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Healthcare student engagement with health-related content through Netflix mini-series: a qualitative study

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Abstract

Background Conventional lecture-based teaching often struggles to keep students engaged and attentive throughout the class. Television and film, when used as educational tools, can promote a compassionate, person-centered approach to healthcare. Film-based education enhances critical thinking and allows students safely to explore and express their professional values and beliefs. This qualitative research aimed to explore how a Netflix mini-series could engage healthcare students and enhance their interest in learning, rather than its direct instructional effectiveness.

Method In September 2023, the “Simulation and Games in Nursing Education” international summer school featured daily episodes from “*The Nurse*” Netflix mini-series, each lasting 40 to 60 min. Healthcare students attended this event as part of their summer school program. We employed a six-step thematic analysis framework to analyze the collected data and Sankey diagrams were used for visualization.

Results Our research involved 28 healthcare students from six European countries, predominantly women (82%, 23/28), with a mean age of 22 years (SD 2.35). None had seen the series before the summer school. The analysis revealed ‘Cinenurducation’ as the main theme, supported by three subthemes: (1) Observational learning and Critical thinking; (2) Cinenurducation feelings; and (3) Relationships and Personal behaviors.

Conclusion While Netflix mini-series can provide engagement opportunities, this research underscores the importance of distinguishing between engagement and educational effectiveness in using media as a teaching tool.

Clinical trial number None.

Keywords Netflix, Drama, Serial killer, Learning, Healthcare, Nursing

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Introduction

Nursing education faces challenges in retaining students' skills and knowledge and innovative educational strategies are needed [1]. The potential to promote a compassionate and person-centred approach to health care is suggested using television and film as educational tools [2]. A film-based approach to education allows students vicariously to experience different experiences and improves critical thinking through discussion [3]. It also provides a safe environment for them to express their values and beliefs about professionalism [4]. Research shows that students with more clinical experience have more negative impressions when watching films than students with no clinical experience [5].

A research by Cambra-Badii et al. (2021) measured undergraduate medical, nursing, and human biology students' perceptions of bioethical issues and professionalism in medical television series [6]. The most common themes recalled by the students were medical errors, inappropriate professional behaviour, and death. Similarly, Klemenc-Ketiš & Kersnik (2011) found that watching the films prompted students to reflect on their attitudes towards life, death and dying [4]. Students also highlighted communication and empathy, as well as doctors' personal interests and perceptions of palliative care. Mubangiz et al. (2022) compared the effectiveness of using documentaries and drama films and found that documentaries mainly produced positive changes in knowledge, while drama films improved attitudes towards the issue [7].

Currently, streaming platforms such as Netflix, HBO Now or Apple TV are gaining popularity due to the flexibility they offer, allowing viewers to watch content not just on traditional television sets but also on personal computers and mobile devices [8], a feature that particularly appeals to Generation Z [9].

Similar to how Alexander and Pettice (1994) redefined "cinemeducation" as the integration of cinema, medicine, and education to represent the use of films in medical education [10], the term "cinenurducation" has been coined to signify the combination of cinema, nursing, and education. Cinenurducation is the use of films in both didactic and clinical nursing education [11–13]. Students not only bolster their professionalism but also refine their critical thinking and moral reasoning abilities through exposure to emergency medicine content. Meanwhile, teachers gain a valuable teaching tool and a theme for reflection, enriching the educational experience post-engagement [14–16].

Healthcare is rarely highlighted in the media for positive reasons. However, one type of event that regularly thrusts health care into the media and results in dramatization is serial homicide. This phenomenon involves the intentional killing of a patient by a health care professional within a health care setting and represents

a contemporary problem in health care systems [17]. When serial homicide occurs, the perpetrators are often long-term health care workers. The victims are often frail older patients with pre-existing conditions who were unable to defend themselves [18] and nurses are often killers [18–21]. As the field of serial killers is vague, there is a lack of understanding of the phenomenon. There is a need for training and greater awareness and promotion of the management of such cases [19].

The main goal of the research is to find out how Netflix mini-series can engage nursing students and increase their interest in learning.

