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Medicine at theatre: a tool for well-being and health-care education

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Abstract

Effective communication plays a crucial role in healthcare settings, as it enhances patient outcomes and improves the overall quality of care and well-being. The rationale for this study was to use theater as a communicative tool by playing stories related to some important healthcare issues. The specific goal was to study the effectiveness of a specially designed theater intervention in enhancing psychological well-being and awareness of some aspects such as the doctor-patient relationships, communication skills, pro-social behavior, and empathy. A pre- and post-experience questionnaire was used to track the audience's response. The results indicate that theater can efficiently promote well-being and spread crucial awareness about healthcare-related issues. Furthermore, the study underscores the varying perceptions and evaluations of health-related topics among individuals based on their age. Finally, we would like to underlie that theatre can also be a valuable tool for health communication.

Clinical trial number Not applicable.

Keywords Theatre, Well-being, Care, Empathy, Communication, Education

Introduction

The literature on the relationship between theater and education is vast: beyond the Aristotelian canonization of the transformative and "pedagogical" value of tragedy, the paideutic effectiveness of theater has variously crossed the history of thought, and today its strategic role as an instrument of reflection, and therefore of individual growth, is gained evidence [1–3].

"Performing theatre" has long become an educational experience in school courses, and numerous dramatization initiatives have been activated to experiment with and evaluate training protocols aimed at healthcare workers to enhance their soft skills [4].

In the framework of Medical Humanities, there are many and articulated objectives that theatre can pursue, both as a therapeutic tool for certain types of pathologies and as a strategy to strengthen the communication skills of professionals [5].

Moreover, for some time, it has been showed that quantitative research cannot give a truthful picture about motivations because it fails to clarify the behavioral and emotional aspects of unmet needs. There is a fair amount of literature on this topic, enriched by analyzing the impact of the arts and cultural events, which confirmed the benefits of artistic and recreational experience [6].

Since its inception as an art form, theatre or dramatic representation has been used not only for entertainment but also to inspire thoughts, critical reflection, and

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emotional engagement [7]. Here, we think of theatre as a unique communication and educational experience with several benefits on well-being, cognitive functions, social inclusion, and psycho-affective processing. Theatre has a unique potential to interpret, translate, and disseminate research findings. This is especially true for medical and health-related knowledge, which often revolves around complex questions and it is frequently confined to academic manuscripts [8, 9].

Studies show the effectiveness of theatre in enhancing empathy and emotional understanding among healthcare professionals [10], while also providing individuals with disabilities opportunities for self-expression and personal growth [11]. The therapeutic benefits are well-documented across multiple contexts. As this field evolves, theater's integration into healthcare settings promises to foster more compassionate and holistic patient care. The therapeutic benefits of theater in healthcare settings are not limited to specific contexts but expand across various healthcare domains, from medical education to mental health treatment and beyond [12, 13]. Significant positive outcomes in several areas might be useful to report: enhanced empathy and communication skills in patient-medical relations [14]; improved patient engagement and understanding of health conditions retention of medical information [15]; reduced anxiety and stress in both patients and healthcare workers [16–18]; therapeutic drama sessions for mental health patients [19].

From this perspective, patient and public engagement is a relevant collaborative way to enhance the quality and impact of research and the more responsible participation of citizens in health policy development. Theatre is also reported as a valuable means to educate the public regarding healthcare issues [20]. Conversely, it can also be a fruitful tool for healthcare providers who can appreciate the educational power of communicating medical issues in a non-scientific setting [21].

Recent research has indicated the fundamental importance of the emotional impact in audience motivations to go to see a show and that a lot of data can be obtained from the qualitative method through in-depth reactive interviews or questionnaires [7]. Despite the promising findings, there remains a need for further research to understand the mechanisms through which arts interventions achieve their effects.

