Abstract This study aimed to present educational interventions in the context of the Education Program through PET-Health Interprofessionality (PET-I), carried out in teaching and in healthcare service of a municipality of Goiás state, based on the analysis of focus groups and portfolios made by participants. A descriptive exploratory study with a qualitative approach was carried out, based on the theoretical-conceptual and methodological foundations of interprofessional education, from August 2019 to November 2020. It was observed that students perceived participation in PET-I as an opportunity to interact with other professions, to associate theory with practice and to act as leading actors. Participants believe that working together to provide the best care for patients requires a basic understanding of the different perspectives and responsibilities of professionals involved. They emphasized informal conversations, meetings, and case discussions as opportunities to understand professionals’ opinions and assignments, and deepen their understanding of the importance of collaborative communication.

Key words Interprofessional Education, Collective Health, Active Methodologies, Health training

Educational strategies for PET-Health Interprofessionality in Southwestern Goiás state, Brazil: a qualitative approach

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Introduction

Interprofessional education (IPE) is an educational approach in which actors from two or more health professions have the clear and intentional opportunity to learn together in an interactive way, aiming to encourage and reinforce collaborative practices and qualify the services offered\(^1\-3\).

Studies point to the potential of IPE to qualify users’ experience of care\(^2\) as well as professional practice, increasing worker satisfaction\(^4\), being fundamental to dispel stereotypes and prejudices\(^5\). In part, this potential is pertinent to its theoretical-conceptual and methodological framework, committed to the construction of educational processes for healthcare professionals who are more qualified and conducive to working as a team and, consequently, to the consolidation of the Brazilian National Health System (SUS)\(^1\-6\).

In Brazil, in recent years, there has been an effort to incorporate IPE into policies that induce professional reorientation in health\(^1\-2\). In this context, the Education through Work for Health Program (PET-Health) stands out, based on the teaching-service-community triad.

PET-Health advocates the inclusion of students in healthcare services, using new care practices and pedagogical experiences. In summary, it aims to provide opportunities for developing skills and competencies aligned with health and SUS needs\(^7\), through interaction between education (undergraduate and graduate education) and professional training spaces and practice settings. In an unprecedented way, in 2018, its ninth edition, in a notice from the Department of Work Management and Health Education (SGTES) of the Ministry of Health (MoH), PET-Health Interprofesionality (PET-I) applies the theoretical and methodological bases of IPE to promote curricular changes aligned with the Brazilian National Curriculum Guidelines (DCN) for all undergraduate courses in health, in addition to continuing education initiatives.

Therefore, an essential proposal of PET-I is to overcome the mistaken idea that it is enough to combine different careers for developing collaborative work\(^8\).

This study aimed to present educational interventions in the context of PET-I, carried out in the municipality’s teaching and healthcare services, based on analysis of focus groups and portfolios carried out by participants longitudinally.

Methodology

Research design

This study is exploratory descriptive, with a qualitative approach, based on the theoretical-conceptual and methodological bases of IPE, and was carried out between August 2019 and November 2020.

In this work, we chose to study the PET-I implementation process through one of its subgroups, in order to make work process feasible as actions unfold, which allowed procedural, contextual and longitudinal monitoring of the activities and meanings that were manifested and constructed within them, based on the assumption that this subgroup was representative of a larger totality. Therefore, we intentionally chose group 02, as the supervisor of this study was the coordinator as a professor of medicine at the Federal University of Jataí (UFJ).

Inclusion and exclusion criteria

For the purpose of selecting research participants, professors, students or healthcare professionals, linked to the PET-I Jataí group, who have participated in at least 75% of PET-I activities, available at the time of data collection, were included.

Professionals not available to participate in the research during the data collection period or absent from work (due to vacation, leave, health treatment, pregnancy or absence from work for any reason) were excluded.

