The Indigenous Tutorial Education Program (PET)—Actions in Health has been developed since 2010 at the Federal University of São Carlos, Brazil, and seeks to train agents capable of collaborating in the improvement of indigenous health conditions and in popular communities. Several indigenous people have passed through the group since its creation. There are also some indigenous peoples who have already graduated and are present professionally in different contexts. Thus, this article presents research that sought to map the group’s former members, in the first twelve years of its existence, and to know their current experiences and the period in which they were participants. This is a study with a quantitative and qualitative approach, using documental survey, sessions and semi-structured interviews. There were 46 participants in the group, 39 of whom were graduates, with a great diversity of self-employed courses, regions of Brazil and indigenous peoples. They developed several activities in research, teaching and extension, with interesting relationships with their graduations and with their permanence in the institution. The effects of participation in the group and the relationship between their participation and daily professional practices were noticed, including those related to the COVID-19 pandemic.

Keywords: indigenous peoples, health of indigenous peoples, higher education policy, public policy, COVID-19
O Programa Educação Tutorial Indígena –Ações em Saúde é desenvolvido desde 2010 na Universidade Federal de São Carlos, Brasil, e busca a formação de agentes capazes de colaborar na melhoria das condições da saúde indígena, nas comunidades populares e na valorização das práticas tradicionais de saúde indígena. Vários foram os indígenas que já passaram pelo grupo desde a sua criação. Também há parte dos egressos que já se gradou e estão atuando profissionalmente em contextos variados. Assim, neste artigo é apresentada uma pesquisa que buscou mapear os egressos do grupo, nos doze primeiros anos de sua existência, e conhecer suas experiências atuais e no período em que eram participantes. Este é um estudo de abordagem quanti-qualitativa, com uso de levantamento documental, questionários e entrevistas semiestruturadas. Foram 46 participantes do grupo, sendo 39 egressos, com grande diversidade de cursos de graduação, regiões do Brasil e povos indígenas. Desenvolveram atividades diversas em pesquisa, ensino e extensão, com interessantes relações com suas graduações e com a permanência na instituição. Percebeu-se os impactos de participação no grupo e relação de sua participação com as práticas profissionais cotidianas, inclusive relacionadas à pandemia COVID-19.

El Programa de Educación Tutorial Indígena Acciones en Salud se desarrolla desde 2010 en la Universidad Federal de São Carlos, Brasil, y busca formar agentes capaces de colaborar en la mejora de las condiciones de salud de los indígenas y en las comunidades populares. Por el grupo, han pasado varios indígenas desde su creación y algunos ya se graduaron y se encuentran trabajando profesionalmente en diferentes contextos. Este artículo presenta una investigación que buscó dar seguimiento a los exintegrantes del grupo, en los primeros doce años de su existencia, y conocer sus experiencias actuales y el periodo en que fueron participantes. Se trata de un estudio con abordaje cuantitativo y cualitativo, y que utiliza encuesta documental, cuestionarios y entrevistas semiestructuradas. El grupo se conformó de 46 participantes, 39 de los cuales son exparticipantes, con una amplia gama de cursos de pregrado, regiones de Brasil y pueblos indígenas. Desarrollaron diversas actividades de investigación, docencia y extensión relacionadas con sus estudios y con su permanencia en la institución. Se advierten los impactos de la intervención en el grupo y la relación entre su participación y las prácticas profesionales actuales, incluso las que tienen que ver con la pandemia de la COVID-19.

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Palavras chave: povos indígenas, saúde das populações indígenas, política de educação superior, ações afirmativas, COVID-19

Palabras clave: pueblos indígenas, salud de poblaciones indígenas, política de educación superior, política pública, COVID-19
**INTRODUCTION**

There have been recently programs and projects focused on affirmative action that have provided specific processes for indigenous people to enter higher education in Brazil, especially since the beginning of the 21st century (Baníwa, 2019).

