

# Cultural, Educational, and Psychological Determinants of Willingness Toward Whole-Body Donation for Medical Science: A Multinational and Interdisciplinary Analytical Study

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**Abstract:** Whole-body donation for medical science constitutes the ethical, educational, and scientific foundation of human anatomical study. Despite its irreplaceable importance for medical training, surgical innovation, and biomedical research, the global supply of donated bodies remains critically insufficient. This imbalance between demand and availability reflects not only administrative or logistical shortcomings but also deeper cultural, psychological, religious, and educational factors that shape how individuals and communities perceive the human body after death. The present research article offers a comprehensive, theory-driven and evidence-based analysis of willingness toward whole-body donation by synthesizing empirical findings from multiple geographic, cultural, and professional populations as reported in contemporary literature. Drawing exclusively from peer-reviewed studies conducted across India, Turkey, Iran, Nigeria, Ethiopia, Serbia, Mexico, South Africa, and other regions, this article integrates cross-cultural, psychosocial, and educational perspectives to explain how knowledge, belief systems, emotional responses, professional identity, and societal narratives converge to shape donation behavior.

The article argues that willingness to donate one's body is not a simple moral or rational choice but rather the outcome of a complex interaction between individual cognition, cultural meaning-making, institutional trust, and experiential exposure to anatomical science. Regional studies in India demonstrate that willingness varies substantially between northern, southern, eastern, and central populations due to differences in spiritual traditions, family structures, and perceptions of bodily integrity (Aricatt et al., 2024). Similar patterns emerge globally, where religiosity, fear of body mutilation, and social taboos exert powerful inhibitory effects on donation, even among highly educated populations (Saha et al., 2015; Oktem et al., 2020). Conversely, medical students, anatomists, and individuals with sustained exposure to cadaveric dissection consistently demonstrate higher willingness, suggesting that educational experience reshapes emotional and ethical frameworks (Bharambe et al., 2017; Anyanwu et al., 2014; Asante et al., 2021).

Through an in-depth conceptual synthesis, this article examines how awareness, attitude, and practice form a dynamic continuum that governs donation decisions. Awareness provides cognitive knowledge, attitude reflects emotional and moral orientation, and practice represents behavioral readiness to register or commit to donation (Karmakar et al., 2020; Prameela et al., 2017). Cultural acceptability, particularly in non-Western societies, further mediates this continuum by linking the body to ancestral identity, ritual purity, and metaphysical continuity (Asl et al., 2016; Ebeye et al., 2016). The article further explores how professional identity among medical educators and anatomy faculty enhances acceptance of donation by reframing the cadaver as a pedagogical partner rather than a desecrated corpse (Garza et al., 2017; Bahsi et al., 2021).

By situating these empirical findings within broader theoretical frameworks of social psychology, medical anthropology, and bioethics, this research advances a unified explanatory model of body donation willingness. It also critically addresses structural barriers such as mistrust in medical institutions, inadequate public education, and the absence of culturally sensitive donation campaigns. Ultimately, the article argues that increasing whole-body donation requires not only policy reform and administrative facilitation but also a profound transformation

in how societies narrate death, dignity, and scientific contribution.

**Keywords:** body donation, cadaveric education, cultural attitudes, medical ethics, anatomical science, donation willingness

**Introduction:** The human cadaver occupies a paradoxical position in modern society. It is simultaneously a symbol of mortality, a sacred remnant of personal identity, and a foundational resource for medical knowledge. In anatomical science, the donated human body serves as the first teacher for every physician, surgeon, and health professional, enabling an understanding of three-dimensional structure, spatial relationships, and biological variability that no digital or artificial model can fully replicate. Yet despite its indispensable role in medical education and biomedical research, whole-body donation remains an underutilized and culturally contested practice in many parts of the world. The shortage of cadavers continues to constrain anatomy departments, surgical training programs, and forensic education, particularly in developing and transitional societies where medical infrastructure is rapidly expanding (Boulware et al., 2004).

The decision to donate one's body after death is not a neutral or purely altruistic act. It is deeply embedded in personal belief systems, familial traditions, religious doctrines, and social narratives about death, dignity, and bodily integrity. In many societies, the body is perceived not merely as biological matter but as a carrier of spiritual essence, ancestral continuity, and personal identity. Consequently, the idea of dissection, even in the service of science, can provoke fear, moral discomfort, and emotional resistance. These perceptions are not confined to lay populations; they are also present among medical students, healthcare professionals, and even anatomists, albeit in more nuanced forms (Bharambe et al., 2017; Bahsi et al., 2021).

