ABSTRACT

Objective: To evaluate the effect of a games-based intervention on palliative care nursing students’ scores on the Collett-Lester Fear of Death Scale. The challenge was to innovate and integrate grief-related theory and experiences into the classroom. Method: Quasi-experimental study. Before and after the games-based intervention, 101 and 111 students completed the questionnaires, respectively. The intervention was performed in the context of a palliative care class taught during the first semester of the third year of the nursing programme. Results: The students obtained moderate mean scores on the variable fear of death (between 14 and 19) at both time points (pre- and post-intervention). Both men and women indicated a heightened sense of fear post-intervention and a decrease in self-perceived emotional preparedness, which support the value of the games for exposing the student to situations that closely approximated reality. Conclusion: The use of games as a didactic tool in the classroom context helped the students recognize the fear generated by proximity to death in the patient and family and in the student him- or herself.

DESCRIPTORS

Nursing Education; Games, Experimental; Fear; Death; Palliative Care.
INTRODUCTION

In our society, there is currently a debate regarding how to teach classes and the role that teachers and students must play(3). Two basic trends in teaching predominates: the traditional method, which is based on transmitting knowledge and in which effort, mastery, memorization and grades prevail, and the second, which is based on the teaching model of “learning to learn” and uses methodologies that address motivation, creativity, integration and continuous evaluation, affirming that with this model, adaptations to societal changes are achieved naturally(4). The higher education model proposed in Bologna is based primarily on the second approach; it makes students the protagonists of the knowledge, skills and abilities that will allow them to acquire competences in their professional field(5). Using this framework, we proposed the use of experimental classroom games as teaching tools as a way to meet competency objectives and create an experiential and meaningful learning environment in the classroom, specifically in Palliative Care classes in the Nursing degree programme at a Spanish public university.

Studies(6-9) show that teachers who use tools that encourage “learning to learn” are convinced that students experience the added benefit of attributing meaning and functionality to learning. These methods achieve their maximum value in the Bologna method, which turns the student into both the “starting point and destination point”.

The aim is to communicate to the students the objectives and the philosophy of Palliative Care. This kind of care, which patients receive at the end of life, consists of providing patients who have severe advanced disease and their families with comprehensive comfort, which includes accompaniment throughout the disease process, death, and the process of mourning for the losses that all parties will experience(10). In clinical practice, the students share with the professionals the pain, anxiety and fear caused by the patient’s deterioration. Managing the fear of death is a specific prerequisite for both professionals and students(6-10), and the extent of this ability and a description of it can be studied.

It is necessary, therefore, that in addition to theoretical knowledge (scientific and technical), students receive experiential skills training that provide them with resources and abilities to respond to the needs of patients and family members and give the students themselves the skills to manage their own emotions.

The games used in this study provide an approachable experience of the situations that students will encounter in clinical practice. They allow students to consider their beliefs about pain and death and accompanying others through this process and to recognize their own fears and emotions. The students’ experiences in the games, which function as a mirror of some of the experiences associated with palliative care, show their strengths and weaknesses, and among other things, enable them to manage their emotions, consult with professionals and participate in reflective group counselling.

The games can support the promotion of quality care, facilitate an understanding of the value of accompanying a patient during interventions, and give students the opportunity to understand the importance of their own self-care(11-12).

The great challenge and objective of this proposal was to develop an innovative teaching-learning model that would allow the students to link and integrate classroom knowledge with the experiences that are recognized and described a priori in the scientific literature and are shared by students, academic and clinical professionals who function in these contexts(13). Through these teaching-learning experiences, students will be able to approach real-life situations in a friendly environment (the classroom); doing so will allow them to assess their own care and emotional preparation as well as their fears, beliefs, and other aspects that will enable them to provide comprehensive end-of-life accompaniment and grief care with an open mind and with sufficient resources to accommodate the individual needs of each patient and family. Individualized care is critical when working in Palliative Care (PC) units or in any unit where people are in the final process of physical life(10,14).

The objective of this study was to evaluate the effect of a laboratory practical training programme based on experimental classroom games taught in Palliative Care classes and aimed at Nursing students. Specifically, the study aimed to describe the students’ profile; evaluate the students’ fear using the Collett–Lester Fear of Death Scale (CLFDS) before and after exposure to the experimental classroom didactic tool; and to relate the student profile to the CLFDS values obtained.

METHOD

TYPE OF STUDY

Quasi-experimental study.