For this project, we developed a novel questionnaire (as, to our knowledge, no standardized test of this type existed) that allowed participants to express themselves freely across several aspects: their perceived mental states and well-being before and after the theatrical performance, their experiences and perspectives on the emerging themes, and their underlying motivations and beliefs. The rating scales enabled us to measure the effectiveness of these interventions.

This project's major aim was to evaluate the beneficial effects of theater on different age groups and, as a second point, to better understand if the use of medicine-related theater plays might represent a good communication tool for gaining healthcare awareness. The plays were chosen to convey important themes and contents of the history of medicine, ethics, and deontology. We created specific plays—adapted and newly written—performed by professional actors. The plays explored health-related themes, including prevention, treatment, gender differences, disease mongering, hypochondria, and fear of illness. We aimed to raise awareness and encourage participants to examine their perspectives on healthcare. Our investigation focused on whether patients view doctors as impersonal and distant figures who lack empathy and compassion. This emotional barrier can significantly impede effective communication and trust-building in the doctor-patient relationship. Their relevance to the intended educational outcomes was related to thinking and gaining new insights and awareness, specifically the relationship between doctor and patient, considering empathy and compassion.

Exploring quantitative measures, such as patient satisfaction surveys or communication skills assessments, can help track changes in behavior and demonstrate the effectiveness of these interventions [22] discusses various studies that have measured the outcomes of empathy and compassion training in medical education.

Through these strategies, healthcare institutions can transform theater's immediate emotional impact into sustainable communication, empathy, and patient care improvements. Success depends on establishing a structured, supportive environment that encourages reflection, practice, and continuous growth.

The project was developed to foster public engagement in healthcare education and awareness. The major hypothesis was that theatre representations could enhance the audience's knowledge, understanding, and well-being. Effective communication between healthcare professionals and patients is crucial for establishing a strong therapeutic relationship and promoting positive health outcomes [23]. Effective communication plays a crucial role in healthcare settings, as it enhances patient outcomes and improves the overall quality of care [24]. Implementing clear and concise communication strategies can help healthcare professionals deliver information effectively and ensure patients understand their treatment plans.

However, studies have shown reduced empathy in professional relationships [25]. One potential solution to this issue is using theater as a healthcare communication tool [26]. With its ability to engage emotions and convey experiences, theater can enhance empathy and care in healthcare settings.

Methods and results

This study was part of a "Public Engagement" project (supported by the University of Florence). The participants were citizens who attended the different plays totake parte in an education project.

The audience represented our sample, comprising 364 participants (244 females and 120 males). We formed three groups that differed in age (the selection was made to obtain groups of the same number of participants: i) young age from 18 to 35; ii) adults from 36 to 64; iii) elderly age from 65 to 85. Participants were allowed to assist in different (4) theatre pieces, and at the end of each play, a debate on medicine-related themes followed (Fig. 1).

On four days, participants viewed the following plays (written and/or readapted by D. Lippi and performed by a professional actors' team, "Compagnia delle Seggiole").

1) "*Marsilio Ficino and the Coronavirus time*". Ficino (1433–1499) focused on prevention and therapies, proposing highly topical ideas such as distancing and hand washing. The play shows a brilliant dialogue between Ficino and a medical doctor who struggles with the recent COVID-19 pandemic.
2) "*Dr. Knock*". This play, written by Jules Romains (1924), remains a significant piece of satirical theatre, prompting the audience to think critically about the medical profession, their health perceptions, and the power of persuasion.
3) "*Florence Nightingale*". Nightingale's legacy inspires nurses, healthcare professionals, and social reformers worldwide. Her tireless efforts transformed nursing into a respected profession and laid the foundation for modern healthcare practices.
4) "*Ignaz F. Semmelweis*". Semmelweis's work on handwashing is considered one of the most important advances in the history of medicine. His findings could help save countless women's lives, but no one wanted to listen to him because he blamed the medical profession.