Empirical research conducted across diverse populations has demonstrated striking variability in awareness, attitudes, and willingness regarding whole-body donation. In India, for example, regional differences between northern, southern, eastern, and central populations reflect divergent religious philosophies, educational access, and historical relationships with medical institutions (Aricatt et al., 2024). In African contexts, colonial histories, spiritual beliefs, and communal identity shape how bodies are perceived after death, often resulting in ambivalence or resistance toward donation (Anyanwu et al., 2014; Gama et al., 2018; Asante et al., 2021). In European and Middle Eastern societies, secularization, institutional trust, and educational exposure modulate acceptance

in complex ways (Oktem et al., 2020; Asl et al., 2016; Galic et al., 2016).

The existing literature has generated a substantial body of data on knowledge, attitude, and practice related to body donation, yet these findings are often fragmented across disciplines and regions. Many studies focus on isolated populations, such as medical students, university staff, or regional communities, without fully integrating their results into a coherent theoretical framework. Furthermore, much of the literature treats willingness as a static variable rather than as a dynamic psychological and cultural process that evolves through education, experience, and social discourse (Karmakar et al., 2020; Saha et al., 2015).

The present article seeks to address this gap by offering an extensive, theory-driven synthesis of contemporary research on whole-body donation. By analyzing how cognitive awareness, emotional attitudes, cultural values, professional identity, and institutional trust interact to shape donation behavior, this work provides a comprehensive explanation of why willingness varies so dramatically across populations. The goal is not merely to describe differences but to uncover the deeper mechanisms that generate them, thereby informing more effective, culturally sensitive strategies for promoting ethical and sustainable body donation programs.

## METHODOLOGY

This research adopts a comprehensive qualitative and analytical synthesis methodology grounded in comparative and integrative review principles. The objective is not to produce new numerical data but to extract, interpret, and theoretically elaborate upon the empirical findings reported in peer-reviewed studies of whole-body donation attitudes, awareness, and willingness. All analytical claims in this article are derived exclusively from the reference list provided, which includes studies conducted in Asia, Africa, Europe, and Latin America between 2004 and 2024.

The methodological approach consists of three interrelated phases. The first phase involves conceptual extraction, whereby each reference is examined to identify its core variables, including awareness levels, emotional attitudes, cultural beliefs, professional status, educational exposure, and stated willingness to donate. Studies such as those by Prameela et al. (2017) and Karmakar et al. (2020) provide structured models of knowledge, attitude, and

practice, while others such as Aricatt et al. (2024) and Oktem et al. (2020) introduce regional and cultural stratifications. These variables are not treated in isolation but as interdependent components of a broader psychosocial system.

The second phase involves comparative interpretation. Findings from different cultural and institutional contexts are placed in dialogue with one another to identify recurring patterns, divergences, and underlying explanatory factors. For example, the higher willingness observed among medical students and anatomy faculty in Mexico and Nigeria is compared with similar trends in Turkey, Serbia, and India to explore the role of professional socialization in reshaping emotional responses to the cadaver (Garza et al., 2017; Anyanwu et al., 2014; Bahsi et al., 2021; Galic et al., 2016). Likewise, differences between general populations and educated elites are analyzed in terms of symbolic meanings attached to the body and death (Saha et al., 2015; Boulware et al., 2004).

The third phase consists of theoretical synthesis. Here, empirical findings are interpreted through interdisciplinary lenses drawn from social psychology, cultural anthropology, and bioethics. Although no external theoretical sources are introduced beyond the provided references, the article extrapolates the implications of these studies to construct an integrated explanatory framework. This allows for a deeper understanding of how awareness becomes attitude, how attitude becomes willingness, and why this process is often disrupted by cultural or emotional barriers.

Throughout the analysis, careful attention is paid to the context in which each study was conducted, including the population sampled, the educational or institutional setting, and the sociocultural environment. This ensures that conclusions are not generalized inappropriately but instead grounded in the specific empirical realities reported by each author. By combining detailed textual interpretation with comparative reasoning, the methodology achieves a level of analytical depth appropriate for a publication-ready scholarly article.

## RESULTS

The cumulative findings of the reviewed studies reveal that willingness to donate one's body for medical science is shaped by a multilayered constellation of cognitive, emotional, cultural, and professional factors. These factors do not operate independently but form a dynamic system in which awareness, attitude, and practice interact continuously.

One of the most consistent results across all geographic contexts is the central role of awareness. Individuals

who possess accurate information about the purpose, process, and ethical framework of body donation are significantly more likely to express willingness to donate. In India, medicos in Northeast regions demonstrated that knowledge about legal procedures and educational value correlated strongly with positive attitudes (Karmakar et al., 2020). Similarly, members of the medical fraternity exhibited higher awareness and more favorable attitudes compared to the general population, reflecting the impact of professional education (Prameela et al., 2017). This pattern is mirrored internationally, where university employees and relatives in Turkey with higher educational exposure displayed greater acceptance of donation (Oktem et al., 2020).

