Chapter # 31

SELF-REPORTED KNOWLEDGE, EXPERIENCES AND PREDISPOSITION TOWARDS INTERPROFESSIONAL EDUCATION AND COLLABORATIVE PRACTICE IN FACULTY MEMBERS FROM THE CENTRE-WEST REGION OF BRAZIL: A QUALITATIVE STUDY

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ABSTRACT
The mechanisms that facilitate interprofessional education and collaborative practice (IPECP) associated with the academic training project include the effective involvement of faculty members, a topic about which there is little available knowledge in Portuguese speaking countries. The goal of the present study was the understanding of self-reported knowledge, experiences, and willingness towards IPECP of health/related areas professors, from two universities in the centre-west region of Brazil. The intentional sample included 16 professors, members of the College and Teaching Structuring Cores (definition, management and update of undergraduate pedagogical projects), who answered a semi structured interview script and filled in a sociodemographic and professional profile questionnaire. The interviews were transcribed verbatim, validated by the participants and then submitted to a thematic content analysis, supported by NVivo, version 11. The results revealed six inductive thematic categories (Undergraduate Training Process, Professional Experience in IPECP, Mechanisms for IPECP, Openness to IPECP, Interprofessional Relations and Representation of IPECP), and 24 subcategories. In general, participants revealed to be open to IPECP, even though not all had knowledge of the mechanisms or technical, political, and ethical tools that favour the development of IPECP, in undergraduate degrees.

Keywords: interprofessional education, health, undergraduate studies, teaching, predisposition.

1. INTRODUCTION

Interprofessional education and collaborative practice (IPECP) in health are prospected as conditions for ongoing qualification in healthcare settings and for the progress of worldwide health systems (Barr, 2010; Gilbert, 2013; Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013; Reeves, Boet, Zierler, & Kitto, 2015). IPECP is the result of the synergy between many-sided efforts, from the macro organisation of health and education policies, to the commitment of the administration of higher education institutions and structure of training programmes, including the comprehension, appreciation and openness of faculty members, professionals and health units' managers to articulate knowledge from several areas in the specific training offered to each future health professional (Barr et al., 2017; WHO, 2010). In particular, knowledge about faculty members' predisposition towards IPECP is heterogeneous and, in some countries, very limited.

Loversidge and Demb (2015) led a qualitative/phenomenological study, approaching 32 professors (medicine and nursing courses) at three American universities. The goal was to explore the experiences of participants in IPECP. Results showed that participants were committed to teaching, collaborative practice in health care and understood that experiences, with supervision and post-activity reflection, led students to incorporate concepts and develop favourable attitudes towards collaborative practice. Conversely, they recognised the existence of institutional and curricular barriers that need to be addressed through the collaboration of more participative teams and the use of systematised teaching methodologies.

Lapkin, Levett-Jones and Gilligan (2012) assessed how IPECP was used in Australian and New Zealander health courses, to teach safety in the use of prescribed drugs, and how it was incorporated into the course syllabus. Of 41 faculty members contacted to answer a questionnaire, the response rate for both countries stood at 72%. In total, 80% reported they provided their students with IPECP experiences, and around 8% were planning or developing projects to provide IPECP in their courses. The remaining said they were considering, but did not implement them, or did not think to provide IPECP experiences to their students.

In the southwest of Brazil, da Silva, Peduzzi, Orchard and Leonello (2015) developed a triangulated qualitative study (multimethod) with the purpose of understanding the perceptions of faculty members, professionals and students about IPECP in primary healthcare. The interviews to 18 professors allowed to build, among others, a thematic category that showed that IPECP is a condition that allows both students and health professionals to better understand patients' needs and, answer those needs within an integrated care approach. Moreover, the professors saw that a therapeutic plan directed at users should be all-encompassing and not dichotomised or restricted to each professional. The authors concluded that a better communication and interrelations are conditions to reduce asymmetries in the professional-user relationship.

In the northeast of Brazil, Barreto et al. (2018) researched the process of interprofessional collaboration (IPC) among managers, family health strategy (FHS) professionals and faculty members. Upon analysing documents and conducting qualitative interviews, the authors found that professors from two universities (n=29), in different municipalities, saw similarities in the teaching goals and expected care when compared to FHS professionals. Hence, professors understood the advantages of teaching undergraduate students in a health care context, in order to have students develop more humane and more empathic attitudes towards patients.

Costa, Patrício, Câmara, Azevedo and Batista (2015) analysed the Reorientation National Program in Health Professional Formation (Pro-Health) and the Education by Work for Health Program, both from Brazil's Ministry of Health, as IPECP-inducing policies, upon studying 120 "Annual Technical Reports" of Pro-Health and PET-Health Projects, and 119 "Self-Assessment Reports", which were filled in by the participating higher education institution. The authors noted the analysed projects revealed new forms of interprofessional interaction and communication, with a positive impact on specific spheres of health care, among other benefits. However, the authors acknowledged the persistence of two obstacles: problems in the qualification towards collaborative practice, and problems concerning the lack of articulation between health services and universities.