Questionnaire

The Medicine-Theatre Questionnaire (Q-MedThea) was explicitly designed for this project to evaluate several issues considered in this study. The Questionnaire consisted of a pre-part (pre-play) that was administered before the play and a post-part (post-play) that was administered immediately after the performance to capture specific aspects related to beneficial effects and the communication of certain topics. The questionnaire consisted of a forced-choice item designed on a 10-point Likert scale. Participants were first requested to sign the consent form and answer questions about demographic and social aspects (such as age, gender, and profession).

The items included the VAS scale [27], satisfaction items related to the theater experience, and questions concerning the social-affective factors of taking care and medical health. The questionnaire is available in the supplementary section.

All the participants were requested to sign the consent form, and all agreed to take part in the study. The Ethical

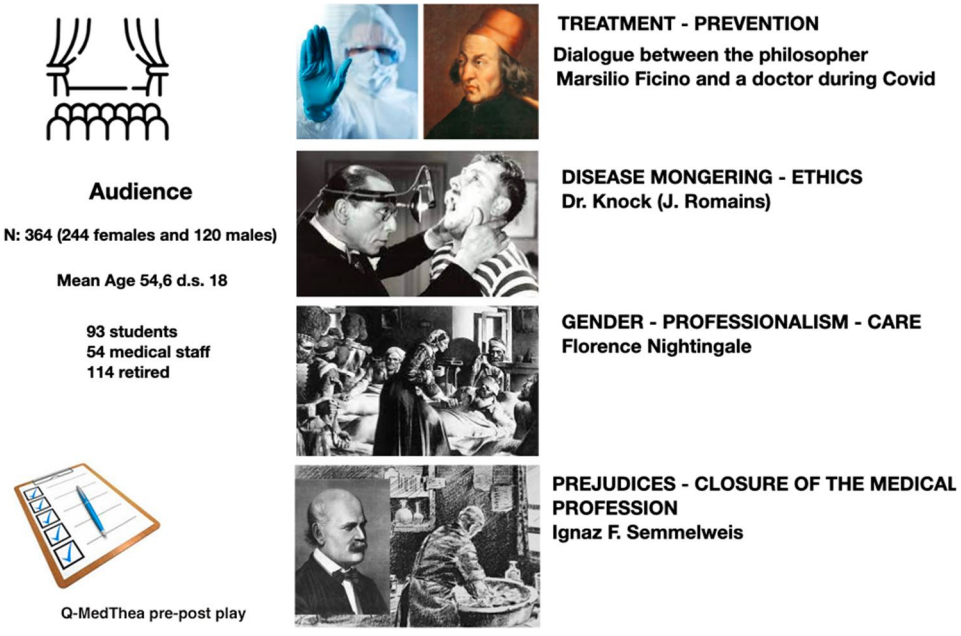

Fig. 1 Methods: on the left, the participants are reported, and on the right, the performed plays are shown. Before and after each play, the Q-MedThea was administered

Committee of the University of Florence approved this project (n. 273 del 26/07/2023).

Results

Comparisons between the two observation periods (pre- and post-plays) were performed by repeated measures ANOVAs for the scores obtained by the Q-MedThea. All four plays together were considered for the statistical comparisons.

Different ANOVAs were carried out with the groups (young, adults, elderly) as between- factors, and the scores obtained for the different items represented the within-factors.

For the VAS analyses, gender was also considered as a between-factor.

In the results section only the effects of a significant interaction are reported. Post-hoc analyses were corrected with Bonferroni for multiple comparisons. When significant differences were observed between the groups in post-hoc analysis, t-test were performed.

The audience completed the questionnaire before starting the play (pre) and immediately after the performance (post).

Figure 2 shows the pre- and post-plays VAS score regarding the sense of personal current well-being, as stratified by age and gender.

From the ANOVA a significant interaction emerged by group x gender x scores, $F(1, 294)=4{,}15$, $p<.01$, $\eta^2 = 0.21$.

A significant increase in well-being was reported as a general result (from 6,1±1,6 to 7,6±1,4, $p<.001$); we report the results of the post hoc comparisons.