Data collection procedures

Data collection was carried out by the researcher between August 2019 and November 2020. The study was carried out in three phases, each with a specific data collection procedure. The first of these, before participants’ immersion in PET-I Jataí activities, consisted of an in-person meeting, called focus group 01, whose objective was to understand participants’ prior knowledge about IPE and teamwork. The second was longitudinal to the project, by collecting portfolios and recording distance activities to assess participants’ experiences reported during the project. The third phase comprised the second focus group, convened remotely, after the interventions planned for the team. The educational interventions and participants’ experiences in the context of interprofessionality, carried out
in teaching and healthcare services in the city of Jataí, through a documentary analysis, were described.

Data analysis

Seeking to understand the experience of professors and students who participated in the research as well as their perceptions and knowledge about IPE in PET-I experience in Jataí, Bardin’s thematic analysis was used, also based on the theoretical-conceptual and methodological approach to IPE. Thematic analysis facilitates understanding participants’ language by relating the meaning of the terms described to the essential topics of the phenomenon investigated, articulating the discourse with the context of production.

To guarantee participant confidentiality, the code with the letter A is used for students and according to the order in which their speeches appear (from 1 to 6); the letter P designates the preceptors and also according to their order of presentation in the speech (from 1 to 4); and Prof is used for UFJ professors (1 and 2).

Ethical aspects

The present study was registered and approved by the UFJ Research Ethics Committee (REC), through Opinion 3.727.135, respecting the ethical principles of research with human beings (autonomy, beneficence, non-maleficence, justice and equity), in accordance with Resolution 466 of December 12, 2012.

Members were informed, through an Informed Consent Form (ICF), about the objectives of the research, its risks and benefits. Everyone was able to suspend or terminate participation during the study without any consequences, at any time.

Results

The team was made up of coordinating professors, tutors, preceptors from various health professions and undergraduate students in the area, linked to the PET-I program at UFJ. There were five tutorial learning groups, which involved the biomedicine, physical education, nursing, physiotherapy and medicine courses. Each group was made up of 12 participants.

Meetings were guided by active learning methodologies. As educational strategies, the following were used during the project: mind maps; small group discussions; large group lecture; reflective exercises; community projects; e-learning; written works; webinars, problematization; flipped classroom; group dynamics; workshops; discussions with triggers; and presentation of educational activities. In addition, part of activities was participation in scientific events on IPE, in a congress held at the institution itself and participation in an international event.

With a view to enabling the group's theoretical-conceptual alignment, many readings, discussion circles and workshops were organized to strengthen the approach to IPE concepts and encourage dialogue and joint constructions between the professors, preceptors and students involved. Other workshops aimed at building collaborative interprofessional skills for reception in Primary Healthcare and for teamwork, through the execution of actions that involved knowledge, skills and attitudes. Subsequently, other workshops focused on learning about active methodologies, always opting for interactive and participatory learning methods.

Web conferences were an important activity, as they also allowed contact with other PET-I groups across the country and with the MoH, which held national and regional virtual meetings to provide support and hold discussions about the projects and the interprofessionality. It was a moment to understand how groups from other cities were working and to hear very different and complementary opinions and visions, which encouraged everyone’s reflection.

The activities proposed by PET-I, such as the IPE experience, proved to be powerful educational strategies, both for undergraduate students and for professors, tutors and preceptors, as, by sharing spaces and knowledge, they built knowledge that surpassed the limit of teaching activities, and which will be able to accompany these professionals throughout their lives.

I'm on an internship and work in several professions. Every moment I am putting into practice the things I learned here (A1).

Some participants reported their experience with the fragmented training model between different courses, highlighting that the lack of opportunities to be together (contact) produces little interaction between students and is certainly reflected among healthcare professionals, with a lack of knowledge of each other's roles, limited knowledge about the complexity of collaboration and difficulties in working as a team. It became clear that this situation has been generated and
influenced by the so-called “professional silos”, where each professional category develops a strong conceptual theoretical framework and isolates itself in its area, based on an education that separates students, and that leads them to not understand the whole.