In general, literature presents several studies about training faculty members in IPECP regarding health courses (Adler & Gallian, 2018; Walsh et al., 2018) as well as teachers and tutors of both medical and non-medical courses (Lima & Rozendo, 2015; Walsh et al., 2018). Nonetheless, there are few studies developed by Brazilian faculty members, from different undergraduate degrees in the field of health and education, which revealed the limited knowledge and evidence about how they think, value and act regarding IPECP.

Silva et al. (2021) described the experience gained through direct observation of the work of professors, at two Brazilian public universities, recorded in "logbooks". The authors evaluated activities from 2014 to 2019 and their records were submitted to content analysis. The results showed that interprofessional education is still a challenging field, that may be enhanced through more regular activities. Professors of different undergraduate courses, by intensifying the dialogue and the preparation of activities among themselves, can potentiate their own training for an interprofessional education, as well as presenting new possibilities for the training of undergraduate and graduate students. In the same perspective, Da Costa and Pinho (2021) questioned the traditional health training, based on medical specialties, and drew attention to the organization of the Brazilian public health system, which needs to place the patient's needs at the center of the training of health professionals, as internationally recommended. Therefore, changing the attitude of teachers is essential to obtain better outcomes in the care provided. Finally, da Silva, Silva, Silva and Batista (2022) analyze teacher training (and its action as a social practice), from an interprofessional perspective, and highlighted the role of policies through the commitment of the government and managers from educational and health institutions engaged in the excellence of care and human dignity.

In our experience, the absence of interprofessional education and collaborative practice in health care tends to increase communication problems, power disputes, making the formation of a health team identity unfeasible, increasing intolerance between professionals with different backgrounds, reducing solidarity as well as compromising communication with patients contributing to alienate their needs. The present study aims to understand the perspectives of faculty members from two universities in the centre-west region of Brazil about their knowledge, experiences and predisposition (representations and attitudes) towards developing interprofessional collaborative practices and education programs within undergraduate degrees, in health care.

2. METHODS

2.1. Type of study

Qualitative, cross-sectional and exploratory.

2.2. Participants

Sixteen higher education professors from undergraduate degrees in the fields of health and/or education and health, of two universities from the centre-west region of Brazil (one private-community and one public federal), of both genders with a minimum lecturing experience of three years. The sample is purposive, and all participants needed to have experience in the Collegiate and Teaching Structuring Core (TSC), which is a committee within the higher education legislation of Brazil that aims to formulate and/or follow the pedagogical projects of undergraduate degrees (inclusion criteria).

2.3. Ethical considerations

This study was designed in compliance with Resolution no. 466, of 12th December 2012, and Resolution no. 510, of 7th April 2016, both by the National Health Council of the Brazilian Ministry of Health (BRASIL, 2012; 2016). All participants signed an informed consent form.

2.4. Instruments

This study used a Sociodemographic and Professional Profile Questionnaire (gender, age, nationality, marital status, time of professional experience as professor, teaching weekly hours and experience in working with healthcare teams, among others), and a semi-structured

interview script that included open questions based on the literature (Barr et al., 2017) and on the researcher's experience with healthcare teams. Participants were asked to consider the following central themes: specific curricular content about collaborative practice during and/or after their undergraduate or post-graduate degrees; relevance of content on collaboration and communication in healthcare teams; relevance of working in healthcare teams; mental representation of interprofessional education, among others.

2.5. Procedures

Following the approval of the research project by the Research Ethics Committees of the Brazilian universities (CEP/CONEP/CAAE nº 61664116.9.0000.5078, Report nº 2.313.969), an electronic communication was sent to the group of professors of health courses in the Brazilian institutions, who were part of the TSC, informing about the research. Those who accepted were approached, individually, and invited to participate in the interview at a place of their choosing. The majority of participants chose their office, with the exception of two professors, with whom the meeting was held in a separate room in the library of the institution. Of all those contacted, only one did not show to the interview after agreeing to participate.

All interviews began with the signing of the informed consent and the filling of the sociodemographic and professional profile questionnaire followed by the questions, based on the script. All interviews were led by the same senior researcher in qualitative research and were audio recorded verbatim.

2.6. Data Analysis

The interviews were sent by email to every participant (n=16), with a request to review and complement the information previously provided, with a 100% response rate. Following the corresponding transcription and validation, the interviews were submitted to a thematic content analysis that produced inductive categories (Bardin, 2013). The thematic categories and attributes (sociodemographic and professional profile) were introduced in NVivo version 11 for further analysis. NVivo helps organize a large amount of qualitative data into larger groupings and then into thematic categories. In addition, NVivo favors the analysis of stronger and deeper relationships in qualitative data, even if resulting from small samples (Alves da Silva, Figueiredo Filho, & da Silva, 2015).

