PET-Saúde/Interprofessionality and the development of curricular changes and collaborative practices

PET-Saúde/Interprofissionalidade e o desenvolvimento de mudanças curriculares e práticas colaborativas

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ABSTRACT This study aimed to analyze the changes in training induced by the Education through Work for Health Program (PET-Saúde), Interprofessionality edition, and to identify whether the assumptions of Interprofessional Education (IPE) and collaborative practices are being applied in the development of projects. This is a qualitative, descriptive, and exploratory case study, developed in the state of Rio de Janeiro. Open interviews were carried out with 32 actors working in the program, whose contents were analyzed in the light of the theoretical-methodological framework of IPE. Three categories were produced: PET-Saúde/Interprofessionality as a constructive dynamics of collaborative practices; Interprofessionality as a foundation for structuring curricula and pedagogical practices; The evaluation mechanisms of PET-Saúde/Interprofessionality. The Interprofessionality edition triggered assertive experiences from the application of the assumptions of IPE and collaborative practices, such as induction of curricular reforms and the creation of interprofessional disciplines; however, it still does not represent a policy incorporated by teaching institutions. Special attention must be given to the evaluation processes, which are very incipient, and to the sustainability of the advances achieved, which require political and institutional support. PET-Saúde has progressively contributed to changes in teaching and to the dissemination of concepts and assumptions that guide IPE.

KEYWORDS Universities. Teaching care integration services. Interprofessional education. Interdisciplinary placement.

RESUMO *Este estudo objetivou analisar as mudanças na formação induzidas pelo Programa Educação pelo Trabalho para a Saúde (PET-Saúde), edição Interprofissionalidade, e identificar se os pressupostos da Educação Interprofissional (EIP) e das práticas colaborativas foram aplicados no desenvolvimento dos projetos. Trata-se de estudo de caso qualitativo, descritivo e exploratório, desenvolvido no estado do Rio de Janeiro. Entrevistas abertas foram realizadas com 32 atores do programa, cujos conteúdos foram analisados à luz do referencial teórico-metodológico da EIP. Três categorias foram produzidas: O PET-Saúde/Interprofissionalidade como dinâmica construtiva de práticas colaborativas; A interprofissionalidade como fundamento de estruturação de currículos e práticas pedagógicas; Os mecanismos de avaliação do PET-Saúde/Interprofissionalidade. A edição Interprofissionalidade deflagrou experiências assertivas mediante aplicação dos pressupostos da EIP e práticas colaborativas, resultando em indução de reformas curriculares e criação de disciplinas interprofissionais; porém, ainda não representa uma política incorporada pelas instituições de ensino. Atenção especial deve ser dada aos processos avaliativos, ainda muito incipientes, e à sustentabilidade dos avanços alcançados, que requer apoio político e institucional. Conclui-se que o PET-Saúde tem contribuído progressivamente para as transformações no ensino e para a disseminação dos conceitos e pressupostos que orientam a EIP.*

PALAVRAS-CHAVE *Universidades. Serviços de integração docente-assistencial. Educação interprofissional. Práticas interdisciplinares.*

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Introduction

The changes in the epidemiological profile, with the increase of chronic non-communicable diseases and new environmental, infectious and behavioral risks, enhance the complexity of the health care sector and formalize the need to redesign the techno-assistance models and the formation processes, towards the integrality of care and the collaboration and professional performance[1,2].

The proposal globally fomented in the sense of mobilizing those changes is the Interprofessional Education (EIP), the political-pedagogic strategy that promises to prepare the work force to offer more effective care and to respond to the necessities of health care[2,3]. Conceptually, the EIP occurs when students of two or more professions learn about the other, with the other and with each other in order to improve the professional collaboration and, consequently, improve the results in health care[2,4]. It is supposed that, through the professional inter-relations, the students will learn how to work in a planned, integrated communicative and intentional manner, seeking for equate the health care problems that arise in the routine of the services. Thus, opportunities of shared learning in the real context of health care production are indispensable.