*I think the greatest difficulty is knowing when we can count on other professions, at least in our training. We have that training of trying to solve everything, you know? (A4)*

A lack of clarity about professionals’ roles and responsibilities can lead to a breakdown in communication and can have a direct effect on patients and their outcomes. Thus, unpleasant and irresolute communication between healthcare professionals was a complaint present in almost all discussions. The group highlighted the value of quality communication when it comes to interprofessional work. Participants understood that healthcare professionals are busy in their “little boxes” and generally do not have a model or regulation of interprofessional health practices to work as a team and communicate better in the routine of their care. Therefore, in person communication and healthcare professionals’ attitude towards collaborative practice and IPE is difficult to conduct and implement. This can result in suggestions given by other professionals being unclear and misunderstood.

Because there is no communication. Because the doctor visits for two minutes. Because he is in doubt, because that thing at the bottom of the bed is full of blood, which is the physiotherapist’s aspiration. But for a physiotherapist, it’s not weird. He wants to know how many times he evacuated, but the nurse isn’t there (P4).

In this context, the group noted the influence of active methodologies in the PET-I teaching-learning process, identified as facilitators of health education and training process. Hence, interaction with differences and teamwork itself and its gains were also identified, especially by facilitating and developing more efficient communication skills. Furthermore, participants reported feeling better prepared for interprofessionality and structured with positive attitudes towards interprofessional work.

People don’t understand that working with others is much easier, more comfortable and safer (P4).

For the group, the activities provided opportunities to share knowledge and skills as well as contribute to solving patients’ problems based on the roles and responsibilities of each category. In this regard, interprofessional meetings to discuss cases were mentioned as the most notable way of teamwork.

However, the pandemic came, and all actions took place remotely. Thus, the first change was to promote more asynchronous strategies to increase participation of those who had constant difficulty with internet connection or with changes and work overloads. Thus, virtual meetings were held, developed with strategies of synchronous active methodologies, but anyone who was unable to carry them out at that time or leave a report could go to Google Classroom and leave their wall, their photo, their response on the forums, their song. This was, in fact, the other major change: tutors sought to make meetings lighter, with playful activities, space for relaxation.

The use of group dynamics is very interesting; these collective activities help to integrate, have fun and develop new skills among students. More than that, the dynamics allow assessing social relationships and solving problems in general, as they broaden the vision of new ways of thinking and working as a team (A5).

From an IPE perspective, the group developed the understanding that health work is a collective construction, and participants have a clear perception of the importance of interaction of different knowledge and experiences in this process. Thus, the interaction provided by PET-I was cited as a strength factor, as it allowed people to open up to new learning and developing joint activities, which allowed them a new look at the context.

Discussion

Healthcare professionals’ difficulty to work as a team highlights important implications for the quality of healthcare services, patient safety and organization of healthcare systems1,3.

Conceptualized by Reeves et al.3 as learning situations in which two or more healthcare professionals from different areas learn together about each other and with each other, IPE can improve quality of care. This is because it is an efficient educational approach that emphasizes interactive learning between different professions with a view to strengthening partnerships and encouraging active problem-solving in interprofessional teams. Therefore, it prepares them for future clinical practice and helps them shape desirable interprofessional aspects of communication through respect for each other’s roles13.

The teaching process from the perspective of IPE seeks an active construction of knowledge
and team strengthening, through the sharing of experiences with supervision based on dialogue. Thus, team training, content, technologies and methodologies used as well as participant integration, must start from the problematization of everyday life, with the explicit intention of developing collaborative skills and improving service quality.

Building skills for higher education as well as for interprofessionality in health demands skills that encourage creative behaviors to solve complex problems. Furthermore, it is essential to create a learning setting in which students, through creativity, become the agents of their own learning. From this perspective, active methodologies emerge as the main response to these challenges, because they are based on ways of developing the learning process through real or simulated experiences. They are capable of making students the subject of learning, with a view to their autonomy, creativity and responsibility, so that they learn to seek solutions and solve professional problems for themselves.

In this context, it is worth mentioning that, according to Barr, regardless of the learning methods chosen, they must always promote interaction, participation and have meaning for people. This allows them to know each other and develop skills such as efficient communication, role clarity, empathy.