Young people showed a significantly worse VAS score as compared to adults and the elderly ($p<.05$; $p<.01$, respectively). A gender discrepancy was also observed; in particular, female, young adults and adults showed significantly higher scores in their pre-and post-perception

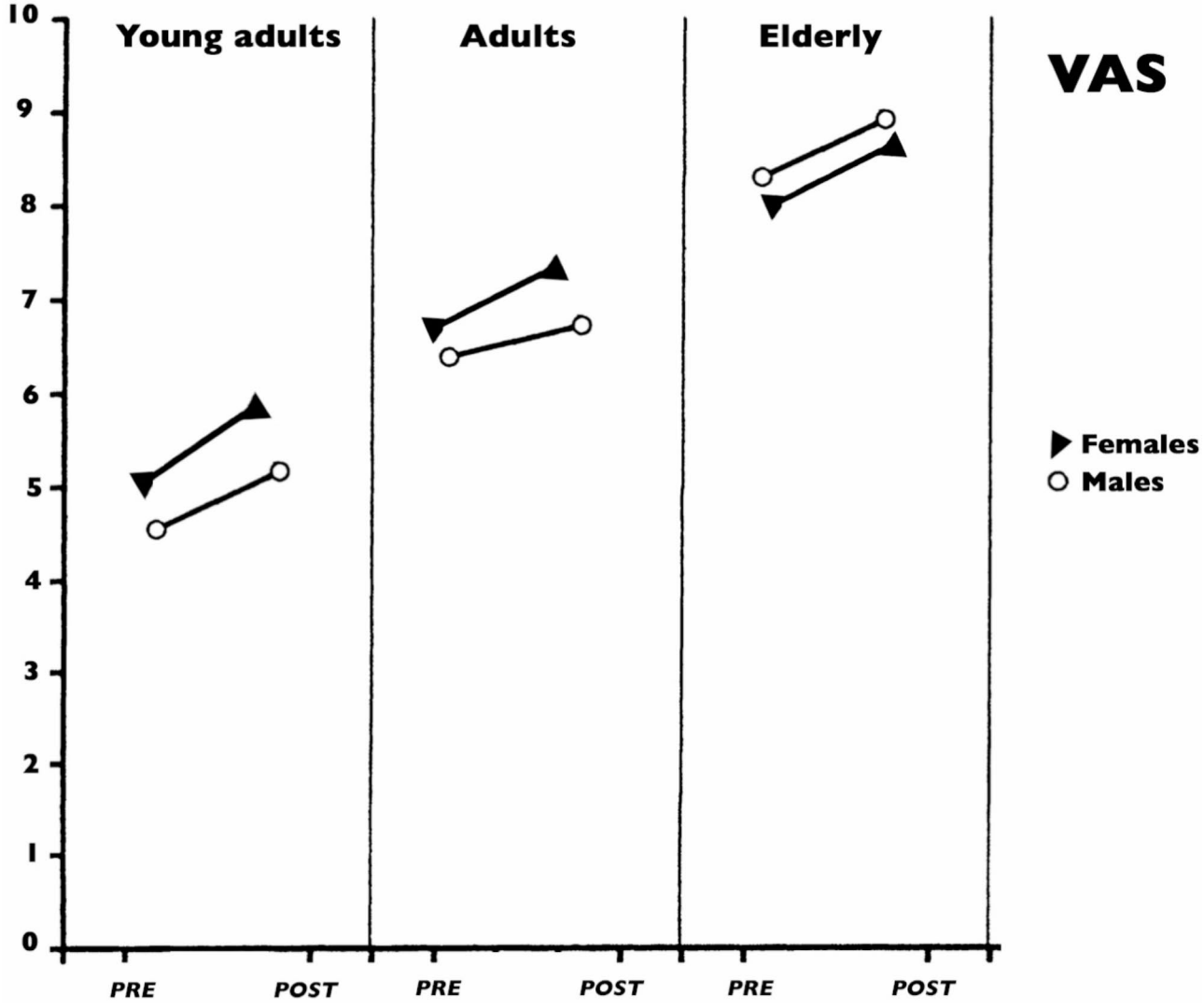

Fig. 2 VAS results as a function of age groups and gender

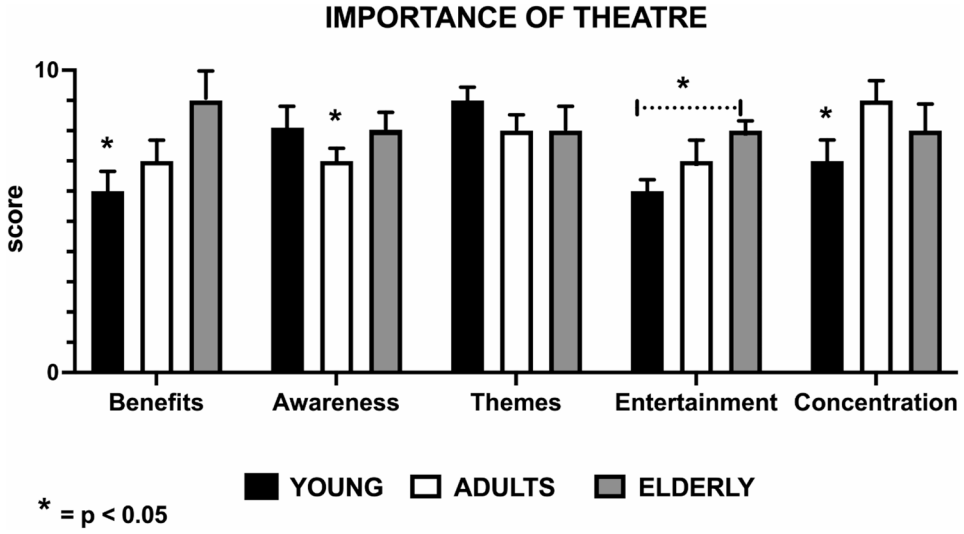

Fig. 3 Items of the Q-MedThea concerning the theatre experience