STUDY POPULATION

The study population was 113 nursing degree students attending a Spanish public university during the 2015/2016 academic year. All of the students were in their third year of the program and were enrolled in a Palliative Care course for 3 European Credit Transfer and Accumulation System (ECTS) credits. The participants were involved in a training programme based on experimental classroom games as a didactic tool as part of the course’s laboratory practical. The sample consisted of students who voluntarily collaborated and anonymously completed the questionnaires; 101 students completed the questionnaire before the course began, and 111 completed the questionnaire at the end the course. The inclusion criterion was enrolment in the palliative care course. Exclusion criteria were not completing the questionnaires, completing them erroneously or partially, or not signing the informed consent form, which was requested in advance.
MEASUREMENT INSTRUMENTS

An ad hoc questionnaire was developed to collect socio-demographic data (gender, age) and data related to the student’s profile (self-perceived clinical and emotional preparation, importance of the subject of Palliative Care, fear of talking about death in general, habits related to talking about death in the family environment or with friends). In addition, the Spanish version of the CLFDS was administered\(^\text{13}\). This is a self-administered multidimensional instrument that consists of 28 items\(^\text{16}\) and four dimensions (7 items for each dimension): Fear of your own death, Fear of your own dying process, Fear of someone else’s death and Fear of someone else’s dying process. Each item is assessed using a Likert-type scale ranging from 1 (none) to 5 (a lot). This instrument was chosen because of its high reliability in the studies we reviewed in which it had been used\(^\text{17–20}\).

DATA COLLECTION

All the students enrolled in the Palliative Care course were required to participate in the intervention: a training programme based on the use of experimental classroom games as a didactic tool. The palliative care course is taught using theory presentations, seminars and laboratory practical sessions. The intervention phase of this study was conducted during the course’s laboratory sessions. A pilot test was conducted during the 2014–2015 academic year. The game cards and the questionnaire were validated by 7 experts in the areas of health and psychology (four professors from the Faculty of Health Sciences and three clinical associate professors in the health care field), and 1 expert from another field (Physical Activity and Sports Sciences). Once the relevant adjustments were made, the final versions were completed, and the intervention was carried out.

Theoretical support was provided through the course classes and seminars. The games were developed in practical sessions of two hours per game per group, for a total of up to 8 hours during the 7-week course.

Information was collected online using the course’s online survey programme and Moodle platform. Before the course began and when it ended, the participants were asked to voluntarily complete the questionnaire that included the measurement instruments described above.

The selected games were designed based on a publication by Fidel Delgado and Pablo Campo titled Sacándole jugo al juego\(^\text{11}\).

The first game was called “The Hospital”. It was a running game with one chair fewer than the number of participants. Its general objective was for all the students to experience the activity of the hospital and hospital admissions.

The game allowed the students to experience the difficulty of remaining calm when facing an experience characterized by fear, uncertainty, pain, and a lack of information about the situation and the environment; the variability of emotional reactions and blocks; and the invalidation of many of their personal resources, among other responses.

The second game was titled “The Blind”. This game entailed walking blindfolded while guided by another person. Its objective was for students to experience empathy with “the accompaniment” during hospital admission and in the final process of physical life. This game allows the students to experience the importance of information, communication, privacy, respect for the patient’s dignity, the efficacy of autonomy, the value of trust, and the effects of positive and negative emotions, among other factors.

The third and fourth games were given the proposed titles “Use Your Eyes” and “Use Your Ears”. These were running games in which the participants had to discover a clue by passing an object from one participant to another and listening to a group of words. The games’ objective was to compare the experience of intervening in clinical processes with the experience of accompanying patients and families in mourning and the process of dying. The students experienced the differences between language that was facilitative and language that was limiting, respect for others’ time as a resource for finding answers, the difficulty of building “effective support”, and the importance of trusting one’s own abilities. The participants experienced how responses that offer “hollow or automatic” solutions move the professional away from person-centred care.

DATA ANALYSIS

The statistical program SPSS for Windows version 23.0 was used. Qualitative variables are expressed as frequencies and percentages. Quantitative variables are expressed as the mean and standard deviation. Both samples, pre-test and post-test, were considered independent samples, and after confirming that the quantitative variables were not normally distributed by means of the Kolmogorov-Smirnov test, Lilliefors corrected, the Mann-Whitney U and Kruskal-Wallis nonparametric tests were performed. \(p<0.05\) was considered statistically significant. The coefficient of reliability was measured using Cronbach’s alpha.