Methods

In September 2023, an international summer school titled "*Simulation and Games in Nursing Education*" was held [22, 23]. This event featured a diverse range of interactive activities, forming part of a comprehensive five-day program designed for participants from different European countries. Among the activities was "Netflix Morning/Noon", where participants gathered daily to watch an episode from the Netflix mini-series "*The Nurse*" [24]. The series features four episodes, each lasting from 40 to 60 min, one for each day of the summer school, except for Wednesday, when viewing was not scheduled due to off-faculty activities. The series explores into the real case of Christina Aistrup Hansen, a former Danish nurse accused of murdering four patients and attempting the manslaughter of a fifth at Nykøbing Falster Hospital, Denmark. Her colleague and teammate, Pernille Kurzmann Larsen, investigated the cases and, on gathering sufficient evidence, filed reports with the police. The series is based on the book of the same name written by the Danish journalist Kristian Corfixen [25].

We recruited participants through an open invitation process. Faculty office for international relations and research affairs sent invitation to the partners across Europe and promoted summer school on faculty website and social media channels (e.g., Facebook, Instagram, X). This initiative was part of the new Erasmus + programme (2021–2027), which introduces Blended Intensive Programmes (BIP) as an alternative form of student mobility. Participation in the BIP was limited to a maximum of 25 international participants. They were eligible to participate in the research if they were healthcare students, provided written informed consent, were at least 18 years old, and participated in the "Netflix Morning/Noon" activity. The exclusion criteria applied to those who did not give consent or did not take part in the "Netflix Morning/Noon" activity.

The research was designed as a qualitative study using focus group interviews, a widely used methodology in cinema education and an effective approach for capturing its nuances and impact [12, 26, 27]. The Consolidated Criteria for Reporting Qualitative Research (Appendix A) was used

to ensure a consistent process throughout the research [28]. After the final episode of “*The Nurse*” mini-series, aired on the last day of the international summer school, we conducted focus group interviews with participants. These participants, at the onset of their summer school program, were organized into small groups, with each group comprising of four to five members. The sample size was determined by convenience sampling, including participants from the “*Simulation and Games in Nursing Education*” summer school. Focus groups were predetermined based on prior summer school experience to ensure effective discussions. However, participants often preferred same-country groups, creating organizational challenges in balancing composition.

The lead investigator (NF) carried out semi-structured interviews in five distinct, tranquil settings with round tables, as detailed in Appendix B, for the collection of qualitative data. The questions were crafted by investigators (NF, LG) to be open-ended, allowing participants to express their thoughts freely without being steered towards a particular viewpoint. The main research question was: How does the Netflix mini-series “*The Nurse*” influence viewers’ perceptions, emotional responses, and critical observations related to nursing practice and healthcare settings?” The investigators had no prior relationship with most participants, except for those from Slovenia, who were acquainted through the organizer/faculty. To minimize bias, discussions followed a structured, neutral approach, and all participants were encouraged to share their views freely.

Each focus group interview was recorded using Sony IC recorder ICD-PX370 (Sony, South Korea). All audio recordings were initially transcribed into text format using Microsoft 365 Word (Microsoft Corporation, Washington, USA). Subsequently, we reviewed these transcriptions by listening to the audio recordings with VLC media player (VideoLAN, France), making manual corrections as needed. To guarantee the rigour and reliability of this qualitative research, we adhered to the criteria established by Lincoln and Guba plus others [29, 30]. Two investigators (NF, male teaching assistant and Registered Nurse in emergency department, PhD; ŠM, female emergency dispatcher, MSc) conducted a thematic analysis. Thematic analysis is a method for analyzing qualitative data by identifying, analyzing, and reporting recurring patterns within a dataset. It is a flexible and straightforward approach that provides deep insights into participants’ thoughts, feelings, and lived experiences [31–33]. The analysis followed the six-step framework recommended by Braun and Clarke [31, 32]. First, we familiarized ourselves with the qualitative data by repeatedly listening to recordings and verifying transcript accuracy. Next, we generated initial codes inductively by identifying meaningful patterns in participants’ reflections. These codes were then grouped into potential themes, which were reviewed and refined to ensure coherence and relevance to the research

question. Each theme was clearly defined and named to capture its essence, with representative quotes selected to illustrate key findings. Finally, we synthesized the results into a structured narrative, composing the final analysis report. To enhance the credibility and reliability of the data, we employed triangulation and involved an additional investigator (LG, a female teaching assistant and PhD candidate) in the coding process. This approach helped minimize bias. In cases of discrepancies, the additional investigator facilitated resolution through joint discussions, ensuring coding consistency. No code numbers were assigned to the participants. All process was conducted using Microsoft 365 Excel (Microsoft Corporation, Washington, USA). The Sankey diagram was created using SankeyMATIC, a free online tool.