3. RESULTS

Participants (Table 1) were predominantly women (75%), over 50 years old (81.2%) and married or with a regular partner (87.5%, graduated in Speech Therapy (6.2%), Dentistry (6.2%), Nutrition (6.2%), Psychology (12.5%), Social Work (6.2%), Medicine (25.0%) and Nursing (37.5%).

In general, participants were highly qualified, with extensive experience in teaching and practice with healthcare teams. Table 1 presents the sample characteristics: 81.2% participants held doctorate degrees or post-doctorate degrees (12.5%) and a minimum experience of five years in higher education lecturing. Regarding teaching experience, 87.5% reported having more than 20 years teaching undergraduate and/or post-graduate degrees; 68.9% dedicated 10 to 30 hours of their time to research and 50% reported no university extension activity (curricular activities developed by professors either within the university or the community around it). Approximately 93.8% of participants had experience in public policies in the areas of health, education and social work; 50.0% had 20 years or more of experience working with healthcare teams; 50% maintained their institutional bond through a public tender or a full-time work contract (43.7%).

Table 1.
Sociodemographic characterisation of Brazilian Professors (n=16).

Variable	%	Variable	%
Gender		**Age (years)**	
Male	25.0	30.1 – 40	6.2
Female	75.0	40.1 - 50	12.5
		Over 50	81.2
Weekly hours dedicated to teaching (undergraduate and post-graduate)		**Weekly hours dedicated to Research**	18.7
10.1 to 20	12.5	Under 10	68.9
20.1 to 30	50.0	10.1 to 30	6.2
30.1 to 40	37.5	Over 30	6.2
		No research activity	
Service as professor (years)		**Undergraduate Degree**	
5.1 to 10	8.3	Social Work	6.2
10.1 to 15	29.2	Nursing	37.5
15.1 to 20	12.5	Speech Therapy	6.2
20.1 and more	50.0	Nutrition	6.2
		Psychology	12.5
		Medicine	25.0
		Dentistry	6.2
Marital Status		**Experience with health teams (years)**	
Married/Regular partnership	87.5	Under 5	6.2
Divorced/Separated/Widow	12.5	5.1 to 10	18.7
		10.1 to 15	25.0
		20.1 and over	50.0
Experience in public policies (health, education and social)		**Main institutional bond**	
Yes	93.8	Public tender	50.0
No	6.2	Full-time contract	43.7
		Part-time contract	6.2
Education		**Number of post-graduate courses taught**	
Master Degree	6.2	01	50.0
Doctorate Degree	81.2	02	31.2
Post-Doctorate	12.5	None	18.7
Weekly Extended Hours			
Under 10	25.0		
10.1 to 30	25.0		
No extension activity	50.0		

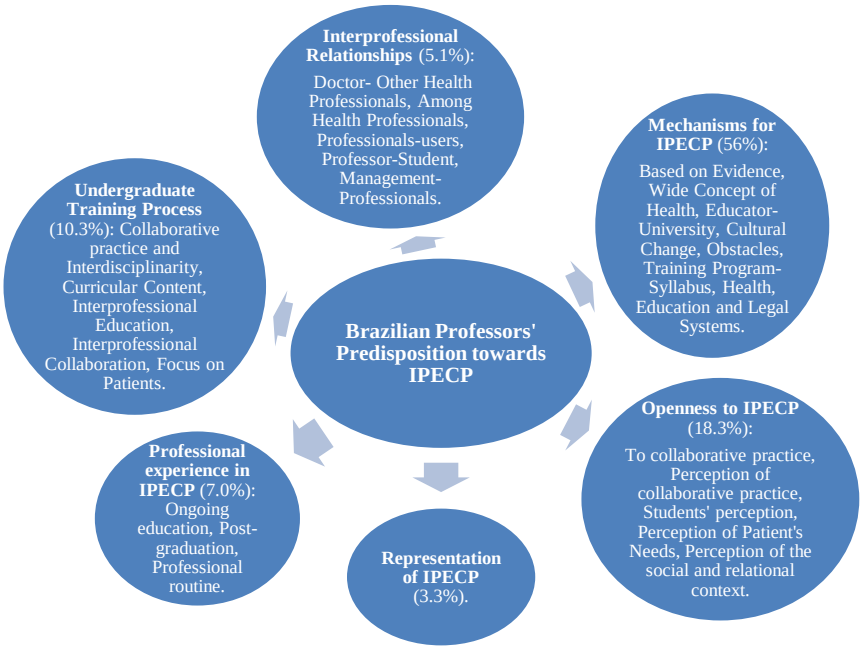
The results showed (Table 2 and Figure 1) six main categories that emerged: Professional Experience in IPECP (7.0%), Mechanisms for IPECP (56.0%), Openness to IPECP (18.3%), Undergraduate Training Process (10.3%), Interprofessional Relations (5.1%) and Representation of IPECP (3.3%). Except for the latter, all the other categories were incorporated into the thematic subcategories.

Table 2.
Designation and Description of Thematic Categories.