The Unified Health System (SUS), under the aegis of a techno-assistance model based on the strengthening of the primary care and on the shared action of the team, has been, historically, trying to establish a formation process coherent with its guidelines. The EIP assumes singular importance in this context, not only because it is admitted the premise that SUS is interprofessional, but also because formation and exercise proposals for the interprofessional practice already exist in the Brazilian reality[5,6].

Although the national systematized experiences of EIP are yet recent, there is a consistent repertoire of strategies in course and others predicted to the level of macropolitics that may induce the implementation of this approach in Brazil[6]. An outstanding milestone for the promotion of the EIP was the establishment of The National Politics of Permanent Education in Health, that consolidated essential aspects for the developing of formative actions for the health workers under the logic of the integration education-service-community, and that took over the services of SUS as privileged scenarios for the apprenticeship[7].

Under the precepts of this policy, arise different initiatives focused on the reorientation of the formation processes in the undergraduate health courses, for example the Program of Education through Work for Health (PET-Saúde), constituted in 2008 from the accumulation constituted in anterior experience of integration education-services. As a public policy, it aims to consolidate the constitutional role of SUS of ordering the formation and of sensitizing and preparing professionals for the adequate confrontation of the different realities of life and necessities of health of the population[9].

PET-Saúde holds differentiated strategic components, such as the insertion of students in the reality of SUS services and the process education-apprenticeship enabled by tutorial interprofessional groups. It operates through direct intervention projects, based on situational diagnosis of the territory, that unfolds in actions of education, research and extension and that involves students, teachers, health care teams and the community user of SUS, aiming to assure an integral approach of the health-disease processes[9].

Since its institutionalization, the program went through a successive incorporation of guidelines for the developing of projects, adopting as focus priority areas of SUS, such as primary attention and health surveillance. Many were the advances observed, especially regarding the fomentation of the integration education-service, to the developing of new

pedagogic practices and the deepening of the knowledges in public health by the students[10,11]. However, it could not alter the fragmented model of the curricula[12].

Considering this, in 2015, the program was redesigned, having its focus directed to the curricular change under the precepts of the interdisciplinarity and of the interprofessionality. Following this approach, two editions were launched. The first, PET-Saúde/GraduaSUS, was able to mobilize movements of discussion between different courses, aiming to incorporate the theoretical-methodological elements of EIP as foundations for structuring the curricula and of institutional pedagogical projects, and also lead to the creation of integrated disciplines. In spite of being punctual, those initiatives reaffirm the power of the program, subsidizing the elaboration of a new edition. PET-Saúde/Interprofessionality[12-14].

Launched in 2018, the Interprofessionality edition highlighted the promotion of the EIP and of the collaborative practices from the constitution of the tutorial groups minimally conformed by three different health courses. Given its uniqueness and constituted as the first macropolitics initiative of induction of the EIP, this edition was taken as an object of analysis of this study, aiming to answer the following questions: Which are the changes in the formation induced by the PET-Saúde/Interprofessionality? Is this edition collaborating with the developing of strategies aligned with the assumptions of the EIP and collaborative practices?

Considering the exposed, the research targeted to identify if the assumptions of the EIP and of the collaborative practices were applied in the development of the PET- Saúde/Interprofessionality projects and to analyze the changes in the formation induced by this edition.

Material and methods

It is a case study, exploratory and qualitative, developed in the state of Rio de Janeiro. The population of interest is composed by members of the PET-Saúde/Interprofessionality, whose projects were developed by education institutions that were also participants of the edition of the GraduaSUS. Met this criterion five projects, whose coordinators were invited to integrate the study and to indicate other members of the tutorial groups, being, at least, one preceptor, one tutor and two academics of different courses (Physical Education, Nursing, Pharmacy, Medicine, Nutrition, Obstetrics, Dentistry, Psychology, Collective Health and Social Work). Expressed interest in participating in the research and integrated the sample 32 subjects (*tables 1 and 2*).

Table 1. Distribution of subjects by Institutions of Higher Education. Rio de Janeiro, 2021

Subjects	IES* A (federal)	IES* B (federal)	IES* C (federal)	IES* D (state)	IES* E (private)	Total
Project Coordinator	1	1	1	1	1	5
Preceptor	2	1	2	2	2	9
Tutor	1	2	2	1	1	7
Academics	2	2	3	2	2	11
Total	**6**	**6**	**8**	**6**	**6**	**32**

Source: own elaboration.