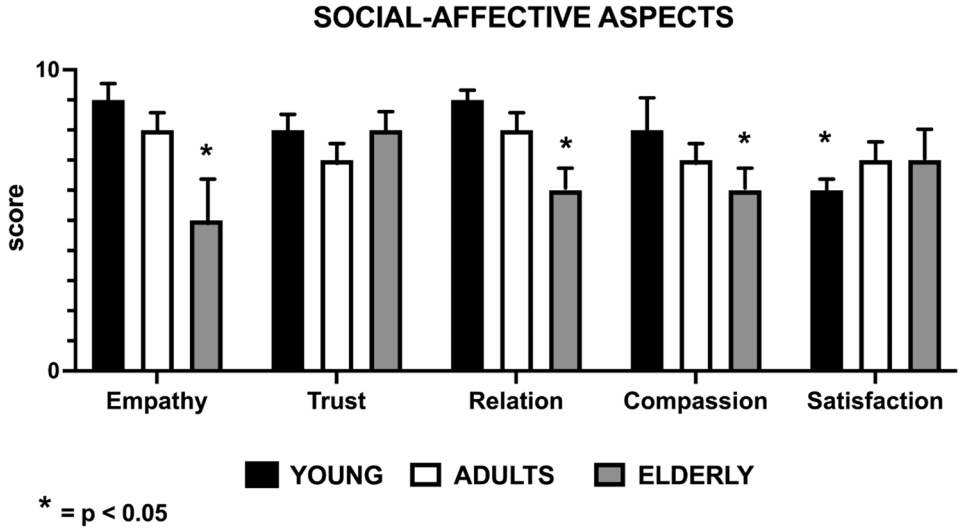

Fig. 4 Items of the Q-MedThea concerning the importance of specific aspects of healthcare

of well-being as compared to their male counterparts (p<.05). In contrast, elderly males had significantly higher pre- and post- VAS values than female ones (p<.05). Importantly, all the categories demonstrated a significant improvement in general wellbeing with respect to the baseline value (pre-play).

