Magic Lab Coat: art as a mechanism of action for care and teaching in health

Mágica bata de laboratório: a arte como mecanismo de ação para o cuidado e o ensino em saúde

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ABSTRACT

Background The objectives of the present study are to report the impact of projects such as the Magic lab coat team, which employ arts, focusing on clowning, for the community and, under the perspective of training health professionals. Methods The actions were developed because of an extension action entitled Magic lab coat team having as a partner hospital, hostels, schools, and charities. The protagonists of this action are medical students, who dress as clowns, bringing joy, humanity and various teachings to the patient and health professionals. Results The activities developed contributed to the teaching-learning process of medical students involved by providing a more humanized training and improvement of communication, expression, and empathy skills. Conclusion The presence of medical students characterized as clowns and focused not only on the clinical picture of patients, allow the well-being of patients, and reconnects them to the focus of all medical practice: the human relationship. The project offers contributions by softening the environment of various health scenarios and influencing the training of health students.

Keywords: medical education; art; health promotion; humanization.

1 INTRODUCTION

The application of artistic activities in health has developed globally in recent decades. It has long been recognized as particularly useful to bring positive changes in patient care and management. Jensen, and co-workers [1] argue in favor that artistic
manifestations of a participatory nature in health constitute an effective way to promote holistic approaches with health benefits. The arts can also be used as a pedagogical tool in health, especially considering that they may facilitate reflection, create meaning and, finally engage the spectators [2,3]. According to Dominiczak, 2017 [4], the involvement with arts during medical education would also facilitate the formation of a more empathetic attitude of medical students and future professionals.

Some studies have pointed out the benefits of various forms of art such as music, dance, writing and poetry for health promotion. In addition, these activities have improved the ability of relaxation, life quality and well-being in severe and terminal patients [5], reduction of depressive symptoms [7], decreasing anxiety, improved mood [8], and represents and an alternative approach to communication, facilitating social interaction [9]. For patients with Alzheimer's disease, the application of artistic activities has permitted improvement of cognitive, psychological, and behavioral characteristics [6]. Regarding the physical benefits of dance, studies have shown that their interventions have significantly improved body composition, blood biomarkers, musculoskeletal function, and that, regardless of their style, it can significantly improve muscle strength and endurance [10,11]. Finlay and co-workers reported that clowning is a multimodal intervention that involves skills such as humor, theater, music, and dance [12]. Hospital clowns aim to reduce stress, fear, helplessly and sadness in the hospitalized patient. Evidence suggest that this type of art was able to reduce preoperative anxiety of children and lead to a reduction in the total length of hospitalization [13], release of endorphins that stimulate the immune system [14].

Although the importance and numerous benefits of the implementation of artistic activities in health are recognized, there is still a great difficulty in integrating this important theme in medical schools, as well as in humanistic themes [4]. In this scenario, the development of projects such as the Magic lab coat, by providing moments of relaxing, joy, good humor, fun and even activities of promotion and education in health, represent a paramount importance not only for the community, but also for the participating medical students themselves. The project provides a more humanized and ethical academic training, contributing to the teaching-learning process.

Given the importance of this theme, our objectives are to describe actions and social impact of a project named Magic lab coat that apply the theme of clowning with music, dance and theater in humanization, education, and promotion of health for the
community, and in the training of future health professionals, allowing the development of communication skills.

2 MATERIAL AND METHODS

Population and type of study

Created in 2017, the project entitled Medicine & Art: An encounter with life represents a university extension, characterized by the link between the academy and the social environment. The initiative aims to promote health through artistic activities in the city of Jataí - Goiás, Brazil. The project consists of five fronts: a) Magic lab coat; b) Med'atro; c) Society of Poets and Designers; d) Medicine Museum "Remember is to live", and finally e) Web series “Ludibriados". The actions carried out by the Magic lab coat group occurs through partnerships with institutions such as schools, hospitals, nursing home, non-governmental organization, charities, and those involved with people in situations of social vulnerability.

