

A Commemoration to Silent Anatomy Teachers: Content Analysis of Gratitude Expressions by Diverse Medical Students

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Abstract

Objectives: Body donors play a crucial role in anatomy education by providing students and researchers with the opportunity to study and understand the human body in a hands-on manner. It is crucial to pay gratitude to donors with the inclusion of diverse medical students. The aim of this study was to conduct a commemoration and a content analysis of gratitude expressions by diverse medical students.

Methods: A project commemorating body donors was conducted at the Department of Anatomy, Faculty of Medicine, Wayamba University of Sri Lanka. The medical students who completed the dissections were guided to reflect on the implications of working with cadavers through notes, poems or drawings in their convenient language. Content analysis with an inductive coding method was conducted following the receipt of those submissions.

Results: The response rate was 90.13% (n=137). Among the participants, 74.45% (n=102) identified and expressed gratitude for the donor for being a silent teacher. Additionally, there was acknowledgement of human dignity in 63.5%(n=87) and recognizing the selflessness and generosity of the donor in 62.77%(n=86). Analysis also revealed learning humanistic skills such as reverence, responsibility towards patients, and compassion by 25.55% (n=35) of the medical students through working with cadavers.

Conclusion: The project permitted individual involvement of medical students from diverse religious and cultural backgrounds in commemoration of body donors. The high response rate and positive views expressed by participants demonstrate the significant impact of cadavers in anatomy education and fostering humanistic skills among medical students.

Key words: Body donations; Gratitude; Diversity, Inclusion

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Introduction

Medical students begin the study of human anatomy early in their careers, using human cadavers as a crucial tool for hands-on learning experiences (1). Research has consistently shown that working with human bodies offers a unique and effective way of teaching and learning anatomy compared to other methods (2-4). Without body donors, known as "silent mentors," medical students would not have the opportunity to learn and train on real human bodies, which is essential for their education and future clinical practice as healthcare professionals (5,6). It is important to show utmost respect to human cadavers during educational pursuits, as every donated body provides invaluable service (7-9). Moreover, expressing gratitude to body donors is important as they have selflessly contributed to the advancement of medical education and research (10).

Gratitude expression has gained attention in positive emotion research for its role in fostering connections with others and promoting well-being. Offering graduate students, the opportunity to participate in gratitude interventions has been shown to increase mental well-being (11). Studies have shown that gratitude and memorialization activities have positive effects on medical students, such as enhancing their commitment to studying, realizing the importance of anatomical dissection, promoting self-growth with humanist values, motivating a good doctor-patient relationship, and fostering empathy and compassion (12-14). Further, gratitude is widely recognized as a key quality

that can lead to greater happiness, positive emotions, and inner strength (15).

Various countries have reported numerous ways of honoring and paying gratitude to body donors, with some ceremonies being based on religious practices specific to the cultural backgrounds of the donors (16-22). However, conducting a successful commemoration for body donors while accommodating cultural preferences, minimizing disruptions to study schedules, and managing costs can be challenging. It is also recommended to include diverse cultural backgrounds in these practices, as religion and ethnicity do not seem to influence students' attitudes toward honoring body donors (21). While individual involvement in gratitude expression is not as common as the collaborative religious memorial ceremonies for donors in Sri Lanka, it could offer an affordable and accessible platform for individuals from different cultural and socioeconomic backgrounds to express their appreciation to body donors on their own.

Methods

The project aimed to help students understand the significance and impact of the gift they have received from body donors, recognize the opportunity to gain knowledge and skills through the generosity of donors, and foster a culture of acknowledging the invaluable experience of learning from human bodies. A total of 152 students who completed the anatomy dissections at the Department of Anatomy, Faculty of Medicine, Wayamba University of Sri Lanka in May 2024 were invited to take part in the project. Students

were requested and guided to write a note, create a drawing, poster, poem, or quotation expressing their feelings and deep appreciation for the trust and faith that body donors have shown in allowing them to gain knowledge, technical and humanistic skills from their remains. Students were given the choice to express their gratitude to the cadavers in either English or their native languages; Sinhala and Tamil.

Every submission was categorized based on language and format, such as poems, notes, or drawings, for thorough analysis. Participants' autonomy and confidentiality were strictly maintained and informed consent was obtained. The content analysis of the submissions was conducted with the aim of identifying the recurring themes or patterns in the content of specific expressions of gratitude by medical students, the role played by cadavers in their factual education and learning of humanistic skills. Inductive coding method was applied by reading and interpreting the content of submissions to develop themes, and subcategories. The content of each submission was analyzed and categorized into identified themes and subcategories. The themes identified include human dignity, the role of the donor, honoring the gift, appreciation of the donor's family, and humanistic skills learned through cadavers. This coding scheme was used to analyze and interpret the data collected from the submissions to gain insight into the impact of body donors on medical students and their perspectives on the donors and their families. The number of notes covering each theme was then counted and recorded.