Results

Our research involved 28 healthcare students from six different European countries ($n=14$ from Serbia, $n=4$ from Poland, $n=4$ from Czech Republic, $n=3$ from Portugal, $n=2$ from Slovenia, and $n=1$ from Croatia), of which 26 were nursing students, while the remaining two occupational therapy students. The majority were undergraduate students (96%; 27/28), with only one being a postgraduate student (4%; 1/28). Most were women (82%; 23/28) with a mean age of 22 (SD 2.35) years. None of the students watched the series prior to their involvement in the summer school, and no students withdrew from the research.

The data analysis culminated in the emergence of the theme ‘Cinenurducation’, which is underpinned by four secondary subthemes: (1) Observational learning and critical thinking; (2) Cinenurducation feelings; and (3) Relationships and personal behaviors; further divided into nine primary subtheme’s, as illustrated in Fig. 1.

The main Sankey diagram (Fig. 1) was divided into three additional diagrams (Figs. 2, 3 and 4), each representing a specific secondary subtheme.

Secondary subtheme 1: Observational learning and critical thinking

The secondary subtheme’s “Observational learning and critical thinking” was comprised of four primary subthemes: (1) Quality of nursing and medical procedures; (2) Medication management (3); Ethical issues; and (4) Development of soft skills (Fig. 2).

For example, during the focus group discussions, healthcare students shared their views on specific topics such as hand hygiene:

To be honest, most of the time I was paying attention that they don’t wear gloves. Anything they did, they didn’t have gloves on their hands. That was, uh, I was frustrated about it, but that’s another story.