Thematic Category	Description (Thematic Subcategories - SC)
Mechanisms for IPECP	Potential factors in the promotion or inhibition of IPECP during their undergraduate studies or professional path.
Interprofessional Relationships	Quality or frequency or nature of perceived relationships between the several health professionals, patients and students.
Undergraduate Training Process	Curricular experiences (formal and informal) or experiences in interdisciplinarity, IPECP in teams, acquired during their undergraduate studies.
Professional Experience in IPECP	Experiences in interprofessional education or collaboratice practices after graduating.
Openness to IPECP	Predisposition to act (cognitive, perceptive, valuation and ethical aspects) towards the development of an IPECP project.
Representation of IPECP	Mental representations, associations and abstract models regarding IPECP.

The professors' knowledge was represented in two thematic categories: Mechanisms for IPECP (Based on Evidence; Educator-University; Cultural Change; Obstacles; Training Programme-Syllabus; Health, Education and Legal Systems) and Interprofessional Relationships (among different health professionals, management-professionals, medical doctors-other health professionals, professor-student, professionals-patient).

Figure 1.
Thematic Categories and Subcategories within Interprofessional Health Education and Interprofessional Health Collaboration.



Professors' predisposition was represented by the categories of Representation of IPECP and Openness to IPECP (that included Openness to Collaborative practice, Broader Concept of Health, Perception of the Social-Relational context, Perception of the Patients' Needs, Perception of Students' Predisposition towards IPECP, Perception of Colaborative Practice).

All thematic categories and subcategories were submitted to a cluster analysis through NVivo, which allowed to find the higher (Figure 2) and lower (Figure 3) thematic similarities. As a result, the Training Programme-Syllabus, Mechanisms for IPECP, Educators-University Relationship and Cultural Change showed a triangulated position of convergence between each other (Figure 2). Conversely, Training Focused on Patients, Experience in Training in IPECP, Ongoing Training, Interprofessional Relationships and Professor-Student Relationships showed a low thematic convergence (Figure 3).

Figure 2.
Cluster according to Higher Thematic Similarity – Brazilian Lecturers (n=16) – Jaccard Index. Source: Nvivo.

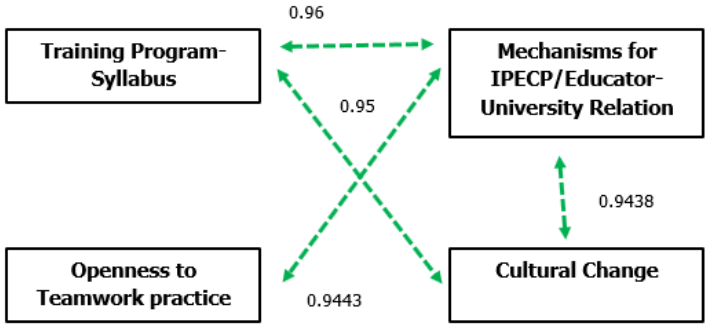
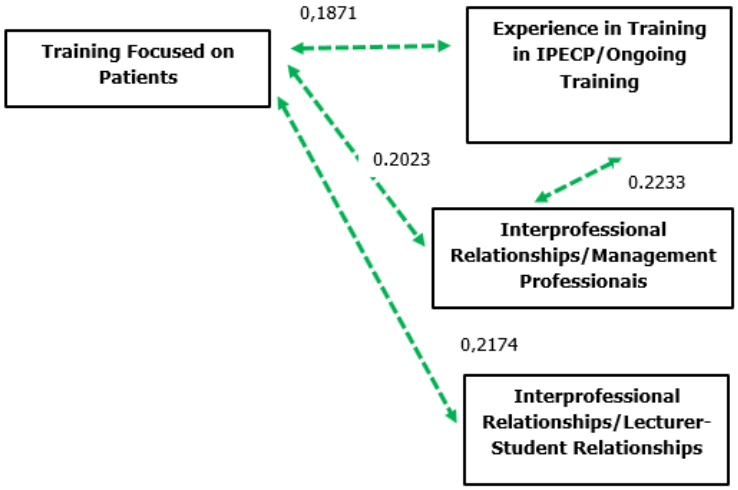


Figure 3.
Cluster according to Lower Thematic Similarity – Brazilian Lecturers (n=16) – Jaccard Index. Source: Nvivo.



4. DISCUSSION

This study aimed to explore the knowledge, experiences and predisposition towards interprofessional health education and collaborative practice, of faculty members from the centre-west region of Brazil.

4.1. Knowledge of IPECP

Participants' knowledge of IPECP was represented in two major categories (Table 2): Interprofessional Relations and Mechanisms for IPECP. Regarding interprofessional relationships, those included a web of relationships established between: a) medical doctors and other health professionals; b) among other health professionals health professionals; c) professionals and patients; d) managers and professionals; and, e) professor and student.

