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PESQUISA

Investigating moral distress over a shortage of organs for transplantation

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Abstract

We verified moral distress related to organ shortage for transplantation in nursing students. This quantitative pilot study analyzed data from 104 nursing undergraduate students. Data were collected through a survey composed of four questions and two sociodemographic items. The chi-squared test was used to examine categorical variables, whereas continuous variable data were analyzed using ANOVA and the Pearson Product Moment correlational test for determining the existence of moral distress regarding the availability of one heart for four individuals susceptible to heart transplantation. A high level of moral distress was identified with regard to the hypothetical decision-making process, which justifies the need for further studies on the subject. Given the hypothetical scenario, moral distress was observed among the students, reaching severe distress in some cases.
Keywords: Transplantation. Tissue and organ procurement. Nurses. Decision making. Ethics.

Resumo

Investigando sofrimento moral por falta de órgãos para transplante

Objetivou-se identificar sofrimento moral em estudantes de enfermagem relacionado à escassez de órgãos para transplante. Este estudo-piloto quantitativo analisou dados de 104 graduandos de enfermagem. Os dados foram coletados por meio de questionário composto de quatro questões e dois itens sociodemográficos. O teste qui-quadrado foi usado para examinar as variáveis categóricas, enquanto as variáveis contínuas foram analisadas utilizando os testes correlacionais Anova e Pearson Product Moment a fim de determinar a existência de sofrimento moral quanto à disponibilidade de um coração para quatro indivíduos que necessitam de transplante. Identificou-se alto nível de sofrimento moral relacionado ao processo de tomada de decisão hipotético, o que justifica a necessidade de novos estudos acerca do tema. Diante da situação hipotética, observou-se sofrimento moral entre estudantes, incluindo sofrimento severo.
Palavras-chave: Transplante. Obtenção de tecidos e órgãos. Enfermeiras e enfermeiros. Tomada de decisões. Ética.

Resumen

Investigando la angustia moral por la escasez de órganos para trasplantes

Nuestro objetivo con esta investigación fue identificar la angustia moral en estudiantes de enfermería relacionada con la escasez de órganos para trasplante. Este es un estudio piloto cuantitativo que analizó datos de 104 estudiantes de grado de enfermería. Los datos fueron recolectados a través de una investigación compuesta por 4 preguntas y 2 ítems sociodemográficos. Posteriormente, se utilizó la prueba de Chi-cuadrado para examinar las variables categóricas, mientras que las variables continuas se analizaron utilizando las pruebas correlacionales *Anova y Pearson Product Moment* para determinar la existencia de angustia moral en relación con la disponibilidad de un corazón para cuatro personas que requieren el trasplante. Se identificó un alto nivel de angustia moral en relación con el hipotético proceso de toma de decisiones, lo que justifica la necesidad de realizar más estudios sobre el tema. Dada la situación hipotética, la angustia moral entre los estudiantes, incluida la angustia severa, es notable.
Palabras clave: Trasplante. Obtención de tejidos y órganos. Enfermeras y enfermeros. Toma de decisiones. Ética.

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The authors declare no conflict of interest.

Moral distress has frequently been discussed since this concept was first used to refer to painful feelings and psychological disturbance as a result of an ethics-based action wherein the social actor is not able to act appropriately due to obstacles, such as lack of time or authority, or an inhibiting structure, such as a constricting institutional policy or legal statute[1-4]. Due to their caring nature and position as hands-on care providers, nurses and nursing students are particularly susceptible to moral distress[5].

Background

Moral distress is an umbrella term involving the experiences of people who are morally constrained[6]. Moral distress in nurses often originates from not being able to advocate effectively for patients[6,7] and is a subjective phenomenon, possibly being felt in different ways and levels according to individual or professional contexts and experiences[4-7]. Recognizing what leads nurses to become distressed due to ethical dilemmas at work could help them accomplish their professional goals and personal work-related needs[3]. This exploration is significant as moral distress and is widely understood as affecting nurses' performance to advocate and provide patient care, reducing the quality of care and outcomes for patients[8].

Moral distress' studies have often tried to define this concept[6], determine its incidence or prevalence[9], and identify its sources[3]. However, no studies on moral distress concerning organ donation or transplantation have been performed yet, although it is known that nurses who work with organ donation are susceptible to moral distress[10-12]. As such, nursing students can also be affected. This study serves to gain insight on undergraduate nursing students' moral distress regarding shortage of organs available for transplantation.