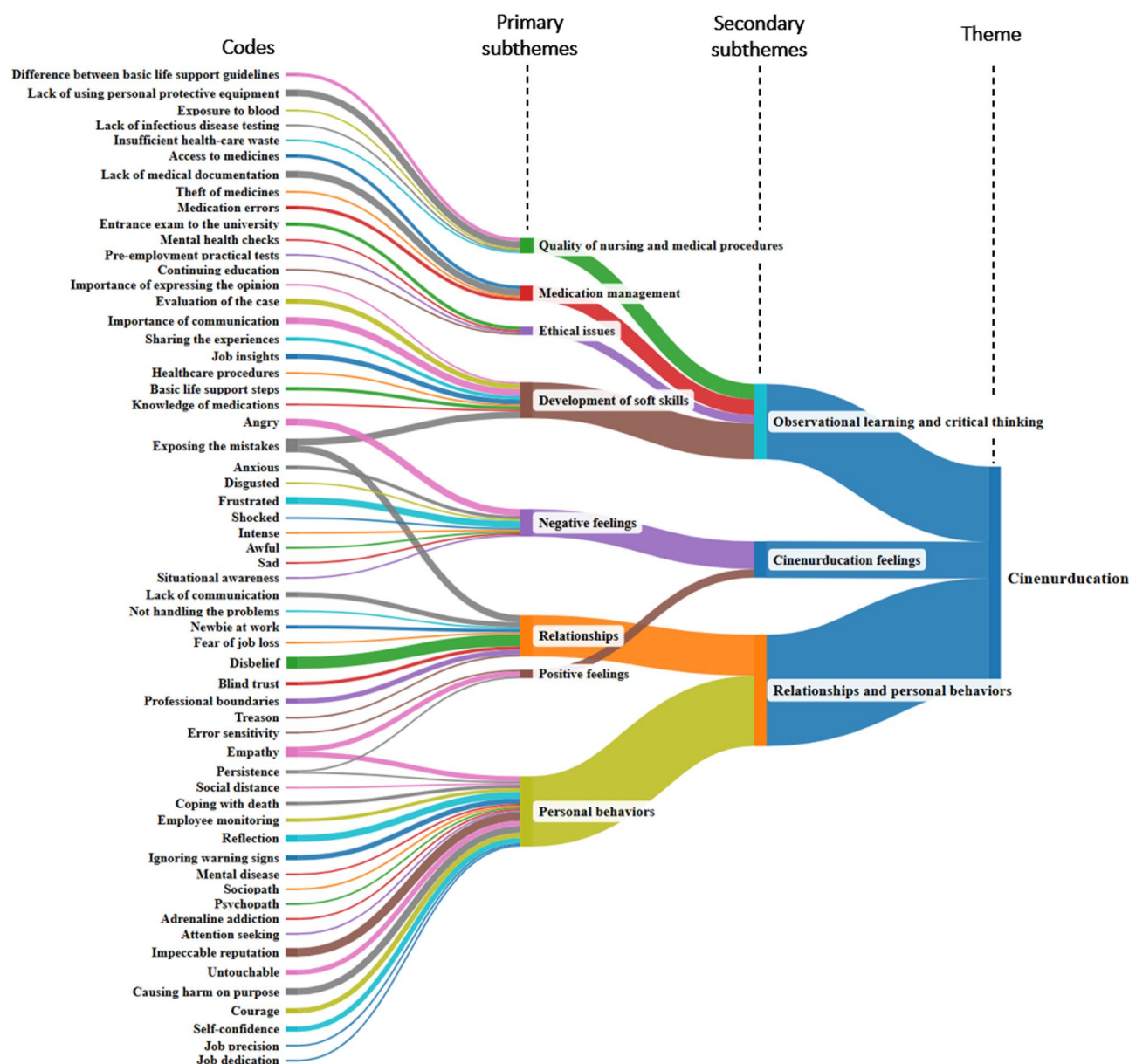


Fig. 1 Main Sankey diagram of codes, primary and secondary subtheme's and theme

Resuscitation:

Yeah, I learned a lot about the reanimation and the steps and like how it's done." and "I saw how the CPR is done. The Danish hospital. It was Danish hospital. It's different than we do this in Poland. They do different steps.

And medication management:

...about the medications in how important this is to manage it, to write everything that is taken and given to the patients to like to make an inventory of the medications, how important it is, so this situa-

tion doesn't happen. The medication doesn't go missing or something like that.

Additionally, another student contributed by sharing:

Yeah, in our hospital the medications are locked, so if you use one you must open it, and the doctor also needs to sign the book. You must put it on the computer, so everything needs to be written time, dates, doctor, you and how much medicine and patient and date of birth of the patients like address. To check it out if it's some missing....

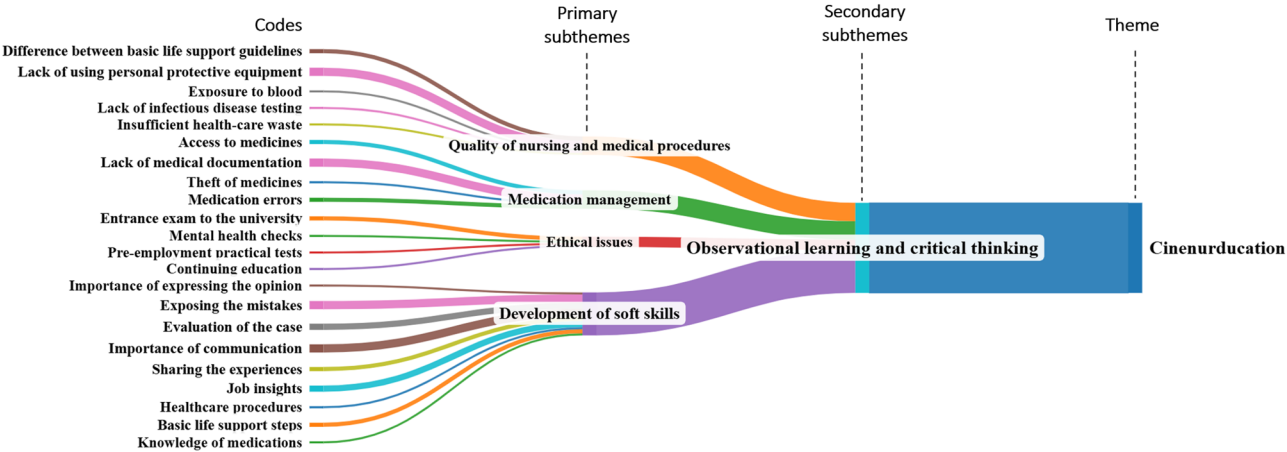


Fig. 2 Sankey diagram for secondary subtheme called “Observational learning and critical thinking”