Regarding the relationship between medical doctors and other health professionals, there was a clear divergence between those who believed the hierarchic relationships still exist, where medical doctors are at the top of the decision-making chain, versus those who understood that the traditional relational model has been changing over the last years into a more dialoguing interaction. Among those who highlight the hierarchical relationhip, a psychology professor reported: *"(...) I don't believe it has changed that much…because what has improved is the communication between psychology professionals and medical doctors (...), mutual tolerance (...) but that is not something that is institutionalised*." Others believed the relationship between medical doctors and health professionals had evolved such as a nursing professor who reported more exchanges among each other *"(...) their posture has also changed significantly. It used to be they were those gentlemen, who looked like a troop colonel when I graduated. Nowadays, it's not! They ask, they debate with us. It's that easy. I think in that sense it's better. It has improve*d".

A speech therapy professor reported the awkwardness, or idea of not being accepted by each other as common both in medical doctors and in health professionals: *"(...) I know academics with a degree in medicine look at other degrees and 'they do not like us.' So, there is still a collective subconscious speech that medicine does not want to talk. Naturally, that idea is perpetuated on to their students and, at times, I do see people being afraid to take a position*."

The image of interprofessional education in professors' minds, regarding the topic of relationships in the health care context, is characterised by different positions that can be grouped in two: 1) the existence of conflicts and distant relationships between medical doctors and other health professionals, perpetuated by institutional practices and experiences, hierarchic models (presented and maintained by professors at undergraduate and post-graduate degrees and by professionals and health services managers), and different epistemological values and scientific knowledge upheld in each profession; and, 2) existence of a relationship model, not so clear or rigourous, characterised by increased collaboration, trust, data exchange and joint planning between medical doctors and other health professionals. In that perspective, medical doctors are more open to exchanges with other health professionals; communication tends to be more assertive and based on expertise, knowledge, and ability of the professions involved in a certain exchange setting. Reducing the existing stereotypes within relationhips in the health context may be driven by interprofessional education, as highlighted by Mahler, Schwarzbeck, Mink and Goetz (2018).

The relationships among different health professionals, by all accounts, as seen by the participants, are not exactly easier than those between medical doctors and other health professionals. Likewise, there are two distinctive dualities. On the one hand, there is more cooperation among different health professionals, as claimed by a social worker professor:

"*I think that, over these last decades, our experience in the area of health has allowed that to happen: professionals are mingling with other areas. So, I think that has been very enrichening for social work., but on the other hand, at times I see social work somewhat closed (...) in its own dome and power, making that dialogue more difficult."*

Many professionals believe the relationship with users is hindered by the fact that people do not put themselves in each other's shoes. Consequently, duties in medical care are automatised and professionals remove themselves physically and mentally from the patient's reality. The technicism employed in that sense hides a reality of inadequacy of professionals regarding the patient's needs. A medicine professor reported that: "*(...) an experience I never forgot! I always had patients in the intensive care unit (ICU) because of cardiology issues (...) but I never stopped visiting my patient, even when the medication was not prescribed by me (...). And one day, a patient next to mine addressed me and said, 'Wouldn't you like to be my doctor?' I said, 'No. You have your own doctor.' And he said, 'I do, but he does not come here (...)'. He realised I was following-up. And that lack of follow-up was perceived as bad for him. So, he proposed changing medical doctors (...)."* In situations like the ICU, or palliative care, for example, many professionals who were previously accompanying the patient then delegate all the medical care to the ICU and/or palliative care teams. However, a gap in the relationship with the patient is created; there is a break in the established bond. The idea of having the patient at the centre of care is also put forward by other professors (Figure 3) who believe there is a distance from health professionals towards patients. Even in contexts of health promotion, participants also feel there is a certain distancing. That distancing between the professional and the patient can be a process of self-preservation, triggered by professionals due to the negative feelings they experience over time (Bortoletti, Vasconcelos & Sebastiani, 2017).

Few participants gave emphasis to relationships between university managers and health professionals. At universities, maybe because participants felt a distance between those who make decisions and faculty members; and in healthcare units, probably because most participants were not involved in extension activities or with the community in general. Thus, managers were not perceived to be open to listening to health professionals – and even less to faculty members. This lack of openness is one of the challenges or barriers that should be overcome in order to create conditions that are more compatible with interprofessional education and collaboration in health care teams, as was also mentioned by Anderson, Smith and Hammick (2015).

Concerning the relationship between professor and undergraduate students, some participants believe there has been a more understanding relationship over the years. However, for others, there is still a sense of authority that makes it impossible to have a more open communication between teacher-student which, consequently, reduces the students' possibility to grow and develop their own knowledge. This transition into more dialogue between professors and students, according to a social work professor, "(...) *also entails restructuring the syllabus and teaching procedures*."

Regarding the Mechanisms for IPECP, participants understood the other health professionals' aspects and the complexity entailed by a certain health condition within a broader concept of health. Moreover, participants understood that one way to teach such a broader health concept is through cross-disciplinary activities developed across several undergraduate degrees. However, some participants recognise a disciplinary and legal limit outlining each profession. In that sense, there is a certain caution so as to not cross disciplinary and legal boundaries.