The Magic lab coat even being a university extension project, also represents an intervention study, of longitudinal character, which seeks to soften the social reality in which in the project takes place. Not only recreational activities are developed, but health promotion, humanization and education are offered for vulnerable populations of all ages and conditions. The project has already reached a population of about 800 people.

Dynamics of the activities

At the beginning of each academic semester, volunteer members of health courses from the entire Federal University of Jataí (UFJ) are recruited. Thus, medical students, professors and technicians who express interest to be part of the project can join the team. For each proposed action there is a previous meeting to plan a specific approach that is consistent with the target audience. Then, the shape of the actions are defined, adapting language, posture, and themes addressed to better include the local community.

During the actions, volunteers dress up in white lab coats, armed with various props such as wigs, plastic glasses, colorful ties, hats, and colorful bows. According to the place and community involved, the dynamics is adaptable, to address a specific health theme. For example, in schools, the dynamic activities are carried out that involve games and challenges with children, addressing health issues such as the importance of brushing the teeth correctly. In nursing homes, medical students promote care for the elderly, with stories, conversations and songs played with musical instruments. For patients admitted
to hospitals, all team involved offer stories, games, and music to promote moments of joy and relaxation. It is worth mentioning that this is not a simple transmission of verticalized knowledge, the proposal is to horizontalize the way of knowing and being known.

Institutional partnerships

The activities developed by students and teachers were only carried out in institutions that authorized the actions to take place. Since 2017 there has been a partnership with the following institutions: two hospitals, four schools (being two of them located in rural areas, one specialized in the care of children with special needs and another one for the education of young people and children), in non-governmental organization and finally, in a nursing home. This project received funding from the Municipal Department of Culture in 2019.

3 RESULTS

The project began in August 2017 and, until the middle of 2020, twelve actions were carried out with participation of medical students, and students from others health areas (physiotherapy, physical education, and veterinary medicine). Professors, technicians, and external collaborators were also involved during the actions (Figure 1). In its first year, the project developed six activities. In all these meetings the exchanges of knowledge were mutual between the community, students, and professors. Children, elderly, sick people, and caregivers declared to feel happier with the presence of the students, feeling themselves more relaxed and welcomed. On the other hand, students claimed to learn about the need to adapt the language and knowledge acquired in the classroom for the effective transmission of scientific knowledge to non-scientific populations, or to communicate with people presenting disabilities. We observed that in institutions that housed healthy people, there was greater participation in the activities, especially those that included active skills, such as singing, games, dancing, painting, and theaters. In these places, the participants who were previously sad and discouraged reported significant improvement and disposition after the meeting with the students.
In the second half of 2018, the project had more than eighty participants, who carried out four activities in this period. The first, occurred in October of that year, during the "D-Day of Science", an event that was held in a public square aiming to promote health education and popularization of the knowledge produced by the university for the community. Important themes were explored, especially those involving the use of pesticides, Chagas disease, healthy eating habits and physical activity. Students faced all activities with good humor and attention to the difficulties of teaching, in a public environment, focused to an audience of various ages, beliefs and customs. During the activities it was noted that many participants from the community had little knowledge about the theme and, after the talks, they were extremely grateful and more comfortable with the suggested interventions given by the students.

Still in 2018, three important activities were performed. Recreational activities were carried out in a school, where the children were hearing impaired. In view of this fact all activities developed were readily adapted so that the children could enjoy all the games and playful activities in their totality. Later, in December, another action was carried out in a nursing home. At that time, the action was attended by members of the academic pediatric league, a religious community in the city, and medical students. During Christmas, gifts were distributed to the elderly, to the sound of music, games, stories, and food. These actions demonstrated to the students how much the holistic approach to health has a positive impact on many people's lives, and how art is a significant means for this.
In the first half of 2019, the Magic lab coat made a new visit to the nursing home, transmitting much joy with music, dances, and stories, as well as assisting the elderly during the time of feeding, on a Saturday afternoon. Subsequently, the group was invited to attend an event in a rural school. For this event, several health education activities were adapted to the context of the school, students' age, and time of action. For children between 5 and 9 years old, a food pyramid was elaborated that would be completed with food figures, a set of drawings for painting on hygiene habits, and physical activities with bladders and team challenges. For adolescents aged between 10 and 12 years, games, stretching, and health talk were proposed. For those between 13 and 15 years old, it was suggested to perform a stretching, a football play, and lectures on good healthy eating. Some students at the school allowed a more individual approach and talked to the Magic lab coat team alone about family, involving social and health relationship. At the end of the morning, students expressed a huge satisfaction for having been part of the activities, as well organized them. At that time, the members of the Magic lab coat have learned a lot about the reality of families geographically isolated from urban area.