Results

A total of 137 (response rate 90.13%) medical students from 152 students of the fifth batch of the Faculty of Medicine, Wayamba University of Sri Lanka responded to the gratitude expressing project. Among the submissions, 57.6% (n=79) of the majority were written in English followed by 29.2% (n=40) of Sinhala, and 1.46% (02) of Tamil submissions. A total of 48 were poems which were written in English (n=37), Sinhala (n=09) and Tamil (n=02). Some of the English (n=8) and Sinhala (n=1) poems included accompanying artwork. Among the submissions 11.68%(n=16) were artworks which included dissecting students, two feet of cadaver with a tag attached to toes, a hand offering roses, heart, doodle art of body.

The findings from the content analysis for the project of gratitude expression highlight that the majority 74.45% (n=102) of submissions covered the role of the donor as a silent teacher. In terms of the other roles of the donor, 7.3% (n=10) referred to them as the "First Patient" and 1.46% (n=02) as a study companion. The themes related to human dignity, with 62.77% (n=86) acknowledging the donor's humanity and 29.93% (n=41) showing respect for the donor's body and sacrifice were also observed. Additionally, the importance of honoring the gift of body donation was highlighted, with 74.45% (n=102) expressing gratitude for the donation and 63.5% (n=87) recognizing the selflessness and generosity of the donor. Only 13.87% (n=19) mentioned appreciating the donor's family, while 25.55% (n=35) focused on learning humanistic skills through working with cadavers (Table 01).

Table 01: Content analysis of the submissions received for the project of gratitude expression for cadavers

Theme and subcategory	Number and percentages of submissions covered each theme and subcategory (n=137)
Human dignity	
Acknowledgment of donor's humanity	86(62.77%)
Respect for donor's body and sacrifice	41(29.93%)
Role of the donor	
First Patient	10(7.3%)
Silent Teacher	102(74.45%)
Study companion	02(1.46%)
Honoring the gift	
Expressing gratitude for the gift of body donation	102(74.45%)
Recognition of the selflessness and generosity of the donor	87(63.5%)
Appreciation of the donor's family	19(13.87%)
Learning soft skills through cadavers	35(25.55%)

Table 01 describes the number of submissions covered each theme and subcategory in content analysis of the submissions received for the project of gratitude expression for cadavers according to the identified themes and their subcategories.

Table 02: Humanistic skills learnt through donated bodies by medical students of Faculty of Medicine, Wayamba University of Sri Lanka

Humanistic skill	Number and percentages of submissions included learning of each soft skill (n=137)
Humanity	08(5.84%)
Humility	07(5.11%)
Altruism	04(2.92%)
Compassion	09(6.57%)
Empathy	02(1.46%)
Mannerism	01(0.73%)
Kindness	03(2.19%)
Love and care	06(4.37%)
Emotion control	01(0.73%)
Responsibility towards patients	10(7.3%)
Reverence	16(11.67%)

Table 02 describes the humanistic skills learnt through donated bodies by medical students of Faculty of Medicine, Wayamba University of Sri Lanka

The content analysis results also show that some medical students have learned essential humanistic skills through working with the cadavers. Reverence, responsibility towards patients, compassion, humanity, and a sense of respect towards patients were the most commonly learned humanistic skills from cadavers (Table 02). The findings highlight the importance of these humanistic skills in shaping the values and qualities of medical students as they learn from the gift of body donation.

Some students have also mentioned their feelings after the first sight of the body in the dissection room. One student mentioned being bothered by the formalin smell, while five (3.65%) others were describing feelings of anxiety. Another student described feeling an unexplainable emotion upon seeing the cadaver. Additionally, two (1.46%) described shedding tears during the initial dissection session and 10.23% (n=14) of the students expressed doubts about causing pain or torturing the cadaver during dissection. But most of them indicate the disappearance of the uncomfortable feelings with the gradual establishment of a strong connection with the cadaver as they learned and dissected the body.

Religious and cultural influences on students' thoughts were evident in some of the submissions. For example, 6.57% (n=09) of students expressed wishes for donors to attain "Supreme bliss of Nibbana,"; the ultimate wish usually made by Buddhists, 1.46% (n=02) wished for donors to "Rest in peace": a usual wish by Catholics, and 5.84% (n=08) described donors as Gods: a concept in Hindu, Buddhist, Catholic and Muslim cultures.

Additionally, 6.57% (n=09) of students viewed the act of donation as a rewarding merit work ("pina" in Sinhala; a concept in Buddhist culture). Cultural beliefs in monsters and ghosts initially scared 2.19% (n=3) of students, but they reported that these fears gradually faded as they gained a better understanding of life through dissections. Moreover, 9.49% (n=13) of the students referred to the cadaver as "grandma" or "grandpa" or using other familial terms such as "aththamma" or "seeya" in Sinhala. Additionally, 2.19% (n=3) of students called the cadavers "mama" or "papa," illustrating the strong bond and sense of closeness that had developed between the students and the cadavers.