Also, the ANOVA showed a significant interaction group x score for the other items, F(1, 297)=3.7, p=.01, η^2 = 0.08; in contrast, no more interaction with the factor gender was found.

The audience reported that the improved sense of well-being depended on the theatre experience; however, an age-related difference was observed between the elderly and adults who reported the most positive effect of the play compared to the youngest (p<.05; Fig. 2). This was evidenced by higher scores in the post-play for the elderly compared to the young group, p<.05.

We also found that the theatre representation enhanced awareness about the considered topics; particularly, young adults showed higher scores concerning the elderly, p<0,05, (Fig. 3), confirming that representing medical topics might also be important among the youngest. Noteworthy, for the elderly, the play represented a moment of entertainment more than for the younger participants, p<.05. During the play, adult participants reported being able to maintain high concentration, more than elderly and younger adults (p<.05).

The relationship between the patient and the medical doctor was also assessed (Fig. 4). Young adults underlined the importance of empathy as a key feature of the

medical profession (Fig. 4), showing higher scores compared to the elderly ($p<.05$).

The audience also reported that the outcome of a medical intervention is much improved when the patient-provider relationship is considered satisfactory. These results highlight the importance given by the youngest participants to social relations with the healthcare provider. In particular, the score related to compassion was higher for the young group than the elderly ($p<.05$). Moreover, the young adults and elderly participants believed that there was a deep gap between doctors met in their real lives and the ideal ones, whilst adults seemed to be more satisfied by their practitioners ($p<.05$).

Discussion

Theatre is uniquely positioned to interpret and communicate health-based research and education. It serves as a medium that effectively conveys complex medical and health-related knowledge, engaging and comprehensibly bridging the gap between academic knowledge and public understanding [28].

Our results showed that participation in theater-related activities can enhance individual well-being. These activities can induce positive emotions and encourage meaningful social interactions, thus contributing to an overall positive social affective state. In line with our findings, engagement in theatre has been linked to psychosocial benefits and increased life satisfaction for older adults [29, 30].

The plays were conceived, chosen, and written to evaluate theatre as a tool for gathering public opinion and feedback on specific healthcare topics. Engaging with thought-provoking stories and performances can provide mental stimulation, while the immersive experience can be a relaxing escape from daily stresses [31]. In our project, each play featured prominent examples of medical or care system issues. The plays touched upon some important aspects, such as the patient-provider relationship, the care system, trust, empathy, ethics concerns, and fear of illness. All groups reported that these themes were relevant factors in the theatre experience. Overall, all participants highly appreciated the plays; they captured the audience's attention, curiosity, and interest. After the plays, a general discussion enabled us to monitor the audience's involvement. Therefore, we suggest that theatre stimulates thought, critical reflection, emotional engagement, and personal transformation. As such, theatre is a powerful tool for disseminating understanding and engagement in health-related issues [32].

Particularly among adults over 65, involvement in theatre has been associated with psychosocial benefits and enhanced life satisfaction [1]. The elderly considered theatre an entertainment medium and a tool for promoting prosocial behavior.

Theatre also holds significant potential for young adults as a form of entertainment and a tool for education [33]. This can be particularly beneficial during the formative years of young adulthood, contributing to personal growth and development [34]. Additionally, theatre can be an effective tool for health education among young adults, helping them to understand and navigate complex health-related issues [35]. This consideration was supported by the findings that all the participants reported having gained awareness about the principal topics represented in the plays. Awareness was enhanced for younger participants compared to older ones, probably because of a more active immersion and involvement in the situations (medical school students) [9].

The results showed how much empathy is essential for a good relationship with a medical doctor. The younger participants in this study were more inclined towards this perspective than the older participants. This suggests that younger people have a more modern outlook toward their relationship with their doctors, valuing empathy over mere competence [36]. The older generation holds a more traditional view, where the doctor's competency precedes their empathic abilities.