New activities were required at the end of 2019, being planned for 2020. These were six actions that happened in a nephrology clinic, which involved donation of hygiene and personal care products, as well as guidance on diabetes, hypertension, and care of patients in need of hemodialysis. Unfortunately, the execution of part of these plans was suspended due to the pandemic, being performed when normality is resumed. However, to meet the demand for health education during the pandemic period, the Magic lab coat team adapted its actions to a digital format. Short videos were recorded separately, parodies of songs and much content was transmitted to many users of social networks, regarding the importance of social isolation, personal health care, and other needs to avoid the COVID-19. In this context, four participants of the Magic lab coat team were willing to sing and stage the parody "The doors will open" from the song "I see an open door" related to the movie Frozen: a freezing adventure. In the parody, the need to stay at home, only going out when necessary, and always washing your hands were included. Keeping this in mind, each participant recorded a funny audio and a video, at home. The videos were them edited and finally transmitted. To ensure a better dissemination of the message, the Project Instagram was created (@medicinaearteuffi). Thus, not only the university students, but all community had a chance to see the digital production of the Magic lab coat team, named 'hashtags' #ididart# during the pandemic. This challenge made it
possible to create rich, accessible, and reliable content about the disease caused by the new coronavirus.

4 DISCUSSION

The figure of the clown, as we know refers to 18th-century in Europe and the circus culture [15]. The comic figure based on the logic of the misfit fool is globally disseminated historically and geographically. By the association in contemporary times with joy and relaxedness, the clown finds himself as a symbol for such feelings, evoking them in most people due to their unique and extravagant characteristics. Started in 1986 by the Group Big Apple Clown Circus Care Unit [15], the dynamics of introducing clowns and figures cheerfully characterized in a hospital environment was quickly seen as successful, spreading rapidly around the world. In Brazil, the first group to incorporate the idea was the Doctors of Joy in 1991, facilitating the dissemination of this practice in the national territory [16]. In this context, our project Magic lab coat escapes the trend of restricted visits to hospital environments, bringing recreational activities to institutions such as day care centers, nursing homes and non-governmental organization devoted to care.

It is known that the participation of volunteers in artistic activities, promotes numerous benefits to everyone involved. Due to the psychological and emotional mechanisms involved in these benefits, there is a lack of quantitative scientific evidence that better proves such effects. However, a vast number of subjective analyses elucidates the impact of this activity, such as: the resignification of the hospital and medical environment [15], the better communication with patients, improvement of patient's medical relationship, greater receptivity to treatment, reduction of negative feelings such as anxiety, stress, and depression. On the other hand, the development of artistic skills in medical students (musical, scenic, improvisation and others), strongly “open” their feeling regarding humanization and contributes to the improvement of communicational abilities and empathy [16-22].

In a particular way, the importance of this project for medical students is highlighted in face of the dehumanization process in health. With the growing view that the profession of doctor is becoming a profitable business, with consequently change of focus, no longer on the quality of the medical act, but on the consequent profits from the activity, we see profound changes in medicine, under the perspective of its essence. This panorama revels an inverse reality for medical students, in which humanitarian aspects
are left out. Thus, the great transformative change of the project The *Magic lab coat*, when medical students are characterized as a clown and are focused not only on the clinical condition of patients, but rather on their well-being, it represents the reconnection of a gap in which the students rescue their attention to the human relationship.