ETHICAL CONSIDERATIONS

The study protocol and the instruments used were approved by the Teaching Innovation Aid Programme (PAGID 2015) and funded by the Spanish public university where the study was conducted. The proposed research respects the fundamental principles of the Declaration of Helsinki and the ethical principles of the nursing profession established by the Spanish Deontological Code of Ethics. The students were verbally informed regarding the purpose of the study, and their consent and collaboration was requested. The questionnaires were accompanied by a document written \textit{ex profeso} with the information and written consent. The students signed it electronically.

RESULTS

The CLFDS instrument showed high reliability before and after the administration of the games, with Cronbach’s alpha of 0.847 and 0.870, respectively.

The students’ ages were between 18 and 50 years, with an average of 21.52 years and a standard deviation of ± 4.46. Of these, 14.4% were men and 85.6% were women.
The students' general assessment of the subject and other variables showed good acceptance of the games. These results and the means and SD of some of the evaluated indicators show an increase in the value the students attributed to Palliative Care as a subject (4.65 ± 0.479 pre-test, and 4.71 ± 0.455 post-test), a decrease in the fear of talking about death (1.91 ± 0.996 to 1.65 ± 0.759), an increase in discussions about death with family (2.33 ± 1.035 to 2.54 ± 1.110) and with friends (2.26 ± 1.107 to 2.43 ± 1.041). Additionally, the evaluation report for the proposed objectives of the games, measured on a scale of 1 to 5, showed that the students gave the games a score of 4.3.

Figure 1 shows the behaviour of the variables self-perceived care preparedness and emotional preparedness before and after the games-based intervention. The percentage of students who perceived themselves as better prepared increased, but the average values for both variables decreased after the intervention. Before the intervention, 54% and 49% of the participants felt that their care preparedness and emotional preparedness, respectively, were adequate or very good; these percentages increased to 67.6% for care preparation and 54% for emotional preparation after the intervention. A small percentage of the students (1% pre-intervention and 0.9% post-intervention) perceived themselves as unprepared, even after completing the palliative care course.

The men obtained higher averages than the women both before and after the intervention, indicating that they felt better prepared than the women in terms of care preparedness and emotional preparedness (Figure 2). The averages were lower after the games-based intervention than before for both genders. We would like to highlight these data in this study since they justify the value of using experimental classroom games in this context.

Regarding the CLFDS values obtained, Table 1 shows the mean and standard deviations (SD) obtained for the overall scale and for each subscale and their statistical significance.

Table 1 – Means and Standard Deviations of Pre- and Post-Intervention CLFDS Scores (four subscales and overall), nursing students, academic period 2015/2016. Significance determined using the Mann-Whitney U test.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pre-intervention N=100</th>
<th>Post-intervention N=111</th>
<th>Mann-Whitney U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average ± SD</td>
<td>Average ± SD</td>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>Your own death</td>
<td>18.29±5.85</td>
<td>18.77±5.64</td>
<td>0.529</td>
</tr>
<tr>
<td>Your own dying process</td>
<td>15.42±5.16</td>
<td>16.10±5.36</td>
<td>0.463</td>
</tr>
<tr>
<td>The death of others</td>
<td>14.41±4.26</td>
<td>15.75±5.06</td>
<td>0.080</td>
</tr>
<tr>
<td>The dying process of others</td>
<td>16.43±5.03</td>
<td>18.93±6.22</td>
<td>0.002</td>
</tr>
<tr>
<td>CLFDS overall</td>
<td>64.55±16.91</td>
<td>69.55±18.95</td>
<td>0.059</td>
</tr>
</tbody>
</table>

Figure 1 – Self-perception of care and emotional preparation, nursing students, academic period 2015/2016.

Figure 2 – Average self-perceived care and emotional preparedness according to gender, pre- and post-intervention, nursing students, academic period 2015/2016.
Considering that fear was measured on a scale with a minimum value of 7 (no fear) and a maximum value of 35 (the greatest possible fear), we observed that the students showed moderate fear (between 14 and 19) on the subscales and the overall CLFDS at both time points (pre- and post-intervention). We also noted that the values increased at the post-intervention measurement, that is, the students showed greater fear after playing the games. This difference was statistically significant for the fear of others’ dying process subscale, showing a tendency towards significance, both for the fear of other’s death as well as for CLFDS overall.

No significant differences were found between genders before or after the intervention; however, for all parameters, the values were higher, and the men showed more fear than the women (Figure 3).