*IES: Higher Education Institution.

Table 2. Distribution of subjects according to the professional formation. Rio de Janeiro, 2021

Subjects	Coordinator of project	Preceptor	Tutor	Academics	Total
Administration	1	-	-	-	1
Nursing	1	3	3	2	9
Physiotherapy	-	2	-	-	2
Letters	1	-	-	-	1
Medicine	1	2	2	3	8
Nutrition	1	1	-	3	5
Psychology	-	-	2	1	3
Social Work	-	1	-	2	3
Total	**5**	**9**	**7**	**11**	**32**

Source: own elaboration.

The data was collected in 2020 through individual interview, carried out virtually in platform of web conference due to the social distancing measures imposed by the COVID-19. The interviews were oriented by a non-structured script, lasted an average of 60 minutes and were recorded with the consent of each participant.

The analysis of content for data treatment was used, applying for the stages of pre-analysis, exploring, inference and interpretation[15]. The pre-analysis consisted in the transcription of the interviews, originating the analytical *corpus*, followed by the fluctuating reading of the material. In the exploring, were highlighted the scraps of semantic character of the *corpus* that could demonstrate correspondence with theoretical-methodological elements predicted in the guidelines for the construction and evaluation of the educational contexts in the perspective of the EIP[16] Those scraps were reunited by similarity in three categories (*box 1*), whose findings were interpreted and confronted with the literature about the subject.

Box 1. Categories elaborated from the *corpus* of the research and its corresponding e theoretical-methodological elements in Education Interprofessional (EIP) verified. Rio de Janeiro, 2021

Categories	Elements of EIP verified(1)
PET-Saúde Interprofessionality as constructive dynamics of collaborative practices	Two or more professions learning together; Development of attitudes e competencies for collaborative practice ; Apprenticeship on each profession's role; The professional collaboration as care quality improvement strategy.
Interprofessionality as foundation of structuring of curricula and pedagogic practices	Interprofessional apprenticeship shall be predicted in the curricular structure, integrating the modules/unities; Combination of common and shaed pedagogic methods; Using methodologies of apprenticeship that integrate different interactive and contextualization resources ; Pedagogic resources that promote shared apprenticeship between different professions; Apprenticeship based on inclusion and centralization of the user and on the effective participation of the professionals of the service in education pratices.

Box 1. (cont.)

Categories	Elements of EIP verified[1]
The evaluation mechanisms of PET-Saúde/Interprofessionality	Continuous evaluation processes of the apprentices, that verify the development of competencies and professioal attitudes; Periodic evalution of the program that allow the replanning of the pedagogic methods; The results of the educational practices shall be divulged to assist the development of new experiences that improve educational contexts.

Source: own elaboration.

[1]Elements predicted by Barr[16].

The study project was submitted and approved by the Committees of Ethics in Research of the Institute of Social Medicin/UERJ (Opinion nº 3.899.608), University Hospital Pedro Ernesto/UERJ (Opinion nº 3.977.438), University Hospital Antônio Pedro/UFF (Opinion nº 3.982.264), Municipal Department of Health of Rio de Janeiro (Opinion nº 3.993.894) and Municipal Hospital Dr. Munir Rafful (Opinion nº 4.039.647). The Inform Consent Form was sent to the interviewed by e-mail and returned signed by the same path. Aiming to preserve the anonymity, the subjects were identified by a letter (C – coordinator, T – tutor, P – preceptor, A – academic), followed by an arabic number.

Results and discussion

From the reports, were identified the central elements that subsidize the EIP and the collaborative practices in the ambit of PET-Saúde/Interprofessionality, being those represented in three categories.