In many medical schools may have a rupture in the patient care pattern, sometimes seem in accordance with a biomedical model. However, it is important to keep in mind that patients' feelings and emotions are usually weakened. Thus, it is necessary to establish a reconnection, sometime by the action of the clowns, to better ensure humanization in health services. The *Magic lab coat* team have offered a valuable chance to develop empathy. Art in its essence represents the point of view of its authors. At that moment that students get deeper into artistic issues, they begin to exercise this change of point of view, both when evidencing their "themselves" when exercising art, and when interpreting a work under the lens of another artist. From that moment, students engage in the proposal to express themselves artistically, whether through music, performing arts, improvisation, or a simple conversation. Then, changes in perception come into action by exercising empathy [7]. In addition, clown students also can exercise communication skills and, also have a chance to look closely at the other. These elements are fundamental for the construction of a good patient doctor relationship, involving trust and respect in medical practice [10].

Over time, artistic manifestations have suffered a historical devaluation since the industrial revolution. At that time, the priority had become to increase production by using the new machinery, to the detriment of the artistic work produced by artisans [23]. Unfortunately, this devaluation legacy has been seen in some countries. In Brazil, the art teaching become a mandatory curricular component, only in 1996 based on the law of the *Education Guidelines and Bases*. However, in 2015 the new *National Common Curricular Base* determined the removal of curricular components related to the art from high and elementary school [18]. This scenario may promote the distancing between the society and artistic manifestations. This fact is also reflected in the lack of appreciation of academic projects that seek to insert medical students in recreational activities aiming to learn about the importance of humanization and the development of communicational skills in health. Thus, the *Magic Labs* team seeks to bring artistic activities to life for the benefit of the sick and less favored people of the population. In addition, other challenges still need to be overcome, which include restricted time allowed for actions and services usually busy with their own activities.
With the arrival of the pandemic many projects have reinvented themselves and adapted to the new scenario through digital media. In this context, there are several sectors within the university that are in line with this new reality, including extension activities. Seeing the possibility of this remote action, the challenges and activities carried out by the project proved beneficial in contributing to the general well-being of the community. It is expected that such skills could be used and converted, in future, into similar new actions ensuring improvement of the quality of the content produced and transmission of more important knowledge to the general community and to child audience.

Therefore, in view of the importance of clowning for all sectors involved in actions promoted, it is imperative that more similar actions could be encouraged, thus generating improvement of health services and the quality of life of patients and making more “human” our students. In all its actions, the Magic Labs Coat team, not only transmitted, but also learned a lot. Fact that supports its existence. The project's actions are based on helping people in all circumstances, always adapting their practice, language, and attitude. These experiences resulted in the strengthening of the relationship between the community and the university. It is worth noting that this is not a simple transmission of vertical knowledge, the proposal is to horizontalize the way of knowing and being known, in the same way that we teach, we also learn and grow as professionals and, mainly, as human beings; creating a generation of doctors immersed in a biopsychosocial model to the detriment of the technical biomedical for the future of the nation.

The activities developed by the Magic Labs Coat team contributed significantly to the teaching-learning process of the students involved, as well as brought numerous benefits to the community served. The community benefits from playful and fun actions when receiving moments of relaxed and a treatment aimed not only at physical needs, but also on social and psychological needs. In addition, the experiences experienced through the project provide a more humanized medical training and allow the academic to develop essential qualities for his professional practice in the future, improving his communication skills, expression and empathy and deputing more to social actions, which is fundamental for excellence in medical practice and a good doctor-patient relationship.
Authors’ contribution

B.L.S.: Substantial contributions to the design of the work and data acquisition. G.R.Q.: Substantial contributions to the data acquisition. T.T.S.: Substantial contributions to the design of the work and data acquisition. V.R.R.: Substantial contributions to the design of the work and data acquisition. F.M.O.: Drafting the work and revising it critically for important intellectual content. E.F.M.V.: Conceptualization, revising it critically for important intellectual content and final approval of the version to be published.
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