Based on the data, there is an assumption that the consolidation of a broder view of health is achieved by combining the technical sense of the term with the experience gained

through several exchanges with patients and the different health needs of the population. Hence, faculty members going with students into the field is an important condition for the articulation between theory and practice, which is often delayed or made impossible by matters of lack of institutional planning and/or funding, which in turn interferes in the relationship between educator and the teaching institution. Therefore, even though faculty members should guide students regarding the reality of the health system, they do not have the appropriate conditions to accompany that immersion process. Moreover, the organisation of the teaching/lecturing work at universities and the need to meet the demands of the higher education rating agencies have delayed a greater proposition and fulfilment of interprofessional health education as reported by a nutrition professor, *"Another [difficulty] is the institution itself changing that entire structure. Adapting itself, understanding that it really needs to be done; not only in paper but because it involves financial and personnel resources, that is why I think it's very complicated*." When the teaching institution also demands a certain teaching position without favouring conditions, that becomes a stressor in the relationship, as stated by the same professor *"(...) it fosters that problem, but at the same time, I think it's complicated because I have 60 students in class."*

When the institution does not introduce collaborative practice formally, sometimes educators start developing activities due to professional or personal reasons, as pointed out by a psychology professor, "*What happens are spontaneous movements initiated by the professionals themselves in order to bridge that gap in content (...) and that is a barrier yet to be overcome."* In that sense, a medicine professor mentioned that universities are always slower in providing answers to social needs: while the health system is constantly requiring new professionals and a new relationship between universities and public health systems; universities tend to focus on what is demanded by rating agencies. Consequently, innovation and proposals from universities in a social context are often left to second plan; universities are much more reactive than proactive, as already discussed by the classic work of Ribeiro (1975).

Participants believed that there are many obstacles to making IPECP a reality in undergraduate studies, namely: pedagogical projects (syllabus) designed exclusively for the topics covered; the current structure of the higher education system; the limited structure of educational institutions to favour active teaching methodologies and also stable working contracts; the lack of interdisciplinary and integrated collborative practice based on the theoretical concepts taught to students; faculty members' closed attitudes towards collaborative practice; the lack of student's supervision by faculty members in the different and real healthcare contexts; the relative submission or subordination of some professions to others; the historic foundations of certain professions associated with moral judgements; the medical hegemony in decisions and greater social recognition in the health domain; and, the the takeover of some professions over others, by the market, as reported by a medicine professor: "*Because then they [medical institutions] took on a national movement, across all states in the country, they pursued a national movement that could have multiprofessional residence, but without a physician involved…so much so that the multiprofessional modality does not have a single physician, nowadays.*"

Lastly, academically, the lack of knowledge, motivation or preparation of managers dealing directly with pedagogical projects and faculty members also delays the debate about IPECP, as illustrated by a speech therapy professor and evaluator of undergraduate studies for Brazil's Ministry of Education: *"Because managers are not prepared either (...) when I say manager, I mean the course coordinator (...) responsible for triggering all the learning processes, at every health unit. So, they are the bridge between the faculty members and upper management. They are the ones who have to master all the methodologies for that to*

happen (...) And it isn't so." Therefore, obstacles are perceived by participants as both theoretical and conceptual, and also of an institutional, political, ideological and ethical nature. Such obstacles persist in the health domain where there are strong power relations, where democratic tradition is still scarce and where there are consecutive reactions towards maintaining a *status quo* and a *modus operandi* that, according to Fitzsimmons, Cisneros and Sannore (2014), reduce the appreciation for collaborative work.

In particular, regarding the training programme offered by undergraduate courses, participants believed students arrived at a real practice scenario very late in their education process. In internship experiences, students were more likely to interact with other professionals, but they were not always guided or monitored towards it. Subsequently, many students may start to mistakenly believe that working and communicating with other health professionals is a waste of time because, supposedly, they should be dealing directly and only with patients.

Even though some participants feel IPECP content could be organised towards a topic or a formal course throughout an undergraduate degree, most of them believe that content should be taught through experiences or large teaching units that favour interprofessional collaborative practices, and by students having contact with patients in the first semesters of the course, through integrating methodologies, as described by Souto et al. (2014). To that example, a psychology professor reported: "*So, you have a whole set of new teaching methodologies that provide that…you put individuals in action. That is where he/she will learn how to do that. Integrating with other professions, understanding what the other is doing. Why are there others with him/her? What's the common goal? So, the common goal is to care for the patient. (...) How are we going to do that together? That is not a classroom, that is action."* Naturally, there are issues to be addressed in training programs, particularly regarding the nature of content to be taught, how to schedule it throughout the course as well as the articulation with health practices, particularly, the experience of interprofessional articulation with students from different professions, in addition to the need to provide models for students to be motivated towards IPECP.