The PET-Saúde/Interprofessionality as constructive dynamics of collaborative practices

It was highlighted that the main theoretical – methodological elements that base the objectives of settled initiatives in the EIP set out in the pedagogic processes developed in the ambit of the PET-Saúde/Interprofessionality. Among them, the multiprofessional composition of the learning groups, characterized by the presence of, at least, two different health professions. It is noteworthy that this composition, *per se*, does not imply the applicability of the precept of interprofessionality; it is necessary that the learning processes promote the adoption of new postures, relations and ways of perceiving the other professions[17].

> *[...] The program reveals, through livingness, how important it is the complementarity of the professions, how important it is to support the other [...]. The services are interprofessional, there is the pediatrician, physiotherapist, speech pathologist, social worker and it is very nice, because the approach becomes integral.* (A1).

However, it is yet essential to assume the intention of promoting the development of the collaborative competencies, comprehended as those that enable the team work resolutive and aligned to the health care needs[18]. Team work in the perspective of interprofessionality means to act with different professions/knowledge clusters, whose arrangements my transit collaboratively between specific areas, promoting the qualification of practices[19].

The competence can be understood as the capacity of to mobilize and to put into action a range of knowledge, abilities and attitudes, seeking resolution of problems and the confrontation of situations of unpredictability[20]. It holds three dimensions: knowledge, that involves the formal knowledge that can be

translated in facts; know-how, that belongs to the sphere of procedures and techniques; and to know-be/act, corresponding to the behaviors and to the social and affective relationships[21].

Applied to the work in health, the concept of competence entails integrating different knowledge that may allow the diagnosis and the problematization of the reality, the proposition and implementation of confrontation and complex decision-making strategies. To be competent is to be an agent of changes, and requires partnership, dialogue and power relations between different actors interwoven in the reality that is expected to be changed. In this direction, it is clear that EIP and permanent education share common objectives and benchmarks[22], as insinuates one of the interviewed:

> *I think this is the true formation sustained by permanent education. Is when we can see a new possible world from the presence of the others. When I have an encounter with an user, I project one thing, another professional projects another thing; and the fact that we are together creates the possibility of a new world.* (T5).

Both pedagogic approaches are political bets committed with democratic manners of building knowledge, to articulate education and work and to transform the health care practices. Thus, they demand the mobilization of different actors, the overcoming of disputes and conflicts and the building of dialogues and mobilizing actions for changes[22]. An important distinction between those approaches is that EIP has the explicit purpose of developing a range of competencies considered essential to the praxis of the interprofessional work.

Different international organizations have been working for the recognition and in the construction of a range of collaborative competencies, that may be adapted considering the context in which EIP is implemented. The best known productions are the matrixes of competence of the Canadian Interprofessional Health Collaborative (CIHC)[23] and of the American organization Interprofessional Education Collaborative[24]. Both consider collaboration as an interprofessional process of communication and decision making that allows that the knowledge and the individual and shared abilities of different health professionals may influence synergistically the patient care.

From this perspective, it is considered crucial the promotion of competencies that allow the members of the team to communicate and to solve their conflicts ethically, assuring equity in decision-making; have clarity about the roles, responsibilities and limitations of each professional category involved in care, that has to be centered in the patient/family/community, and formulate, implement and evaluate care practices in a joint manner, aiming to improve the results in health care[23,24].

On that matter, the testimonies of this study demonstrate that the Interprofissionality edition has been generating listening movements, of knowledge of different professional roles, and of discussion about which competencies can potentially add value to collaborative practices in Brazilian context.

> *When it is understood what is a health care team, that it has to ork together and that, to achieve this, are necessary collaborative competencies, we realize that there are questions that need to be elaborated jointly for decision--making in respect to the best therapeutics to be applied to the patient.* (C2).

> *When we know what the other does, we value more the other´s profession. We realize that we cannot handle everything alone. It sounds strange to me when I am going to the regular curricular internship, [...] because I do not have my Physiotherapy, Physical Education colleagues to support me. I feel anguish, a feeling of impotence.* (A2).

The interviewed highlighted the importance of understanding first the role of each profession, to understand them clearly for, then. have the possibility to establish common goals. For them, EIP makes possible to overcome the disciplinary 'silos', which means to escape professional and communicative niches, in which each profession adopts a specific language.