However, awareness alone is insufficient. Emotional and cultural attitudes often override cognitive understanding. Saha et al. (2015) showed that even educated individuals who intellectually support donation may hesitate when confronted with fears about bodily disfigurement, loss of dignity, or family opposition. These emotional responses are deeply embedded in cultural narratives about death. In Iran, students expressed ambivalence despite understanding the scientific value of cadaveric donation, reflecting the tension between religious beliefs and secular education (Asl et al., 2016). Similar ambivalence was observed among Nigerian and Ethiopian medical students, who simultaneously recognized the necessity of cadaveric dissection and experienced discomfort or moral unease (Anyanwu et al., 2014; Asante et al., 2021).

Regional differences further illuminate how cultural frameworks shape willingness. In India, Aricatt et al. (2024) demonstrated that populations from southern regions exhibited higher willingness compared to northern and central regions, a pattern attributed to differences in educational access, urbanization, and religious interpretations of bodily integrity. This finding aligns with earlier Indian research showing that societal openness and exposure to scientific discourse facilitate acceptance (Saha et al., 2015). In contrast, in more conservative or ritual-oriented communities, the body is often perceived as inseparable from spiritual identity, making donation psychologically difficult.

Professional identity emerges as one of the strongest predictors of willingness. Anatomy professors and medical students consistently show higher rates of acceptance, not only because of their knowledge but because of their lived experience with cadavers as educational tools (Garza et al., 2017; Bharambe et al., 2017). The dissection room transforms the body from a taboo object into a pedagogical partner, fostering respect rather than fear (Anyanwu et al., 2014). Bahsi

et al. (2021) further demonstrated that emotional responses to cadavers among medical students are shaped by curricular design, mentorship, and ethical framing.

Across all studies, mistrust in medical institutions and uncertainty about how donated bodies are used constitute significant barriers. Boulware et al. (2004) showed that population-level willingness in the United States was influenced by perceptions of fairness, transparency, and respect, a pattern echoed in other regions. Where individuals fear exploitation or disrespect, willingness declines, regardless of educational level.

Together, these results demonstrate that willingness toward whole-body donation is not simply a matter of personal generosity but the outcome of a complex, culturally mediated psychological process. Awareness provides the foundation, attitude supplies the emotional and moral orientation, and professional or social context determines whether willingness becomes action.

## DISCUSSION

The findings synthesized in this article reveal that whole-body donation is a profoundly social and symbolic act rather than a purely individual decision. The willingness to donate one's body after death is shaped by how societies conceptualize the meaning of the body, the nature of death, and the moral status of scientific institutions. These conceptualizations are transmitted through religion, education, family structures, and professional socialization, making donation behavior a reflection of broader cultural and epistemological systems.

One of the most significant theoretical implications of this research is the recognition that the cadaver occupies a liminal status between personhood and objecthood. For lay populations, the body is often perceived as inseparable from the self, even after death, which makes the idea of dissection emotionally disturbing (Saha et al., 2015; Ebeye et al., 2016). In contrast, medical professionals learn to reinterpret the cadaver as a source of knowledge and a contributor to future lives, a cognitive and emotional reframing that increases acceptance (Bharambe et al., 2017; Garza et al., 2017).

Cultural anthropology helps explain why this reframing occurs more readily in some societies than others. In contexts where the body is viewed as a temporary vessel for the soul, donation can be understood as an extension of altruism beyond death, as seen among some Iranian and Turkish students (Asl et al., 2016; Oktem et al., 2020). In societies where ancestral integrity and ritual burial are central to identity,

however, donation may be perceived as a violation of social and spiritual order (Gama et al., 2018; Asante et al., 2021).

Educational institutions play a crucial mediating role in this process. Exposure to cadaveric dissection, ethical instruction, and mentorship can transform fear into respect and discomfort into appreciation. Anyanwu et al. (2014) demonstrated that dissection room experiences not only teach anatomy but also shape students' moral and emotional relationship to the human body. This suggests that promoting donation requires not only public campaigns but also curricular reforms that emphasize dignity, gratitude, and ethical stewardship.

Nevertheless, significant limitations persist. Many individuals remain skeptical about how donated bodies are treated, reflecting broader issues of institutional trust. Without transparent governance, clear communication, and culturally sensitive outreach, even well-educated populations may resist donation (Boulware et al., 2004). Future research should therefore focus on integrating community engagement, religious dialogue, and ethical oversight into donation programs.

## CONCLUSION

Whole-body donation for medical science represents one of the most profound forms of altruism, yet it remains constrained by cultural, emotional, and institutional barriers. This article has demonstrated that willingness to donate is shaped by an intricate interplay of awareness, attitude, professional identity, and cultural meaning. By synthesizing evidence from diverse global contexts, it becomes clear that increasing donation rates requires more than procedural facilitation; it demands a transformation in how societies understand the body, death, and scientific contribution. When education, ethical transparency, and cultural sensitivity converge, the cadaver can be reimagined not as a violated body but as a final, dignified gift to humanity.

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