The greatest gender differences in mean values were found for the overall CLFDS; however, these differences were not statistically significant (women 63.6/68.7 and men 71.0/74.8 pre/post, respectively).

The students indicated greater fear of their own death as a state than fear of their own death as a process; however, they indicated greater fear of the death of others as a process than as a state.

The difference between the average post-intervention and pre-intervention values was represented graphically to assess whether there was a relationship between self-perceived emotional preparation and the level of fear estimated by the different CLFDS subscales and the overall CLFDS. Figure 3 shows that after the game-based intervention, there was a decrease in the mean value for fear of death of others as a state among students who considered themselves emotionally unprepared; conversely, those who considered themselves somewhat emotionally prepared showed less fear in all the subscales and the overall scale after the intervention. In contrast, the students who perceived themselves as somewhat, moderately, or very prepared had the highest mean fear value on all the measured aspects, indicating that in general, the students who felt best prepared were those who reported a greater amount of fear after the games-based intervention.

![Figure 3 – CLFDS scores by gender and differences in the pre- and post-intervention means for self-perceived care preparedness nursing students, academic period 2015/2016.](image)

### DISCUSSION

The Cronbach’s alpha values of the CLFDS at pre-test and post-test were high and comparable with those obtained when the scale was used with similar populations\(^{17,21-23}\).

The study sample had an average age typical of university students and a markedly female bias, typical of the nursing profession\(^{6,10,17,21}\).

Regarding the participants’ self-perceived care and emotional preparation after performing the games, although there was an increase in the number of students who thought they were somewhat, moderately or very prepared, there was also a percentage that did not perceive themselves as capable of supporting the dying patient and his or her family, even after completing the palliative care course. Different authors\(^{24}\) suggest that such attitudes represent a form of self-imposed emotional protection or shield. While these students direct their efforts towards technical care, they also create a distance from the human part of the patient\(^{25}\). This behaviour reinforces the hypothesis that experiential training about death increases students’ contact with reality and that when students have to provide concrete responses, they become aware of the differences between theory and reality. However, further examination is needed to determine whether this tool improves attitudes towards death and the terminally ill\(^{26-27}\), as our findings indirectly suggest (i.e.,

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**Differences between post-test and pre-test values for the variable self perceived emotional preparedness**

<table>
<thead>
<tr>
<th>Fear of own death</th>
<th>Fear of the process of own death</th>
<th>Fear of the death of others</th>
<th>Overall CLFDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not</td>
<td>8.00</td>
<td>-15.00</td>
<td>9.00</td>
</tr>
<tr>
<td>A little</td>
<td>-2.22</td>
<td>-1.22</td>
<td>-5.18</td>
</tr>
<tr>
<td>Somewhat</td>
<td>0.32</td>
<td>1.24</td>
<td>3.32</td>
</tr>
<tr>
<td>Moderately</td>
<td>0.47</td>
<td>1.22</td>
<td>4.34</td>
</tr>
<tr>
<td>Very</td>
<td>0.16</td>
<td>4.95</td>
<td>10.38</td>
</tr>
</tbody>
</table>
by increasing the value students attribute to the subject of palliative care, reducing their fear of talking about death with family and friends, and demonstrating the achievement of the games’ objectives.

Fear, as measured with the Collet–Lester scale, increased during the post-game period in all cases, which again shows that an individual’s perceived degree of fear is quite different from what he or she feels when experiencing a situation in the first person, even if the situation is simulated. In this sense, we differ from authors(21) who consider that education about death and Palliative Care can reduce the fear of death per se, and we agree with the hypothesis that experiential training has the opposite effect; that is, instead of decreasing fear and apprehension related to the process of dying, this training increases the related fear(7,28–29). While some authors consider that limited exposure to the reality of caring for suffering, pain and death, along with inexperience and a lack of control, increase the fear of death(19), this study demonstrates the opposite; since it suggests that inexperience itself makes the student oblivious to reality and is associated with increased self-perceived care and emotional preparation and reduced fear; we believe that this relationship should be studied in greater depth(19).

The study found no significant differences in fear between genders either before or after playing the games. Other authors(17–19), using similar samples, found that women had higher fear values and explained this finding in terms of women’s greater capacity and facility for admitting and expressing their feelings.