Materials and methods

Research design and participants

This quantitative pilot study used a novel survey tool (Appendix). The tool was designed by a two-member research team to be quickly and easily filled, and thus had only four research questions and two socio-demographic items. The first question of this survey represented four small case studies about four different patients with one similarity: the need for a heart transplant. All of them were critically ill, and the study participant must decide which one should receive that organ. The idea of choosing only one patient was based on a Canadian scenario wherein the number of persons waiting for an organ transplant is much higher than the number of organs available for transplantation.

The tool was distributed to all 134 undergraduate nursing students who were attending classes in a mandatory nursing research course at the Nursing School of the University of Alberta. A total of 104 (77.6%) filled and returned it after a verbal introduction to the study by the first investigator and the provision of a written information letter. This study was approved in advance by the Research Ethics Committee at the University of Alberta.

Data collection

All potential participants were asked to anonymously complete the survey. Instead of a signed consent form being obtained from each participant, the Research Ethics Committee determined that all those who completed and returned the questionnaire would be providing implied consent.

The data were collected between November 1 and December 6, 2016. All data were entered into a spreadsheet, and all entries were checked by the two researchers for accuracy prior to analysis. This paper reports the findings of the quantitative data analysis.

Statistical analysis

The Statistical Package for the Social Sciences (SPSS, version 23; IBM Corporation, Armonk, NY) was used for quantitative data analysis. Descriptive statistics were utilized to describe the sample. The chi-squared (χ^2) test was subsequently used to examine categorical variables, while continuous variable data were analyzed using ANOVA and the Pearson Product Moment correlational test. These tests were performed to ascertain if moral distress was experienced in scenarios involving the availability of only one heart for transplantation to four individuals, as well as to determine if moral distress' intensity varied according to age and gender.

Findings

The participants were primarily younger. The age group ranged between 18–46, with 21.8 being the mean age. Out of 104 participants, 82.7% (n=86) were female and 17.3% (n=18) were male.

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Who gets the heart?

The participants were asked to opt between four different persons and decide which one would get the one available heart for transplantation and thus life-saving purposes. As shown in the attached tool, a short description of each patient was provided to enable this decision-making process.

Among the 104 participants, 80.8% (n=84) chose to give the heart to Meredith. Meredith was the youngest person; she was 47 years old, widowed, and a mother of two children. She had already received a liver transplant due to liver failure from past intravenous drug use. The second most commonly chosen patient was Paul (17.3%; n=18), who was a divorced 67-year-old professor who needed a replacement heart after developing an infection that suddenly caused him heart failure. Paul lives with his 15-year-old son. The third but much less commonly chosen option was Brad (1.9%; n=2), a 57-year-old homeless person who had no next of kin and required a heart transplant due to untreated high blood pressure. No participant chose Susan, the oldest person. Susan was a 77-year-old retired truck driver who lives with her husband, has grandchildren, and has had many heart attacks.

Some differences in choices among the 104 students according to gender were noted. The male participants only chose two of the four options, with this most often being Meredith (72.2%), followed by Paul (27.8%). The female participants chose three of the four options, although 82.6% chose Meredith, followed by Paul (15.1%) and Brad (2.3%). Despite these differences, no correlation between gender and decision was found (chi-squared=1.994, df+2, *p*=.369). Similarly, no difference was identified regarding age.

Moral distress

All participants were asked to explain why they chose one over the others, and then report how they felt about their decision. Some degree of moral distress was reported. The median and mode moral distress scores were 7 on a scale from 0 indicating no moral distress, "not upset," up to 10, the maximum score pointing to "very upset." The mean score of 6.1 also indicates a common overall level of significant moral distress, as 1–5 scores would indicate only mild moral distress. However, it is worth noting that 39.4% (n=41) reported a 0–5 level of moral distress, while 60.6% (n=63) reported a 6–10 level of moral distress, indicating quite significant moral distress over this hypothetical situation.