Affirmative action came loaded with a variety of meanings, reflecting the historical experiences of the other countries in which it was developed (Paladino & Almeida, 2012). According to Feres Júnior and collaborators (2018), three key arguments justify affirmative action policies: reparation, distributive justice and diversity, and at least one of these points has always been present in the various countries in which they have been implemented.

The Federal University of São Carlos (UFSCar) approved reserved places for indigenous students in 2007 and later, in 2008, the institution’s first indigenous entrance exam was held (UFSCar, 2016).

It’s been fifteen years since the first indigenous entrance exam at UFSCar and, over the years, important achievements can be highlighted from the development of a decentralized selection process that has made it possible to double the number of applications annually, in addition to the fact that the number of indigenous students graduating is steadily increasing (UFSCar, 2016). This important step allows, in addition to opportunities for professional growth, the exchange of experiences in teaching, research and extension activities, as well as the breaking down of stereotyped patterns shaped by society since the colonial period, which can even lead to the construction of new intercultural knowledge (Luna et al., 2020).

Over the years, the collective of indigenous students (the Indigenous Collective) at UFSCar has been organizing itself and fighting for its visibility in the institution, with the creation of the Centre for Indigenous Cultures (CCI in the Portuguese acronym), a student organization representing indigenous students. Institutionally, there have been actions that proved essential for the permanence of students, such as the permanence grant, housing, food and pedagogical support, which are part of the affirmative action policy.

They have organized national events, such as the first National Meeting of Indigenous Students (ENEI), the National Meeting of the Brazilian Society for the Advancement of Science (SBPC), and workshops, with an emphasis on spaces with the presence and protagonism of indigenous people (Cohn, 2018).

In 2010, the Ministry of Education (MEC) issued Decree No. 976 creating the PET Groups (PET is an Portuguese acronym for Tutorial Education Program) Conexões de Saberes (Connections of Knowledge), with a view to developing innovative actions to expand the exchange of knowledge between grassroots communities and the university, valuing the role of university students benefiting from affirmative action within Brazilian public universities, contributing to the social inclusion of young people from rural, quilombola, indigenous and socially vulnerable communities. The PET program had already been running since 1979, but at that time it created interdisciplinary groups focused on building new knowledge and integrating knowledge (Freitas, 2015; Ministério da Educação, 2010; Rosin et al., 2017).
Thus, two specific groups for indigenous students emerged at UFSCar - the PET “Health Actions” and the PET “Indigenous Knowledge” (Callegari et al., 2015). At the beginning of the program, the PET Indigenous Health Actions had twelve indigenous people, who were regularly enrolled in health courses, and these were the first so-called “Petianos” (belonging to the PET), who were tutored by a professor from the Medicine course. Having recently returned from their villages and bringing with them strong cultural traits, the first Petianos faced challenges in their new socio-cultural reality, difficulties of an economic nature and, above all, adapting to the pedagogical model of university teaching (Callegari et al., 2015).

The PET Indígena - Ações em Saúde has been running since then and seeks to train agents capable of helping to improve indigenous health conditions in working-class communities and to value traditional indigenous health practices, linking the fields of teaching, research and extension.

The group currently has twelve scholarship holders and four non-scholarship holders, students on undergraduate courses in: Nursing, Medicine, Physiotherapy, Gerontology, Occupational Therapy, Physical Education, Biology, Special Education, Pedagogy, Music and Image and Sound.

A number of indigenous people have participated in the PET Indígena - Ações em Saúde since its creation, but their experiences and relationships with their degree courses have not yet been investigated. There are also some graduates who have already finished their degrees and are working professionally in a variety of contexts.

Thus, this article presents a study that was planned and developed by five indigenous people who are current or former participants in the group, guided by the tutor, who felt the need to analyze the group’s historical trajectory. The research sought to map the group’s graduates in the first twelve years of its existence and to find out about their current experiences and those of the period when they were “Petianos”.