According to the participants' perspectives, mechanisms for IPECP involve an intersectoral approach established between health, education, and legal systems. In Brazil, with the new 1988 Constitution, there was a favourable environment towards creating the public policy of the Unified Health System from which the family health program stemmed, when the areas of nursing and medicine played the major roles, at first. Nonetheless, by providing the multiprofessional residence in a health program (a joint action between Brazil's Health and Education Ministries), the proposal to establish a partnership between those two professions was frustrated with the medical class, as perceived by a nursing professor: *"(...) when we created the first multiprofessional residence in Goiás, the nursing faculty (...) coordinated that residence (...). We had 20 vacancies, 10 for nurses, 10 for medical doctors (...), but there was so much resistance and interference by the Regional Council of Medicine (...); it was a very painful process, because they did not accept it: how were they going to have a multiprofessional residence coordinated by a nursing faculty? Many students reported they were forced to abandon that residence."*

Despite the governmental intervention, through the Program for the Promotion of Changes in Medical School Curricula, some participants felt the conditions to substantially change the training offer in medicine programmes was not possible and, as a result, the gap between medical doctors and other health professionals could not be repaired. Consequently, even though there is some articulation between health, education, and legal systems, especially in Brazil, there is an endogamy posture, in undergraduate degrees, not allowing the creation of better conditions for an interprofessional training, despite a few positive

IPECP experiences in the southwest of Brazil (Souto, Batista, & Batista, 2014). Also, there is a great asynchronism between municipal and state health structures, which either facilitate the integration of faculty members and students in healthcare scenarios, or maintain them at bay for the most different reasons, including administrative ones. Since many health units are managed by social organisations (defined as a not-for-profit private legal institution), teaching at those units is not always authorised, or authorisation is not always compatible with the needs of the academic calendar.

Finally, the last subcategory of Mechanisms for IPECP, addressed cultural change. This topic entails the ongoing and recurrent discussions about the undergraduate pedagogical projects and the awareness of the role of IPECP aimed at caring for the population. The idea of trial and error associated with cultural change is very present for some participants, which opens a processual and evaluation dimension to the acquisition of a new stance that favours a change in teaching proposals, content and strategies. To that extent, a nursing professor reported: *"... to make it formal, it needs to happen during the curricular reform (...) and, perhaps, we do not have a very in-depth knowledge about it yet…because it's taking isolated topics to structure an organised knowledge, to build a curricular subject in those lines (...) but we are still in a maturing phase*."

In Brazil, cultural change might also come through the new curricular guidelines for undergraduate health degrees, since those establish the skills that are common to the different health professions, as reported by a nursing professor: "(...) *putting in practice (...) our curricular guidelines, and skills, that is what we aim for…but between what we aim for and what we, professors, in the way we are trained, can give shape to, it's difficult… because when we look at those skills, they require a different way of being and thinking our teaching and doing*!"

4.2. Experiences in IPECP

The experiences of Brazilian faculty members in IPECP, based on the categories of the Training Process and Professional Experience (Table 2) showed that, in general, most participants did not have training (curricular content) on interprofessional education, but they did report allusive experiences during their mandatory curricular internship period, many of which coincided with the two last academic semesters. In addition, the experiences in optional topics or open courses for curricular integration were remembered as the main activities where students from different undergraduate degrees, could meet. In those topics, the norm was a theoretical approach, with little or no experience in collaborative practice. However, as reported by a psychology professor, at the university at that time with the military government in Brazil, the goal was to avoid meetings and dialogue with individuals from other universities, as exchanges between professionals were not encouraged. Of all the professionals interviewed, nurses were the health professionals with more reports of interfaces with other students, even though they assessed, those experiences as regular or insufficient, in the face of the needs observed during their curricular internships. Another element in personal experiences was interprofessional collaboration. For nursing professors, interactions with medical students and residents were almost non-existent, even though their internships were mainly within hospital units, in the early 80s. A nursing professor reported: "*and it was the first degree at the university… and it came from a school managed by nuns….do that concern was very present and we were forbidden to talk to medicine residents and academics*." That segregation was also perceived by medical students who studied at the same time as nursing students: "*In my undergraduate degree, I was already interested in that [collaborative practice… when I realised there was a very strict separation, especially where*

I studied, between medicine and nursing. I also began realising that over there (...) in the wards (...) we worked side by side, but the separation and the hierarchy were absolute."

Some participants also reported that collaborative practices were only possible in university extension projects, which they took on voluntarily. Likewise, interprofessional collaboration experiences took place, for most participants, through isolated events associated with internships. However, those activities were not considered integrated, but overlapped. Those who went to university in the 90's reported preliminary experiences in healthcare teams, as pointed out by a social work professor, "*In my undergraduate studies, the profession of social work itself, in which I was trained, was already very general. So, it already had that characteristic of interprofessional collaboration*."