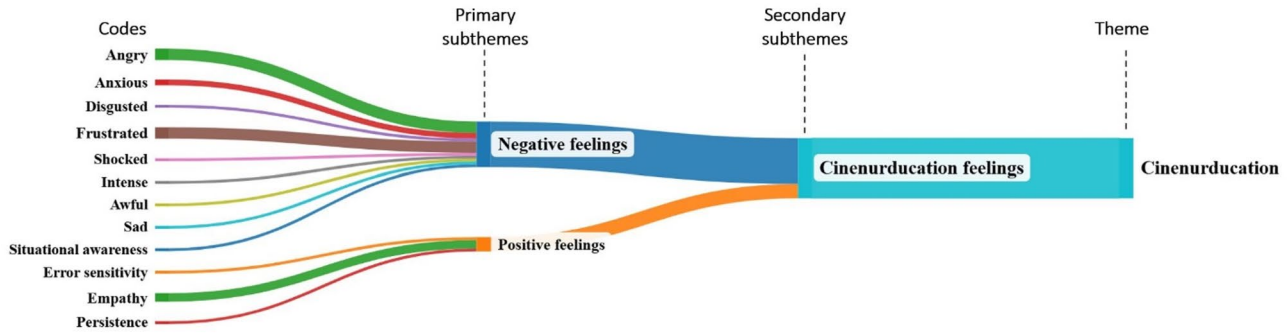


Fig. 3 Sankey diagram for secondary subtheme called “Cinenurducation feelings”

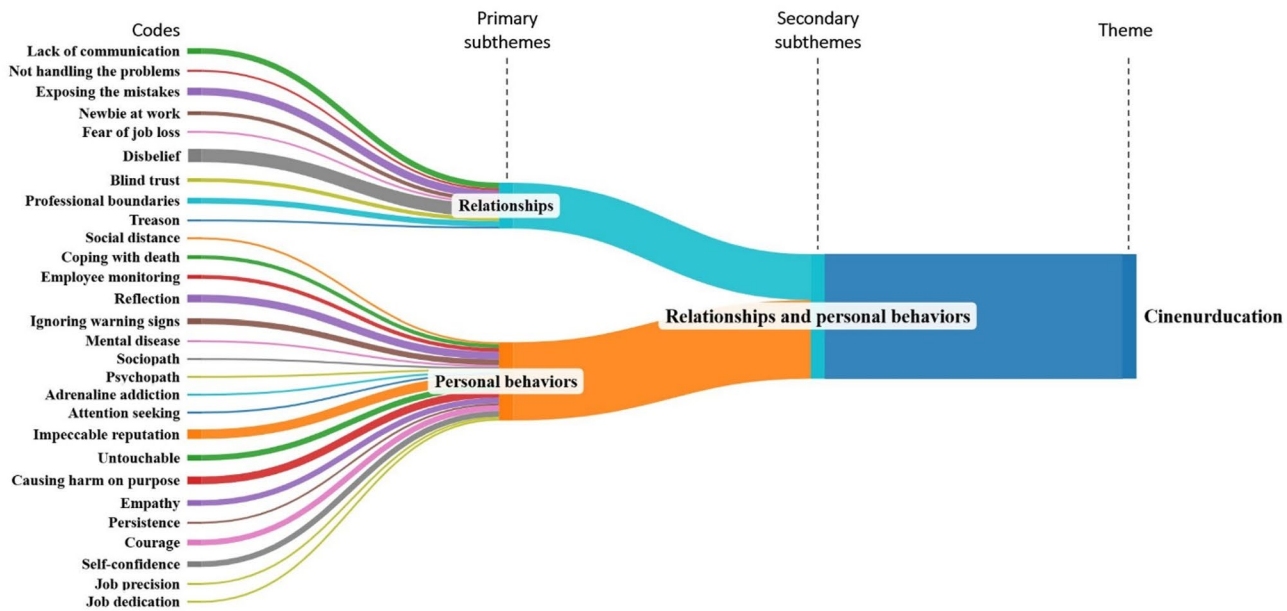


Fig. 4 Sankey diagram for secondary subtheme called “Relationships and Personal behaviors”

In conclusion, the healthcare student wrapped up by stating:

They do not use documentation and that was the core problem. I hope this will never happen again.