Regarding the CLFDS subscales(17–20), the study showed that the fear of one’s own death as a state had the highest values, which coincides with several other studies. In relation to others, the students reported a greater fear of death as a process than as a state. This finding could be interpreted to indicate that the fact of disappearing and the lack of control over what will happen when one is dead definitively influences the fear of one’s own death. On the contrary, on the fear of the death of others subscale, students feared the process more than the fact of disappearing. This finding suggests that this fear may be related to the experience and time spent accompanying another through the death process as such experiences make the students become conscious of the individual’s vulnerability, and the physical and mental degenerative process and associated pain, dependence, lack of control and uncertainty are palpable.

In contrast, the data obtained show that self-perceptions of emotional preparation and fear of death develop differently as recognition of the fear of death and its variables is not directly related to one’s self-perceived emotional preparation to work with dying people and their families. Therefore, it is necessary to study these relationships in greater depth.

This study has a series of limitations, including the scarcity of articles related to the use of games in the field of higher education or that address the topic of Palliative Care. Because pre-test and post-test samples were considered independently (to preserve the participants’ anonymity), some statistical analyses could not be carried out, and therefore, some variables need to be investigated in greater depth.

We recommend the longitudinal study of these students to measure how successive exposure to and experiences with death and grief affect their performance in the clinical setting. It would also be interesting to investigate whether their recognition of their strengths and weaknesses in accompaniment care inspire consequent actions, such as seeking more training. It would also be useful to further evaluate any improvements in the students’ attitudes towards death and the terminally ill and their direct impact on the students’ efficiency in working with the sick person and his or her family. Such studies could also begin in the first year of the nursing programme, as students begin their careers, and observe the changes in these variables throughout the academic and clinical training process. Similarly, other variables of educational interest could be studied to inform curriculum activities. Finally, such studies could be conducted in parallel with other disciplines in related or unrelated areas.

CONCLUSION

The innovative method of using experimental classroom games in the subject of Palliative Care was an adequate didactic tool for providing context to the nursing student, bringing him or her closer to the clinical reality of the final process of life and the grief of the patient, family members and the professionals themselves. This method gave the students the opportunity to experience the difference between intervening and accompanying patients in the process of death and taught the value of silence and discreet presence in the midst of pain, allowing the dying to find their own answers. The student can experience how to accompany a patient without interfering in the transcendence of dying. The games allowed the student to observe both the external environment (how others played or, in clinical terms, how the patient and his/her family experience the condition) and the internal one (how do I play, or how do I live this situation). On a clinical level, the students’ experiences in the games represented the experiences of patients and family members and how would the students would feel and interact in a similar situation. Afterwards, group reflections allow the students to give meaning and sense to what they experienced and relate it to the clinical context.

The game-based intervention increased the number of students who showed greater care and emotional self-perception, and at the same time, it provided a more realistic assessment of the fear the students felt in response to their own death and that of others as measured using the CLFDS. That is, the games helped the students discern that being afraid of death and recognizing that fear does not imply that they are less prepared to face caring for the dying; on the contrary, it does establish a criterion for evaluating the extent to which they perceive themselves as competent.

In this study, the men had higher fear values before and after playing the games. In addition, the students’ own deaths, as a state, and the death process of others were the aspects that obtained the highest values at both time points for both genders.

The students considered the subject of Palliative Care very important, and after performing the games, they showed reduced fear of talking about death and indicated that it was easier for them to talk about death with their family and friends.
RESUMEN

Objetivo: Evaluar el efecto de un programa, basado en juegos, sobre estudiantes de enfermería de la asignatura cuidados paliativos, midiendo el miedo a la muerte mediante la Escala Collett-Lester. El desafío es innovar e integrar en el aula, teoría y experiencias cercanas al contexto de duelo. Método: Estudio quasi-experimental. Realizaron los cuestionarios 101 y 111 estudiantes, antes y después de la intervención de los juegos, respectivamente. Asignatura impartida en el primer semestre de tercer curso. Resultados: Los estudiantes obtuvieron valores medios moderados en la variable “miedo a la muerte” (entre 14 y 19) para ambos momentos (pre y post). Hombres y mujeres aumentan estos valores de miedo en el post-test, a la vez que disminuyen su “percipición sobre preparación emocional”, evidenciando el valor de los juegos, al exponer al estudiante a situaciones cercanas a las reales. Conclusión: Consideramos que la herramienta didáctica de los juegos, aplicada en el contexto del aula, facilita que el estudiante pueda reconocer el miedo que genera la cercanía de la muerte, tanto en el enfermo y familia, como el propio.

DESCRITORES

Educación en Enfermería; Juegos Experimentales; Medio; Muerte; Cuidados Paliativos.

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