PET-I used active methodologies as pedagogical strategies, promoting interaction between participants from different professional categories to discuss content from the perspective of IPE to exchange and share experiences, relating theory and practice, teaching and work. In this way, professionals are encouraged to reflect on their performance as well as that of other participants in collective and collaborative learning.

The dynamics adopted as strategies can be as diverse as possible: conversation circles; bulletin boards; mind maps; discussion in small groups; lectures in a large group; reflective exercises; community projects; e-learning; written work; webinars; problematization; flipped classroom; group dynamics; workshops; discussions with triggers; and presentation of educational activities.

These strategies contribute to building and strengthening relationships and meaningful learning. Furthermore, the presence of an encouraging learning environment can add value to educational practices. For Silva et al., learning from people from different professions is an experience that expands the understanding of collective work, and is in line with international recommendations that state that opting for interactive active learning methods is an IPE guideline for more effective results.

Studies have proven the effectiveness of active methodologies in IPE activities, identified as effective learning opportunities in small interdisciplinary groups. Furthermore, they improved understandings and perceptions of each other’s roles, breaking prejudices and stereotypical views.

However, active teaching methodologies are subject to criticism. It is known that these methodologies require changes in paradigms, and their development may require greater investment in technology, time, space and dialogue with different health sectors. Hence, the main criticisms demonstrate that some students are lost in the process of managing their own knowledge and feel insecure about their development. Furthermore, as it demands greater effort from students in the process, it can trigger unexpected and sudden changes in their behavior, maturity and organization.

Costa et al. observe that, regardless of the chosen methodology, IPE activities must always be developed with the aim of encouraging and valuing collaboration in interpersonal and interprofessional relationships. Barr finally states that “ [...] no method is sufficient”. For this author, the most important thing is that interprofessional professors pay attention to the way their students evolve, adapting learning as their demands change and in order to keep them interested in the process.

For De Sordi et al., health training reorientation does not only involve innovative teaching methods or modern pedagogical approaches that adopt active methodologies. Processes that encourage innovation are structured in time and space, as innovating is not just introducing new technologies, but they state that these interventions must have the potential to develop skills and competencies among students. For substantial changes to occur, it is necessary to break with old paradigms, with a better understanding of the health-disease process, understanding the complementarity of each profession, the need for teamwork and enabling dialogue between different knowledge and experiences. Transformation depends on explicit clarity about where one wants to go.

From this perspective, it is not enough to review health training or change professional practices, but it is necessary to build a work process...
based on its problematization, encourage people to develop independently and promote a multiplicity of questions and perspectives through exchanges of knowledge experiences, expanding the understanding of problems to propose joint solutions, thus consolidating the idea that knowledge production must be closely linked to local realities according to the health needs of people, communities and populations.

The group in this study understood this interaction as essential for learning from each other and that by increasing mutual understanding and respect, teamwork is facilitated, which, ultimately, promotes improved user safety and quality the care provided and, consequently, the services provided. This reinforces that the idea of IPE as a strategy for changing behaviors and attitudes aimed at collaboration.

In the activities developed at PET-I Jataí, the intention was always present and clear for members to interact with each other and develop effective collective teamwork. For participants, such conduct potentially improves work, which is in accordance with IPE foundations, which emphasizes explicit intentionality for developing collaboration and teamwork. Similar results were obtained by Torres et al., who also point out that PET-I interventions have made its participants aware of the relevance of teamwork for improving the quality of services offered to the population.

In addition to prioritizing collaboration, participants were also able to understand how interdependence between their roles and respect for others affect working relationships and recognized that collaboration can improve their ability to provide appropriate care and greater team satisfaction.

It is important to highlight that PET-I did not stop with the pandemic; its activities were rethought and replanned in order to ensure continuity of meetings and work. To this end, it was decided to introduce remote, synchronous and asynchronous strategies. It must be said, however, that experiencing interprofessional health activities in a context in which in person classes and practical activities were suspended at UFJ and only returned remotely for some subjects was a great challenge for students, who were less participative.