The analysis of the "Observational learning and critical thinking" theme, results reveal a multifaceted engagement with the depiction of healthcare practices in the series. Students critically evaluated the quality of nursing and medical procedures, discussing the importance of meticulous medication management to prevent errors like those dramatized in the series. Ethical considerations were highlighted as crucial, especially in scenarios where the lack of proper documentation led to severe consequences. Additionally, the discussions emphasized the development of soft skills, such as communication and accountability, essential for enhancing safety and ethics in healthcare settings. Through these reflections, students not only assessed the series' portrayal of medical errors and ethical dilemmas but also considered practical improvements in their professional conduct to ensure such mistakes are avoided in real-life medical practice. Some students appreciated the series as a form of experiential sharing that added realism to their learning, while others expressed scepticism about the educational value of the series, feeling it offered limited real-world application. The necessity of reflective discussions post-viewing was emphasized, suggesting that without active engagement and critical thinking, the educational potential of observational learning through media could be minimal.

Secondary subtheme 2: Cinenurducation feelings

The secondary subtheme's "Cinenurducation feelings" was comprised of two primary subthemes: (1) Negative feelings; and (2) Positive feelings (Fig. 3).

Healthcare students in majority experience negative feelings:

Also, was angry about the other nurses and then how those staff have the very protective of everyone. Yeah. And couldn't see was she (Cristiana) doing. I was frustrated about (not using gloves) it, but that's another story. I got the don't be afraid to say my opinion and be brave about. It was upsetting because she (Pernille) thought something was wrong, but she didn't have any evidence. I imagine it was hard for her because she was new. She was the only one, probably with Katia or some something like this. But she didn't have anyone to talk about this later. Of course, the doctor. She didn't have anyone. She didn't know what to do, to be honest, and not to have her career ruined at the start.

And positive feelings:

*I felt good. She (Pernille) finds the truth and everything and she fight for it, and she didn't give the f*** about what they all said. I tried to find the good things. Yeah. Yeah, it's awful because she killed people. Yeah, it's anxious because you're it's tension, like, what's happening. And it's the ER and she go through the hall and did what she wants to. I felt empathy. I was not only thinking about how the nurse felt but also the patients and the family and how my work, but how I can make others feel and have impact on their families.*

The analysis of the "Cinenurducation feelings" theme reveals a spectrum of emotional responses elicited by the series among healthcare students. For instance, students felt anger towards other nurses who failed to notice malpractices and empathy towards the struggles and ethical dilemmas faced by the characters. The series prompted strong reactions and provided a platform for students to reflect on their potential impact in healthcare settings, emphasizing the importance of ethical vigilance and personal bravery in their future professional lives.

Secondary subtheme 3: Relationships and personal behaviors

The secondary subtheme's "Relationships and personal behaviors" was comprised of two primary subthemes: (1) Relationships; and (2) Personal behaviors (Fig. 4).

For example, during the focus group discussions, healthcare students shared their relationships and personal behaviors with a content:

And in the Czech Republic, we have a similar case with some nurse like boy nurse killed with heparin. So, it's really, yeah, it's similar for me. I think in it's a good way to learn about some things or maybe the reality some parts of the reality and the job of nursery. It reminds me to be careful with who are you working for with, yeah. So, we are not the same people. If I love my job, I will do it the best I can. But there are some conditions. Staff who have the condition, like a sociopath or psychopath like that. So, when some get addicted to the adrenaline, it's quite possible that this situation happened so. ...not to trust everyone at work to have a distance little bit and try to communicate more and just talk. I would like to get to know the person that I'm working with on the shift. For example, if experience death frequently we must talk to the doctor/psychiatric.

The analysis of the “Relationships and Personal Behaviors” theme delves into how the series influenced students’ perceptions of professional interactions and personal conduct within the healthcare environment. The discussions highlighted the need for vigilance, effective communication, and better interpersonal understanding to prevent malpractice and ensure patient safety. Students also noted the importance of seeking psychological support in dealing with frequent exposure to death and high-stress situations, emphasizing mental health as critical in maintaining effective professional behavior and relationships.

Discussion

Our findings suggest that Netflix mini-series can enhance healthcare students’ critical thinking abilities, observational learning, feelings, and relationships and personal behaviors. Additionally, our research revealed that Netflix mini-series can serve as an effective teaching tool, offering valuable learning opportunities for healthcare students. Similar results were presented in studies by Oh and Steefel (2016) [13] and in literature reviews by Hoffman et al. (2018) [34].