Regarding post-university experiences, these can be grouped in different contexts: obtained through professional routines reported by a nursing professor, "(...) the first team meeting I ever participated in, at the hospital where I worked, was attended by social work, psychology, medical, and nursing professionals – and it was run by nurses [...]. It was my first time and I'll never forget it!" or through ongoing training at work (reported by a medical professor, "I *took some courses where that was mentioned, it was encouraged and we even practiced in workshops (...), we actually had some training in the medical school". or* even through post-graduation courses reported by a speech therapy professor, "I *eventually built that knowledge through my specialty courses in the area of academic teaching [...] with active methodologies. So, I already had that, a vision of that collective, of the group, collaborative practice, observing others and their experiences [...]"*).

Based on their university training and on their professional experiences, participants believed the content fostering interprofessional education should include: leadership, collaborative practice, communication (assertive), ethics in research, collaborative practice philosophy, personal development, social interaction and health education. Interestingly, few reports mentioned receiving a learning experience that focused on patients' needs, an essential aspect of interprofessional training (Gilbert, 2013; Reeves et al, 2015, WHO, 2010).

4.3. Predisposition Towards IPECP

When participants were asked to describe what came first to their minds when hearing the expression "interprofessional education", it took them a few seconds until they could provide an answer. In general, participants used inductive thought, associating aspects to the term before formulating a synthesis of the mental representation they had created. The "interprofessional education" expression was associated with empowerment, attitudes, paradigms change, feeling part of a team, mutual learning, players involved (patient, community, individuals, faculty members and students), challenges, integration, transition between spaces and ideas, training of different individuals but within a common philosophy. Thus, even without a conceptual definition, participants made associations with structuring elements of IPECP, as exemplified by a medical professor, who reported, "*The image (...) is a debate room with at least four different professionals, discussing a topic, or a case (...), an image of a joint visit to a patient's bed, or in a ward, or (...) in the outpatient service (...)."*

In terms of personal openness to IPECP, there was a great and positive appreciation from Brazilian professors, even if some don't feel fully qualified to develop IPECP. As reported by a nursing professor, "*I think we need to learn that, and teach that at university, but I believe we are only going to have interprofessional or collaborative practice when we, universities, start teaching it. It has to come from here.*" Despite recognising its difficulties, participants assess participants as more open to IPECP, but they do acknowledge that faculty members may have little practice, and provide little encouragement towards IPECP at higher education institutions. The fact that this study included a purposive sample of faculty

members who think and contribute to the evolution of pedagogical projects, may induce the idea that participants are more open to IPECP and have a better perception of collaborative practices. Also, it is precisely this motivation that is supposed to pave the way for interprofessional education, at the university level (Filho, Da Costa, Forster, & Reeves, 2017).

For participants, openness to IPECP was also related to the perception of social and relational contexts established in different practice scenarios. Such scenarios can be unpredictable and unknown, demanding problem-solving actions through the collaboration of different players. In that sense, collaborative practice needs professors and students to be technically prepared, while also establishing personal and affective relationships that are more mature, in order not to overload the public system and resources. Therefore, participants perceive IPECP as a way to optimise human, material and financial resources, with the ability to push forward the goals of public policies. To that matter, a nursing professor reported, "*The system as well, (...) because it creates fewer public expenses, if we think about it. When we're more assertive in a certain action, in a case where teams exchange ideas, where they talk, everybody wins*." Likewise, the perception of the patient's needs was also associated with openness to IPECP, and participants recognise the need to focus more on that relationship, as reported by a medical professor: "(...) *once we had a debate about what is a team, how it works and its characteristics, from the perspective of both professionals and patients…. something curious happened (...): when faced by the team, the patient loses the reference of who is the person most connected to him/her*." Understanding that the patient needs to connect with a health professional, wether a psychologist, physician, social worker, or any other professional, requires being open to understand the patient's needs. In this matter, IPECP tends to intensify or enlarge the understanding of the patient as a whole person.

Last, but not least, openness to IPECP in faculty members entails their own perception of students' predisposition. For participants, students respond in a positive and motivated manner to the experiences provided by professors and/or professionals at health care units. Through experience, students can observe models, wide their understanding of other professionals' work, and their own limitations as well. When students perform a task together with students from different courses, they tend to value what they accomplish. Naturally, that collaboration, that co-creation is a matter of pride and status for students. According to participants, Students Associations tend to favour interdisciplinary experiences, which can be better channelled or be more intense through regular school programs based on a greater professional collaboration.

5. CONCLUSION

Even though few participants from the sample are familiar with the technical literature and world experiences in IPECP, they did demonstrate to be open to interdisciplinarity and understand the limitations of working alone, fostering a potential field of action for the development of IPECP. Moreover, the involvement of other faculty members and students from the centre-west region of Brazil can be extended and consolidated towards IPECP when knowledge is more available and those, in leadership positions, provide institutional and training mechanisms, in line with the perspective and mission of interprofessional education and collaborative practice.

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LIMITATIONS OF THE STUDY

The findings in this study were based on one public university and one private community university from the centre-west region of Brazil, which therefore do not express regional differences in Brazil, an issue that needs new research for a better comprehension.

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DECLARATION OF INTEREST

The authors declare there is no conflict of interest. Moreover, the authors are the only ones responsible for the content of this chapter.

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