On the other hand, participants developed a greater understanding of the context, being capable of greater reflections and criticisms about their own training and that offered by the institution. With the development of the program activities, the group's perceptions intensified and there was an understanding that the process was better when difficulties and suggestions for changes were discussed together, which reinforces the importance of the method chosen to conduct this process.

The activities proposed by PET-I sought to develop collaborative skills by giving participants more autonomy, encouraging greater leading role in their development and requiring greater interprofessional collaboration in the activities performed. To achieve this, it was necessary for members to know and trust each other and communicate in order to develop collective work, and the adoption of focus groups as a method was essential to guarantee interaction between participants. This experience in the focus groups was the great trigger for learning and reflection on care comprehensiveness and teamwork.

The group was satisfied with the results achieved, thanks to the teaching strategies that enabled discussions and reflection on their own practice, the integration of theory with practice and interaction between participants. Thus, program participants highlighted on many occasions the importance of highlighting pedagogical strategies as powerful facilitators of the development of teamwork skills and inducers of greater reflection on professional health practice. For them, these strategies allowed for greater integration between theory and practice and interaction among peers and, therefore, more meaningful learning.

In replanning activities, information and communication technologies became fundamental to allow continuity of PET-I Jataí activities, making it possible to exchange, at least temporarily, in person activities for remote activities. These actions were also taken by other projects in the country. Thus, as already mentioned, after the pandemic, activities took place virtually, with fortnightly virtual meetings, through Google Meet, with the intense use of WhatsApp for closer communications.

For Iguarino et al., considering the social distancing recommendations imposed by the pandemic, the main advantage of digital tools was the maintenance of activities without physical travel, avoiding the risk of contamination and spread of the virus. Martins and Khalaf observe that, although with limitations, work continued to be developed, with results of integration and collaboration between professions. The authors say that abstracts and scientific articles were produced as alternative learning strategies, with so-
cial networks being the means of interaction with the community.

Thus, it was notable in participants' statements that using these tools also enabled developing skills for interprofessional teamwork, especially developing group communication29. The group reported satisfaction with overcoming difficulties and mastering new technology. Active methodologies and digital tools were important strategies used and made it possible to develop collaborative learning, with all members of different professions contributing their experiences and knowledge in the process of reflecting on the professional actions carried out in the service20.

Thus, it was possible to verify that these pedagogical strategies, when intrinsic to the training process, enable empowering participants, making them leading actors and giving them greater autonomy to participate in the learning process, which allows them to better reflect on the importance of their contributions.

Thus, PET-Health, through new care practices and pedagogical experiences, offers opportunities to develop skills and competencies for training with a profile suited to health needs and policies, with the aim of also rescuing coherence between healthcare professional training and SUS7,24.

It is believed, therefore, that the relevance of describing this experience is given by allowing new practices to be visualized and based on them to reflect on the possibility of improving them, collaborate with new stimuli for future studies and also contribute to the reflection of the paths and strategies adopted so far by PET-I, thus strengthening its implementation and envisioning new initiatives and perhaps even consolidating PET-I as a policy that induces reorientation.

Conclusion

It is noteworthy that understanding IPE meets the current demands of the Brazilian health context, as it integrates important principles of SUS, especially user centrality in work processes of healthcare services, coherence of professional profiles in light of the complex health needs of the population, reorganization of work and health practices from the perspective of interprofessional collaboration for teamwork. In this context, IPE presents itself as a strategy capable of promoting changes in public health practices.

The actions developed show that the adopted pedagogical strategies used were significant and creative, based on the use of active methodologies and, therefore, enabling the inclusion of different professional knowledge, creating educational opportunities in which individuals from two or more professions learn by interacting with each other, but with the explicit purpose of advancing the qualification and development of skills and competencies for teamwork.

It is emphasized that PET-I deepened discussions for adopting IPE in health courses across the country, envisioning changes in professional education and health. Even considering the limitations, the balance of the experience was positive, resulting in a unique opportunity for personal and professional growth during participation in the program.
Collaborations

TM Diniz and EFM Villela participated in work conception and design, manuscript writing and review. All authors participated in approving the final version of the manuscript.
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