Some differences in the level of reported moral distress according to gender and age were noted. A significant difference (T=2.036, *p*=0.48) was found between the male mean score of 5.06 and the female mean score of 6.28, with females thus more morally distressed in general, as most chose 8, 9 or 10 as scores. Age differences in moral distress scoring were also shown to be significant by the Pearson correlation test (R=220, *p*=025). Younger students scored higher on the moral distress scale compared to older students.

Discussion

This study served to gain insight on the potential moral distress of undergraduate nursing students related to the scarcity of available organs for transplantation. The results show that moral distress is present among many, if not most, nursing students when faced with the ethical dilemma of choosing one out of four patients to receive a life-saving heart transplantation.

In a Korean study that sought to explore and understand moral distress from a critical care nurse perspective, some participants experienced moral distress after realizing they had become indifferent about ethical patient care. The more experienced the nurses were, the more they excelled in healthcare provision and the more indifferent they were[13]. In our study, younger students felt more distressed than older students. Clearly, the presence of moral distress is different among nurses. These may be important differences that require intervention. For instance, moral distress should be a mandatory topic for exploration in nursing schools given the high number of students who are younger, and therefore more susceptible to serious moral distress over hypothetical and actual patients.

As described by Corley and collaborators[9], as well as Jameton[14], a key element in creating moral distress situations is the feeling of powerlessness, such as that related to the inability to perform an action understood as the ethically appropriate course. The shortage of organs for transplantation is a major public health issue not only in Canada where this study took place, but all over the world. In having to deal with decisions such as the one verified here, nurses and also nursing students will be exposed to the risk of moral distress and its harmful consequences. Mental health and job satisfaction are only two among many areas in which harmful consequences

of moral distress have been found [15,16]. When decisions concern the end of life, high moral distress' consequences are to be expected [16].

A literature review conducted by Sasso and collaborators [17] identified that studies on moral distress in the academic scope are scarce. It also showed that this phenomenon is present in the setting of nursing academic education. Thus, the evidence gap identified suggests that further studies must be developed to collaborate with our understanding of the phenomenon and to identify issues upon which preventive intervention can be implemented.

Final considerations

We observed moral distress in nursing students over a hypothetical situation, even reaching severe distress levels, regardless of actively working in the field or being a nursing student. The developed instrument was found to be an effective research tool, as not only did a high percentage of students choose to complete it, but the findings were evident and useful. This is important in that a large number of studies analyzing the moral feelings of health professionals in their work activities use a qualitative methodology, typically based on interviews and focus groups, perhaps due to the lack of an instrument capable of measuring emotions objectively. Having an easy-to-use instrument capable of measuring emotions objectively is an accomplishment of this pilot study.

Although the aim of this study was achieved, future investigations need to assess this survey tool and verify its applicability and generalizability. It is also important to develop further studies on this subject in order to explore why moral distress is present, why it varies among students and nurses, and its impact on nursing work. In addition, research is needed to develop strategies to reduce the intensity and incidence of moral distress as well as to reduce its consequences on care provider health, patients, and the healthcare system.

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Participation of the authors
Both authors conceived the study, analyzed and discussed the data collected by João Paulo Victorino, and took part in the writing of the manuscript. Donna M. Wilson supervised all stages of the study.

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Appendix

Survey tool

Age: _____
Gender: Male ( ) Female ( ) Other ( )

Imagine you are a registered nurse and sitting on a committee that needs to decide which person gets a heart. There are four people who could get this heart.

1. Which person would you give the heart to? All are suffering of advanced heart failure. CHOOSE ONE.

a. Meredith – 47-year-old lawyer, widowed, with 2 small children. She has had a liver transplant before as she developed liver failure due to IV drug use in her teen years.

b. Brad – 57-year-old homeless person. He has no next of kin. He has untreated high blood pressure that affected his heart.

c. Paul – 67-year-old professor, divorced but his 15-year-old son lives with him. He developed a heart failure.

d. Susan – 77-year-old retired truck driver who lives with her husband and lives near her three small grandchildren. She has had many heart attacks in her life.

2. Why? Please tell us why you chose one over the others. Use the back of the page if needed.

_____
_____

3. How would you feel about this decision? Mark anywhere on the line below. (0 = not upset; 10 = very upset).

( ) 0 ( ) 1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( ) 6 ( ) 7 ( ) 8 ( ) 9 ( ) 10

4. Why would you feel this way? Use the back of the page if needed.

_____
_____