While people widely recognize empathy as crucial in medical care, its perception and value vary across generations. Older patients often emphasize knowledge expertise and may be comfortable with more formal medical interactions, whereas younger patients seek empathetic, collaborative, patient-centered care. Recognizing these generational differences enables healthcare providers to adapt their communication styles to serve each patient's needs better.

Empathy is an essential aspect of medicine, as it plays a vital role in the quality of patient care [37]. It helps doctors understand their patients' feelings and experiences, ultimately improving the patient-provider relationship [38]. Healthcare professionals who empathize with their patients significantly enhance patient satisfaction, treatment adherence, and clinical outcomes. Therefore, it is crucial to ensure that medical education encourages the development of empathy in future practitioners. This will help them consider not just their patients' physical health but also their emotional and psychological well-being [39].

Feeling trust for the medical providers emerged among all the participants as a key aspect of their relationship. All our participants considered the relational aspects crucial for a positive medical treatment outcome; however, in line with the responses given to the items regarding empathy, the younger are more sensitive to these aspects than the elderly [40].

Younger patients emphasize empathy as crucial for establishing collaborative doctor-patient relationships. They view it as a vital element that enhances

communication, builds trust, and improves health outcomes. Research shows that younger individuals value empathy in shared decision-making and patient engagement [41]. This generation is more informed and proactive about their health, seeking clinical expertise and healthcare providers' emotional support [42]. Older patients, however, tend toward a more traditional view of the doctor-patient relationship, emphasizing physician authority and expertise over empathetic engagement. They often prioritize technical aspects of care over emotional connections, seeing empathy as secondary [43]. This perspective stems from their generational experiences when medical authority went unquestioned, and treatment efficacy precedes the emotional aspects of care [43]. While older patients may benefit from empathetic interactions, they don't always express this need explicitly [44].

Research indicates that older individuals may not actively seek empathetic interactions but still appreciate emotional understanding. Their expectations differ from younger patients' more assertive demands for empathy, creating potential disparities in satisfaction and care quality [45, 46].

The patient-provider relationship is a cornerstone of healthcare and crucial to providing high-quality services [47]. It is founded on mutual understanding and trust, significantly influencing healthcare's course and outcome. A strong patient-provider relationship can enhance patient satisfaction, improve patient compliance, and yield positive health results [32]. Therefore, doctors should develop good communication, empathy, and compassion to establish a robust patient relationship [48, 49].

Older adults reported better experiences with their healthcare providers than younger individuals. Elderly participants reported higher satisfaction levels with their medical practitioners than younger adults did.

The central challenge lies in translating the emotional impact of theater-based interventions into sustained improvements in healthcare communication and practice. Although theater effectively evokes empathy and raises awareness, converting these short-term responses into lasting behavioral change requires strategic implementation. Facilitated debriefing sessions after theater experiences are essential. These sessions enable participants to process their emotional responses, relate them to clinical scenarios, and develop concrete strategies for implementing insights into their practice. Eisenberg et al. (2014) [50] highlight how theater and other arts can cultivate physician empathy, emphasizing the value of reflective practice. To achieve long-term improvements in healthcare communication, it is vital to implement behavior change interventions that are tailored to the specific needs of healthcare professionals. These interventions should focus on enhancing communication skills, fostering empathy, and promoting patient-centered care [51, 52]. Techniques such as motivational interviewing and goal setting can be effective in facilitating behavior change during medical encounters, leading to more meaningful patient interactions. Incorporating theater-based techniques into healthcare training can enhance emotional engagement and communication skills. Role-playing and improvisational exercises can help healthcare professionals practice empathetic responses in a safe environment, allowing them to translate short-term emotional experiences into long-term behavioral changes [53, 54]. By simulating real-life scenarios, providers can develop a deeper understanding of patient emotions and improve their ability to respond empathetically.