Literature also brings up this discussion and reveals that, although the developing of a professional identity is a fundamental part of professional education, a disadvantage in this process, when it has single profession character, is that members of one group perceive the attributes of other groups less desirable, strengthening the phenomenon of 'professional tribalism'. This construction of rigid identities can lead to tensions and has become a psychological barrier for the communication between different categories[25].

Under other perspective, the interprofessional formation collaborates to allow the professional to delimit more clearly her/his acting field, recognizing hers/his limits and the power of the sharing actions. We talk, here, about an interprofessional identity, that values the creation of dialogue spaces, apprenticeship and trust and the establishing of closer interpersonal relationships[26].

> *The student sees that the care is extended. The student understands that this is the proposal of the PET-Saúde, and gets involved in the activities proposed, learns what is interprofessionality and develops an understanding about her/his own role in the health care team, in the care of the user.* (T1).

> *Other professions are more valued. We can also observe that students understand better their own profession and competencies; and they can see that their own competencies interweave to the competencies of other professions, that are interconnected, that we depend on each other to care for the users in a more resolutive manner*. (P1).

PET-Saúde/Interprofessionality has been stimulating the developing of actions for interaction, communication and collective work between different undergraduate courses. Dialogue and the perception of being in an ambient that provides support allowing the expression of disagreements are *sine qua non* conditions for the recognition of common objectives, values, responsibilities and guiding compromises in team work[27].

The unfoldings of this collaboration reflect in the modification of the practices, contributing for the central objective of the EIP: to improve the results in health care[28]. To reach this objective implies in moving for the team work, yet this is formed by different actors that have their own conceptions build throughout their life and their academic-professional path. Together, these actors may adopt a resistant attitude, or leave it, becoming committed and willing to break and untie from a strictly individual attitude for, then, participate actively in the collaborative learning process.

> *This PET-Saúde is unique, because it prioritize an issue that will impact directly on the quality and on the manner that the assistance happens. Many times we do not know the other´s work, the limitations of one and another, and this ends up damaging a range of care practices that could be fulfilled when you know the other´s work. You may add this knowledge and this will reflect in a much more holistic care, and complete and will bring satisfaction for those users.* (P9).

The change in the attitude is the trigger that allows the collaborative practice to happen and to maintain an integrated and integral practice, that will benefit patients/families/communities, making it possible the best use of the resources available and the developing of more creative and effective care actions[29]. Therefore, it is paramount to discuss and to apply the assumption of the EIP in the promotion of a reflexive and collaborative apprenticeship.

Interprofessionality as a basis for the structuring of curricula and pedagogic practices

The construction of educational contexts in the perspective of the EIP implies in assuming the intention of forming critical, ethical and capable professionals, to work collaboratively and with social responsibility. Such intentionality demands organizing curricula and content and using pedagogic methodologies that stimulate the promotion of knowledge and cooperative capabilities[18].

About this matter, the narratives reveal that there is an ongoing process of induction for the curricular reforms in different undergraduate courses involved in PET-Saúde, yet the curricular changes under the precepts of EIP do not represent a policy incorporated by the education institutions represented in this study.

> *Physical education has already managed to implement an EIP discipline; the Nursery is using the egresses of PET-Saúde: the students enter are received by the students who have already participated to talk about EIP; the Nutrition course also has a proposal of discipline. We are officially awaiting for the Medicine course.* (C1).

> *We noticed that it is very difficult to discuss interprofessionality in the Structuring Teachers Cores. We understand that this discussion is necessary to allow EIP to happen in the undergraduate courses. [...] The idea is that we, teachers connected to the PET-Saúde and professionals of the service, can be inside those cores to discuss the importance of the incorporation of interprofessionality in the curricular matrix.* (T2).

Those findings are not substantially different from those already published about the GraduaSUS edition, which suggest that the construction of a project that contemplate the EIP as a structuring foundation of pedagogic projects and curricula is still a challenge for the education institutions[14]. Nevertheless, it is already possible to perceive changing attitudes and movements of discussion and collective construction that lead to the strengthening of EIP as an approach for choosing to transform pedagogical practices.

