” rather than “excitement,” possessing a natural cultural and sensory suitability for alleviating common symptoms such as agitation and anxiety in AD patients. **At the same time, it must be noted that strict fire safety regulations must be followed when using open flames or heated incense burners, and adequate ventilation must be ensured to avoid irritation for those with respiratory sensitivities.** (As shown in Figure 1)



Figure 1. Agarwood Sample (Author's Collection).

Research Method Design: A Proposed Exploratory Qualitative Study

To further investigate the above theoretical propositions, this paper proposes an exploratory qualitative research design.

- **Research Design:** A multi-case ethnographic study, combining participant observation with in-depth interviews.
- **Research Sites:** Two to three eldercare facilities or memory care centers that implement person-centered care.

- **Intervention and Process:**

- A. *Baseline Observation Period (2 weeks):* Detailed recording of daily interaction patterns, typical conflicts, quiet moments, and environmental atmosphere in the target care unit (e.g., common living room, residents' rooms) without the use of agarwood.
- B. *Intervention Period (4–8 weeks):* High-quality agarwood incense sticks or a low-temperature aroma diffuser will be used for fumigation at fixed daily time slots (e.g., during afternoon susceptibility to irritability, before nighttime sleep). The researcher, as a participant observer, will focus on recording:
 - a) *Changes in bodily practices:* Alterations in patients' breathing, facial expressions, body postures, and activity patterns; changes in how caregivers approach, touch, and guide patients.
 - b) *Generation of interaction events:* Whether new interactions emerge around the aroma (e.g., shared gazing at the incense smoke, simple olfactory dialogue, fragments of memory elicited by the scent).
 - c) *Transformation of spatial atmosphere:* The combined impression of the environment's soundscape, lighting, and "smellscape."
- C. *In-depth Interviews:* Semi-structured interviews will be conducted with participating caregivers (nursing staff and family members). Topics include: subjective experience of using agarwood, observations and interpretations of patient reactions, changes in personal emotions and fatigue levels, and individual perceptions of traditional incense culture.

- **Data Analysis:** Field notes and interview transcripts will be subjected to thematic analysis to distill core themes such as "anchors of calm," "shared focal points," "breakthroughs in communication," and "cultural solace."

Analysis and Discussion: How Agarwood Aroma Reconstructs the Care Space

Based on the aforementioned theories and existing evidence, we can infer and analyze how agarwood aroma may reconstruct AD care practices on three levels:

Individual Level: Providing Sensory Anchors for the "Unraveling Self"

The cognitive world of an AD patient is fragmented and disordered. The aroma of agarwood, acting directly on the emotional centers via the olfactory pathway, may physiologically induce a state of bodily calmness (corresponding to its pharmacological potential for anti-inflammation and neurotransmitter regulation). This bodily tranquility constitutes a pre-linguistic, direct "felt good." For patients unable to articulate their anxiety, the relaxation of the body is in itself therapeutic. More profoundly, the specific aroma may awaken vague memory traces associated with culture or personal history, providing the unraveling self with a brief but tangible **sensory anchor**, achieving a temporary transition from "cognitive disorder" to "sensory presence." **It should be noted, of course, that the manifestation of such cultural effects may vary depending on individual differences in cultural background, life experience, and olfactory memory; for patients without relevant cultural memory, its effect may primarily rely on the pharmacological basis and sensory characteristics of agarwood.**

Relational Level: Creating a “Shared Focal Point” and a “Nonverbal Pathway”

Caregiving relationships often become tense and oppositional due to functional tasks such as eating and toileting. As a pervasive, non-directional, and neutral presence, agarwood aroma can become a **shared sensory focal point**. When the caregiver softly asks, “Do you smell this? Isn’t it pleasant?” accompanied by a shared gaze towards the source of the fragrance, a new, non-task-oriented interaction is generated. Even if the patient cannot respond verbally, the act of sniffing together and the slowed rhythm shared within the aroma itself establishes a gentle “being-with.” This wordless co-presence, grounded in shared sensory experience, is the cornerstone of high-quality emotional connection. It bypasses the barriers of language, opening a **nonverbal pathway for emotion**.

Practical and Cultural Level: Empowering Caregivers and Reconnecting with Tradition

For caregivers, agarwood is not only an intervention tool but also a **cultural resource** and a form of **emotional labor support**. Utilizing the traditional wisdom of “aromatic orifice-opening” can imbue care practices with cultural depth and meaning, enhancing professional identity and self-efficacy. At the same time, as a relatively simple and positively perceived intervention, it helps caregivers regulate the rhythm of interaction and creates a more supportive work environment, thereby indirectly alleviating emotional exhaustion. This transforms the caregiver from a passive “task performer” into an agentive, creative care practitioner capable of wielding cultural wisdom.

Conclusion and Outlook

In summary, this paper has reinterpreted the potential of agarwood in AD care from a humanistic and social science perspective. We propose that the intervention of agarwood aroma, through its unique **cultural-sensory-pharmacological triadic nature**, can effect a shift from “disease management” to “relationship nurturing” within the micro-space of care. By providing patients with embodied sensory anchors, creating a shared nonverbal focal point for caregiving interactions, and infusing care practices with cultural meaning and support, it cultivates an oasis of emotion founded on **nonverbal solace** and **embodied co-presence** within the desert of cognitive decline.

Future research and practice may advance in the following directions:

1. **Conduct empirical research:** Implement qualitative studies as designed herein to gather frontline evidence, deeply portraying the complex influence of agarwood aroma in specific care contexts.
2. **Pursue mixed-methods exploration:** While assessing subjective experience and interaction quality, combine monitoring of physiological indicators (e.g., heart rate variability, salivary cortisol) to quantify the impact of aroma intervention on the stress levels of both caregivers and patients.
3. **Promote interdisciplinary dialogue:** Foster deep conversations among neuroscience, pharmacology, and the humanities and social sciences to jointly construct an “integrative care” model that respects both biological mechanisms and humanistic care.
4. **Develop culturally adapted care protocols:** Systematically compile and develop a “toolkit” of non-pharmacological interventions centered on traditional cultural elements such as agarwood, and incorporate these into professional care training systems.

Ultimately, in confronting Alzheimer's disease, we must not only target the plaques and tangles in the brain, but also carefully tend to the emotional bonds that connect us to one another. A wisp of agarwood incense, soundless and motionless, may yet rekindle a warm and resilient glimmer of human connection in the domain where the light of language gradually fades. This, perhaps, is the most profound value of the humanistic spirit within the territory of medicine.

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