Sustaining behavior change requires a long-term commitment to training and education. Continuous professional development programs that revisit emotional intelligence and communication skills can help reinforce the importance of empathy in patient care [55]. This ongoing training should be integrated into the healthcare system's culture to ensure that empathy remains a core value in practice. Bridging the gap between short-term emotional responses from theater-based interventions and long-term improvements in healthcare communication involves a comprehensive strategy that includes emotional intelligence training, organizational support, tailored behavior change interventions, feedback mechanisms, integration of theater techniques, and a commitment to continuous training. By implementing these strategies, healthcare organizations can foster a culture of empathy and enhance the overall quality of patient care.

Some limitations of the present study are important to underlie for future research. One important aspect is exploring whether these theater experiences have a sustained impact over time and whether they lead to concrete changes in healthcare behavior or attitudes beyond the immediate theatrical experience. While Likert scales effectively quantify general trends, they cannot fully capture the complex emotional and cognitive responses to theater. A more nuanced approach, such as open-ended questions or narrative analysis, would provide deeper insights into how the plays affect participants.

Our findings suggest attending performances is a combined social, cognitive, and affective experience transcending entertainment. Theatre has a special ability to interpret, translate, and disseminate general knowledge, particularly medical and health-related knowledge, which often involves complex and difficult questions. Importantly, our suggestions are in keeping with medical doctors who maintain or enhance empathy and compassion [56] when dealing with patients; that is the only way to sustain humanity as physicians for positively influence well-being [57].

Conclusions

The data collected demonstrated that theatre can serve as an effective medium for promoting pro-social behavior. Furthermore, the results showed that the theatrical intervention successfully enhanced the participants' overall well-being. This improvement in well-being was observed. This indicates that theatre has the potential to impact individuals' quality of life positively, providing a unique and engaging avenue for personal growth and self-improvement.

The study also found that theatre can be a powerful tool for disseminating crucial knowledge and fostering a deeper understanding of health-related issues. Through theatre's engaging and interactive nature, complex health topics were presented in an accessible and comprehensible manner, leading to increased awareness among the audience. The data will be stratified according to the different plays for further investigation. However, the study was able to reveal significant differences in how health-related topics are perceived and evaluated by people of varying ages. This highlights the necessity for age-appropriate health communication strategies and interventions, underscoring the importance of considering demographic factors in health education and promotion efforts.

Overall, this project underscores the potential of innovative methods such as theatrical interventions to enhance psychological well-being, improve communication skills, and promote health awareness. It invites further exploration and research into the integration of such creative approaches within the fields of health education and promotion.

In conclusion, in line with the literature, we suggest that theatre and the arts significantly enhance the healthcare experience for both patients and professionals. The therapeutic benefits of arts interventions and their positive impact on healthcare environments underscore the need for continued exploration and integration of these practices within medical settings. Future research should focus on elucidating the specific mechanisms of action and developing standardized training and evaluation frameworks to maximize the potential of arts in healthcare.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12909-025-06793-9.

Supplementary Material 1

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Author contributions

Author contributionsConceptualization: DL, BI, CA, and LV. Data curation and writing—original draft: TM and CA. Organization of the project: DL, MAC, CA. Formal analysis: TM. Funding acquisition: DL. Methodology: TM and LV. Supervision: DL and CA. Writing—reviewing and editing: all authors. All authors have read and agreed to the published version of the manuscript. All authors contributed to the article and approved the submitted version.

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Data availability

Availability of data and materialsThe data supporting this study's findings are available upon request from the corresponding author (TM).Clinical trial number: not applicable.

Declarations

Ethics approval and consent to participate

The Ethical Committee approved this project (n. 273 del 26/07/2023). The questionnaire used was anonymous and voluntary. Participants were informed that their data would be gathered and used for this study, meaning that participants gave their consent by participating. This study was conducted in accordance with the principles outlined in the Declaration of Helsinki.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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