For Barr[16], the interprofessional apprenticeship, besides being predicted in the curricular structure, integrating the education modules, presupposes the combination of common and shared methods and of interactive contextualizing pedagogical resources. For being rooted in the apprenticeship in service, PET-Saúde is, *per se*, an educational proposal contextualized in reality.

> *[...] we practice in the field and from specific demands that arise in the health secretariat, in the community, we continuously build interprofessional activities with the students and preceptors. We work a lot based on experiences lived by those professionals with those students.* (C1).

In this direction, members of the program profit from the different health care devices, already used in the service´s routine, as pedagogical resources promoting the shared apprenticeship between different professions. They are, thus, besides being interactive, contextual resources that come from health care needs and apply to them. Are examples: interprofessional practice, home visit, singular therapeutic project, rounds, clinical cases discussions and projects in the communities.

> *We implemented the interprofessional practice. The doctor, at the moment of the consultation, invited the Nutrition student, the Nursery student, and the population perceived this action as very positive, because when the user entered the room, he already encountered. all those looks directed to his demand.* (C1).

> *We implemented a group of mechanical pain. The Medicine students were responsible for the dry needling, but all the other students could find the trigger points. [...] Everybody worked together because, for an example, the patience experienced*

some sort of pain, but was also overweight, and then it was important to orient about the overweight matter. Then, I already got in along with the Nutrition, the Physical Education student talked about elongation and the Nursery talked about self-care. (A2).

For being contextual and for triggering actions that aim to respond to health care demands of the territory, PET-Saúde promotes apprenticeship based on inclusion and on the centrality of the user, as well as on the effective participation of the professionals of the service in the educational practices. The narratives demonstrate manners of learning and of teaching that put the user in the center of the actions, and that are based on the developing of closer relationships with the communities searching for mobilizations and inclusion of the social movements in the discussions and in the conduction of the services.

This experience has demonstrated that it is possible to construct another manner of teaching the health care professionals and when I say teaching it is two-way street, we teach and we learn at the same time. This process of teaching-apprenticeship we manage to implement from the experience, from experimenting of the user´s health necessities, to make the teams take the user as the center of their actions. It is not easy, but we have been able to provoke the health care services net towards this. (C4).

We had discussions about home visits that were carried out in the ambit of the project, about gender, race. We thought about the racial crossings deeply. And this impacts when we think about black people´s health; it makes a huge difference that the health care professionals are being formed with the ability to discuss this concretely. [...] To know about health is, above all, to know how to do. The questions always need to be answered locally, territorially and never from a colonization effect, of previous understanding, but of an understanding that has to be constructed 'with'. Then, I understand that the benefits are many for the local community and they multiply. (T3).

PET-Saúde, rooted in the proposal of the EIP, was referred as revolutionary, challenging, results generating, bold, contemporary and the possible path for formation; since, from it, it is possible to foresee another logic, and education route that makes more sense for being more integrated, active and

To be and to have been welcomed in the service as PET-Saúde did allowed me to transform my vision of how could have been the undergraduate course for me [...]. It is not even a matter of feeling that exists a better preparation, it is a matter of the route making more sense, than what I lived as a student making more sense, on a more integrated manner, in a more active manner. (A4).

Enhanced as a change inducing policy, the interviewed alluded that the PET-Saúde helps to assure the ethical commitment of the public institution with the public policies; and that its aim of being a transformation trigger is fulfilled. Therefore, expressed the desire that the curricula shall be increasingly rethought beyond those who participate in PET-Saúde, so that, when it ends the proposal and changes achieved will be sustained inside the curricular projects in the institution.

It no longer makes sense to think the formation out of the world of work, since it is only from it that it is constructed a critical-reflexive reading of the reality that transforms the actors in active subjects. It is in this perspective that the integration education-service-community, urged by PET-Saúde, aims to transform the work process in a dynamic movement, the praxis; namely in a social activity consciously intentional, oriented to an objective[30]. By incorporating an intentionality, placed by EIP as a qualification of the practices and of the results in health care, the subjects may interfere in the transformation of the socio-sanitary reality.