Nursing is a demanding profession that requires a range of soft and practical skills [35, 36]. To recruit and retain high-performing nurses, employers should look beyond technical skills to soft skills such as bedside manners, personality, communication and decision-making [37], which were also highlighted by students in our research. They stated that the process of recruiting a new employee should be more thoughtful and careful to find suitable candidates with all the above qualities. There is a need for pre-employment psychological assessments and practical skills tests. Such an example is a selection process for applicants for the position of emergency medical dispatcher in Slovenia, where a computer speed typing test and handling an adult basic life support scenario are an important part of the job interview. As generations Alpha and Z are entering the healthcare labour market, there is a need for carefully designed strategies for educating and employing new workers. These are the ‘technology literate’ generations, which means that the traditional model will no longer provide a sufficiently effective and interesting way of learning [38, 39]. This change should be reflected in the style of teaching and the enhancement of the student learning experience so that it is interactive, meaningful and relevant, for example by using advanced technological environments with artificial intelligence and automation [40].

The use of films in nursing education is a creative way of learning complex material [41]. Films facilitate observational learning by engaging more than one sensory organs, thus stimulating students’ memory [42]. The advantages of laboratory-based training over traditional

learning are mainly in the long-term retention of knowledge [43]. In addition, watching films can make an important contribution to promoting professional identity and professional values in nursing students [3]. Kaser & Acar (2017) also found that watching and discussing films significantly improved the development of communication skills [44]. Due to the increasing complexity of the healthcare environment and the increasing responsibility of nurses in education, it is not sufficient to deliver content simply passively, but rather a combination of blended learning through film watching and an interactive learning mode [45].

Nurses have traditionally been portrayed negatively or stereotypically in the media as self-sacrificing heroes, sex objects and romantics, especially in early films. However, there was a turning point in how they were portrayed following the filming of Ken Casey’s novel *One Flew Over the Cuckoo’s Nest* and the infamous and sadistic Nurse Ratched [46]. In more recent films nurses are increasingly portrayed as strong and confident professionals [47]. Clearly, with the filming of “*The Nurse*”, cinematographers are not flinching from portraying the rare but darker side of nursing. The way nurses are portrayed in films is important because it has an impact on the way the public, patients and nurses themselves view their profession [48, 49]. Media images of nursing often do not reflect the true nature and positive image of the profession [50]. Focusing on what students can learn about professional ethics from portrayals of everyday medication errors might be more beneficial than examining serial killers. Our research shows that, despite the criminal aspects highlighted in “*The Nurse*” mini-series, medication errors continue to be a significant concern.

When people identify with characters in films, their emotions and thoughts are simulated [51]. Films are important for exploring situations such as pain, illness and death. Learning through film has the power to help learn the value of respecting the patient’s experience [52]. Identification with fictional characters leads people to integrate these characters into their self-image [53]. Our research presented that emotional responses to the “*The Nurse*” mini-series were likely shaped by cultural differences in how healthcare professionals perceive ethical dilemmas, hierarchy in hospital settings, and whistleblowing in malpractice cases. Some students expressed strong emotional reactions to the inaction of colleagues in the series, possibly reflecting varying cultural attitudes toward professional accountability and workplace dynamics. Since lectures and simulations may not always fully capture the complexity of situations and ethical dilemmas in nursing, films offer a powerful educational tool. One advantage is the presence of characters who can serve as positive role models [54], inspiring and motivating students in their careers. Another benefit is their

accessibility and flexibility—students can watch them independently, anytime and anywhere, at their own pace, with the option to revisit key scenes. The main disadvantage compared to simulations is the lack of practical experience, as students passively watch without engaging in hands-on training. Additionally, there is a risk that certain aspects of the story—such as complex medical procedures, ethical dilemmas, and other critical issues—may be oversimplified or misrepresented [55], as films are primarily created for entertainment rather than educational accuracy.

The use of a crime drama series like “*The Nurse*” mini-series, which centers on a nurse accused of multiple patient homicides, adds a layer of complexity to this approach. It is crucial to distinguish clearly between everyday medical errors and the extreme criminal acts depicted in the series. There is a risk that without careful moderation, students might conflate common medication errors with intentional criminal acts, leading to misconceptions and fear within their learning environment.