Discussion

According to Pawlina et al. (2011), the body donation commemoration was first held as a memorial ceremony in England in 1965, and American medical schools began incorporating the same practice in the 1970s (23). Other countries like Germany, Austria, Thailand and Sri Lanka have reported similar commemorative practices, each with a focus on their predominant religious and cultural backgrounds (10,22,24). Apart from this, the conduct of presentations on appreciation and demonstration of respect for the donors with the participation of students and the lecturers (21), decoration of the dissection room and adorning the cadavers with flowers (25), having a calendar event of gratitude paying at the specially built area (14). Instalment of a monument has also been reported (1,26). Gratitude paying in the United States (US)

shows incorporation of various forms of expression such as speeches, music, poetry, and essays to explore different themes (9). However, there has been limited attention in the literature on gratitude note writing projects.

The themes of "Role of the donor", "Human dignity", "Honoring the gift", and "Appreciation of the donor's family" closely reflect the themes of "recognize the donor's role as the "First Patient" or "Silent Teacher", "reflect the donor as possessing human dignity", "honor the gift of human body donation", and "recognize the decedent's family" as outlined by Leeper et al. (27). The majority of submissions identified the role of the donor as a "Silent Teacher" or first patient. However, identifying the cadaver as a study companion was also noted in the received submissions. Additionally, over 50% of the submissions discussed the concepts of "Human Dignity" and "Honoring the Gift," highlighting the significant impact that cadavers have on the participants.

The findings from the content analysis also reveal the inculcation of valuable humanistic skills after working with cadavers. These skills include reverence, responsibility towards patients, compassion, humanity, respect etc. Since these qualities are crucial in the medical profession, the findings emphasize the significance of providing opportunity to learn from cadavers to foster humanistic skills among medical students. A study conducted among medical students in China shows the successful inclusion of medical humanistic like appreciation through the integration of gratitude- paying activities into anatomy curricula (14). According to another study

conducted in South Korea, the educational outcomes of gratitude-paying included the preservation of students' sense of responsibility and respect, with a gradual understanding of the donors' intentions (28). Another study conducted among nursing students also showed that students have shown great respect for the donors, emotional growth, and empathy have been achieved by active participation in work with cadavers (12). Several studies have shown that students had the benefit of having better outlooks on death, relationships with patients, development of professional identity, and relief from negative emotions through gratitude-paying activities and reflective writing of gratitude to body donors (23,29-31). Referring the cadaver as "grandma", "grandpa", "mama", "papa" or "Aththamma", "Seeya", "Amma", "Thaththa" (synonyms for same in Sinhala) also suggests that the students had developed a deep emotional connection to the cadavers, viewing them not just as tools for learning but as family members.

Some countries, including Sri Lanka, have held religious commemorations (10,22,24) while other countries were having non-religious commemorations (9,14,21,25). The content analysis of this commemoration confirms that medical students from various religious and cultural backgrounds have participated in the gratitude expression with inclusivity of their diverse cultural and religious beliefs. Different wishes for body donors, such as attaining "Supreme bliss of Nibbana" or "Rest in peace " reflect the unique beliefs and values of different religious backgrounds. Similarly, the concept of donors being described as "Gods" highlights the

reverence and respect given to the act of donation in multicultural communities as the concept of “God” is common for many religious and cultural backgrounds in Sri Lanka. It is also interesting to note how cultural beliefs in monsters and ghosts initially influenced some students' perceptions of dissections, but how these fears gradually faded as they gained a better understanding of life through the dissections. This signifies the power of education in changing in-built misconceptions.

It is worth noting that the reported gratitude-related activities were primarily led by students (9), showcasing the lack of involvement of anatomists in the projects. However, this commemoration was effectively planned and carried out by an anatomist as highlighted by Tshering and Pabst (2001) (16). Additionally, this commemoration only required pen and paper and a minimum time with no specific venue. It is a simple way to pay gratitude to body donors. Furthermore, when considering economic expenditure, this method is incredibly affordable, making it an ideal option for a low-income country like Sri Lanka that is currently facing an economic crisis. This demonstrates that paying gratitude to the body donors does not have to be expensive or complicated, but rather can be achieved through simple and cost-effective methods. Furthermore, the submissions include poems and artwork. The creative and diverse nature of the submissions suggests that the activity serves as a platform for medical students to display their individual abilities and creativity.

Conclusion

In conclusion, the gratitude expression project conducted among medical students at the Department of Anatomy, Faculty of Medicine, Wayamba University of Sri Lanka has provided a platform for medical students from different religious and cultural backgrounds to reflect on the significant role of body donors in their medical education. It also highlighted the profound impact of cadaveric dissections on professional and personal development by fostering humanistic skills. The high response rate demonstrates the significance of this project in promoting gratitude among medical students. The inclusion of students from diverse religious and cultural backgrounds in this commemoration ensures a more inclusive approach to gratitude-paying activities. The simplicity and the cost-effective nature of the project further emphasize that expressing gratitude to body donors does not always require high financial expenditure. Instead, it can be achieved through meaningful reflections and appreciation for the selfless act of body donation while allowing the students to display their own talents and creativity. Therefore, it is crucial to continue efforts to promote this type of gratitude paying for body donors in Sri Lankan medical faculties.

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