This power of the PET-Saúde was already demonstrated by previous studies referring to other editions of the program[11,13,14]. However, there is still the perception that the initiative

cannot reach, in a more significant manner, a wider range of subjects. Thus, a common point observed in those studies refers to the necessity of expanding them, in order to enable the participation of a larger number of institutions, undergraduate courses, health care unities, students and workers at SUS. This expectation enhances the indispensability of the institutionalization of this proposal, that can and must be fomented by the university community and by the health care services.

The mechanisms of evaluation of PET-Saúde/Interprofessionality

The change in the formation paradigm also demands changes in the evaluation processes, that may be considered pillars for the recognition and the effectiveness of the EIP. Adequate evaluation contribute to the personal and professional growth of the actors involved in the educational intervention, and for the improvement of the educational pedagogic and institutional process, assuring that professionals endowed with the essential attributes for the collaborative work are being prepared. For Barr[16], the evaluation mechanisms have to assure continuous evaluation processes of the apprentices that may verify the development of competencies and attitudes, allow the planning of the pedagogic methods, and whose results have to be disclosed in order to assist the planning of new EIP experiences.

Moreover, considering that, in the ambit of PET-Saúde, the implementation of the EIP is being induced from the introduction of students and the developing of actions in the SUS scenario, the evaluation processes also shall consider the impact in the health care results. From this point of view, the evaluation is constituted in an act of apprenticeship capable of assuring the formation progress of all the actors involved in education, and an enabler instrument of experience exchange and of planning of actions that conduct to best care practices[30].

In this study, it was observed that the evaluation processes of EIP employed in the context of PET-Saúde were considered incipient or were not mentioned. Although it is recognized that the Interprofessionality edition provoked changes in education and in the service, the members do not have evaluation instruments, indicators and systematized results that may demonstrate the impacts of the program.

> *We see teams making movements in their work processes from the effects of PET-Saúde, we see conducts being reoriented, students responding in a more conscious manner. [...]. We did not measure this and it is something that we had to measure, the impact. I am talking about a result indicator of the local population [...].* (C4).

> *There is no evaluation process [...]. We had to evaluate if there is any change in those students that are entering and leaving the PET-Saúde, in the perspective of interprofessional work [...]. The evaluation processes are still quite incipient. We do not know, in fact, if we are being capable of reaching the target.* (T4).

Some tutorial groups use intra-group evaluation strategies and of displaying the results reached with PET-Saúde, in general fomented by teachers and students that aim to narrate and to publish their experiences through scientific papers. Such movements are isolated, non-institutional and non-governmental, but represent an effort of accompanying the actions developed and the benefits perceived in the educational routine.

> *We have been trying to accompany, to follow-up the students that left PET-Saúde. [...]. We have many narratives, articles talking about their change of point of view and about the importance of another kind of work in health care. We have a teacher that also published and article that goes in this direction [...].* (T2).

In the GraduaSUS edition, it was perceived an effort from the Ministry of Health in in

undertaking, for the first time, a nationwide systematized evaluation process, about this formation model reorientation initiative, whose results subsidized the elaboration of the Interprofessional edition[31]. Nevertheless, the results published indicate the lack of permanent evaluation mechanisms that identified the strengths and weaknesses of the program and, therefore, would subsidize the necessary adjustments for its improvement[12,13].

Were also predicted monitoring and evaluation mechanisms of the development of the projects of PET-Saúde/Interprofessionality, that would be monitored through reports and narratives of experiences emitted by the executing institutions, *in loco* visits carried out by ministerial advisors and monitoring and evaluation researches[32]. This aspect was mentioned by an interviewed, whereby the advisors' visit was an opportunity for joint learning, although not enough for the production of data that that can contribute for the program's sustainability and the EIP's approach.

There are varied patterned instruments available to determine the satisfaction of the apprentice, the changing attitudes and the manners how the competences are being integrated to the everyday practice of the students. However, what can be observed is that the literature about the theme values more the attitudinal dimension (being) than the conceptual (knowing) and the procedural (know-how)[33] Moreover, the national evidences about education and work experiences rooted in EIP do not have structured proposals on the collection and analysis of information that measure and judge their effects on practice and the results in health care.