This potential for problematic interpretations suggests the need for a more nuanced approach when selecting media examples for educational purposes. Educators should consider the ethical and pedagogical implications of using dramatic and sensationalized content [56]. It is recommended that such media be used judiciously, accompanied by guided discussions that explicitly address the differences between real-life medical errors and the fictional representations of criminal activities in healthcare settings. This approach can help prevent misinterpretations and ensure that the educational focus remains constructive and aligned with the realities of medical practice [57]. Our research presented that despite these cultural differences, common themes emerged across nationalities, particularly regarding professional ethics, patient safety, and the importance of communication in healthcare settings. This suggests that while nationality influenced individual viewpoints, the fundamental values of nursing practice and patient care remained universal [58]. Additionally, while the dramatized nature of *The Nurse* captured students’ attention and elicited strong emotional reactions, it is important to recognize that the series depicts extreme and rare instances of criminal malpractice. Such portrayals may risk distorting students’ perceptions of the nursing profession if not contextualized properly. To mitigate this, educators should emphasize the distinction between everyday clinical errors and sensationalized criminal behavior. Structured debriefings and guided reflections are essential to help students process such content critically, ensuring they build realistic, informed, and confident views of their future roles in healthcare.

Limitations

Our research has a few limitations. Conducting interviews in English, a non-native language for participants, may have limited their ability to fully articulate complex thoughts and emotions, potentially affecting the richness of the qualitative data. Furthermore, the time constraints immediately following each viewing session may have hindered deeper reflection and more nuanced discussion. These factors should be considered when interpreting the findings, as they may have influenced both the depth and clarity of participant responses. Additionally, our cohort primarily consisted of female nursing students, which may limit the generalizability of the findings to other healthcare disciplines and more gender-balanced populations. While we did not observe reflections suggesting differences based on these characteristics, future research should aim to include a more diverse cohort across professions and demographics to enhance applicability. Lastly, questions used during the discussion sessions were not pilot-tested prior to their implementation. This oversight may have contributed to potential biases in framing, which could have inadvertently influenced the students’ responses. Without pilot testing, it is also more challenging to ensure that the questions were comprehensively understood by all students or that they effectively captured the depth of students’ reflections on the series and associated educational activities. Due to time constraints, students did not review their transcripts for validation. To ensure accuracy, the research team cross-checked transcripts with audio recordings, and three investigators conducted the thematic analysis to enhance credibility. Despite the absence of member checking, these steps helped maintain data integrity.

Conclusion

Our research has shown that using televised drama about nurses with nurses can facilitate discussion about a wide range of topics from the practical and clinical to the ethical. To support curriculum integration, we suggest using Netflix-based content alongside structured debriefings focused on ethical issues, clinical accuracy, and communication. When paired with blended learning approaches—such as case discussions or simulations—these sessions can enhance critical thinking and align media content with real-world nursing practice. In this way we should gain insight into the best media and the preferred scenarios to act as an adjunct to the more traditional aspects of nursing education.

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12912-025-03233-3>.

Supplementary Material 1:

Supplementary Material 2

Acknowledgements

The authors would like to thank all healthcare students who participated in this study.

Author contributions

Nino Fijačko: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Visualization, Writing – original draft, Writing – review & editing. Špela Metličar: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. Gregor Štiglic: Methodology, Writing – original draft, Writing – review & editing. Lucija Gosak: Conceptualization, Methodology, Writing – original draft, Writing – review & editing. Roger Watson: Methodology, Writing – original draft, Writing – review & editing.

Funding

None.

Data availability

On request, the corresponding authors will provide the datasets that were used and analyzed in the current study.

Declarations**Ethics approval and consent to participate**

Participants were informed about the research's purpose, assured of privacy and confidentiality, and told participation was voluntary with the option to withdraw at any time. They provided consent by signing a form. Ethical approval for the research was granted by the Ethics Committee on Nursing at the University of Maribor, Faculty of Health Sciences under reference number 038/2023/4491-2/900. Authorization to conduct the research on the premises was also secured. All methods were carried out in accordance with the ethical principles of the World Medical Association Declaration of Helsinki [59].

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Received: 29 December 2024 / Accepted: 16 May 2025

Published online: 30 May 2025

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