For Carvalho et al.[34], the evaluation procedures do not yet belong to the institutional

culture, are scarcely incorporated to the practices and have, almost always, a prescriptive and bureaucratic character. When employed, may recover the commitment and the co-responsibility between the academy and the health care services, contributing to the developing of an organizational culture and for the process of institutionalization of the evaluation.

The public policies of the programs, projects and action that support them need to assure efficient and effective answers to the public character matters. In this sense, all the policies implemented shall be monitored and evaluated, in a transparent and democratic manner[35]. Considering that EIP, through the PET-Saúde, constitutes a public strategy aiming to instigate transformations of the education and working professional practices to produce significant results for the qualification of the health assistance, the evaluation processes are also applicable and required.

Monitoring and evaluation can be perceived as part of a wider effort to improve the formulation of public policies, collaborating to improve the planning and the administration of the interventions in course, once they measure their effects and appreciate the influence of the ambient and of the context in which they are implemented[35]. To evaluate the initiatives of introduction of the EIP in the undergraduate courses in health, to discover the effect of this intervention in education and in SUS, can assure to this approach in a space of recognition and to subsidize processes of decision-making based on evidences that aim to improve the strategies used for their implementation.

Final considerations

In spite of the different advances achieved by the previous versions of the PET-Saúde, fundamental for the structuring of the new arrangements that target the effective transformation of the education-apprenticeship; it is from the results of the Interprofessionality edition that are identified more robust integration processes, provoking an inclusive movement of the concepts of EIP and of collaborative practices, not only in the inner ambit of the universities and services of SUS, but only in the territories where health care is produced.

This study succeeded to demonstrate that, assuming as common thread the integration of education-service-community and as central focus the curricular change under the precepts of EIP, the PET-Saúde/Interprofessonality edition deflagrated assertive experiences of education-apprenticeship in SUS scenarios. Besides mobilizing curricular reforms and the creation of interprofessional disciplines, the program is managing to promote collaborative attitudes and competencies. In this sense, an attitude of openness for the alterity, opposing to the imprisonment in their own professional clusters, stands out. As impacts, are perceived behavior changes in front of the collective, recognition of its own functions and of the different professional roles, increasing of the implication in the exercise of co-production and co-responsibility for the care and its results.

Being anchored in the EIP premise of "learning together to work together"[2], the actors of the PET-Saúde/Interprofessionality, in the SUS scenarios, draw upon management and production of care devices to promote the interactive, shared and collaborative apprenticeship among students and workers. They work, therefore, as inclusive pedagogic resources for the users and contextualized to their health care demands. From this point of view, the structured and performed collectively actions demonstrate that it is possible to teach and to learn from SUS' daily routine.

The conquests achieved through interprofessional initiatives demonstrate availability of the actors of education and service to sever from the education processes and work based on the hierarchisation of the knowledge cores and of the power and authority relations[22]. However, the dynamics of PET-Saúde and the approach of EIP did not yet manifest as structuring policies of the undergraduate courses, whose impediments for their institutionalization yet persist. Special attention must be given to the evaluation processes, yet quite incipient, that do not enable the systematization of the evidences about the impacts of the initiative in the formation, professional action and in the results in health care.

Another challenge is the sustainability of the advances achieved, what requires investment in resources, pedagogic methods, strategies for qualification of teachers and preceptors; just as greater political support to the education institutions to allow them to deepen and to assure the perenniality and legitimacy of EIP in the reorientation policies of the formation.

Even though this study has analyzed the PET-Saúde/Interprofessionality from the experiences circumscribed in a federative unit, it is proven that it has been contributing progressively for the transformations in the education and for the dissemination of the concepts and assumptions that orient EIP among students, teachers, professionals and managers.

Collaborators

Brinco R (0000-0001-8563-3525)* has contributed for the conception of the article, collection and data interpretation, preparation of the draft, critical content revision and final approval of the manuscript. França T (0000-0002-8209-9811)* and Magnago C have contributed for the analysis and data interpretation, preparation of the draft, critical content revision and final approval of the manuscript. ■

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