**METHODOLOGY**

This was an exploratory study with a quantitative and qualitative approach. The quantitative part of the research was retrospective and cross-sectional, using documentary data and a questionnaire, with descriptive analysis. The choice to carry out part of the qualitative research was due to the fact that it delves into a reality of social relations and everyday life, which makes it difficult to objectify the natural sciences, and at the same time makes it possible to move towards subjectivity and understanding of phenomena and processes, in a field marked by specificity and differentiation (Minayo, 2014).

Qualitative research is much less concerned with aspects that are repeated and much more attentive to their socio-cultural dimension, which is expressed through beliefs, values, opinions, representations, forms of relationship, symbology, uses, customs, behaviors and practices (Minayo, 2017).

This research was carried out by five indigenous people, one of whom was a PET graduate and four current PET students, under the guidance of a family and community doctor who works in the field of indigenous health. This characteristic of the
authors, who are directly involved with the research topic because they are part of the same experience, positions them as committed authors and in a position that favored dialogue with the interviewees and the information collected.

The criteria for inclusion in the research were: indigenous person who had studied at UFSCar, graduated or not; graduate of PET-Indigenous Health Actions. There were no criteria for excluding participants.

The construction of the research data was carried out in two stages, as described in the following sections:

*Stage 1: Mapping the graduates*

Through a documentary survey of the materials available in the group’s internal archives and the Ministry of Education’s Tutorial Education Program Management System (SIGPET), a mapping was made of all the indigenous people who took part in PET-Indigenous Health Actions, known as graduates, between 2010 and 2022.

The researchers then tried to locate these graduates via email, social networks and key people, and invited them to take part in the research. Once they agreed to take part and signed the Informed Consent Form, a self-administered questionnaire was sent out.

The questionnaire sought to gather information on the profile of the PET graduates, the period they had worked as students, their current professional activities and their general perceptions of their participation in the group.

*Stage 2: Semi-structured interviews*

The interview is a privileged communication technique and is characterized by being a conversation initiated by the interviewer, with a specific purpose, more specifically aimed at building up information for a research object. Thus, in order to get to know the current experiences of these indigenous people, as well as those they experienced during their time as Petianos, we opted to conduct semi-structured interviews, i.e. they had a set script of questions, but with the possibility of broadening and deepening understandings based on what was brought up by the participant (Minayo, 2014). When it comes to interviews, it is important to emphasize that an individual statement also has many collective aspects, requiring this analysis (Minayo, 2017).

After analyzing the questionnaires and looking for a diversity of participants and homogeneity (Minayo, 2017), seven were selected to be interviewed individually. The characteristics for being invited were that they should bring a wealth of experiences related to the group: graduated or still a student; from the health area or a related area; current work in indigenous health or a related area; participation in the group in different years. We chose to select only graduates who had participated in PET-Indigenous Health Actions for more than one year.

The seven selected graduates were invited for individual interviews. Some were unavailable, so other invitations were made until seven were accepted and interviews conducted.
Given that all the interviews were carried out during the COVID-19 pandemic, sanitary social distancing measures were taken and all the interviews were conducted remotely, using the Google Meet virtual meeting platform.

The interviews lasted between 19 and 47 minutes, with an average of 28 minutes and 21 seconds. The interviewers were the Petianos-indigenous authors of this article. The interviewees were identified by the names of typical Brazilian fruits from their regions. This strategy sought to guarantee confidentiality, but also to bring out the essence of the interviewees’ experience and culture, and these names were agreed with the research participants. The names were as follows: Jabuticaba, Guavira, Tucumã, Açai, Caju, Umbu and Buriti.

The interviewees were five women and two men; from the Terena, Tariano, Ba- niwa, Tupinikim, Atikum-Umã and Pankararu peoples; from the states of Mato Gro- so do Sul, Amazonas, Pernambuco, Espírito Santo and São Paulo; they were studying for the following degrees when they were students: nursing, psychology, medicine and special education.

All the interviews were recorded on audio and video and then transcribed in full, ensuring confidentiality by coding the names and other data that would identify the participant. The process of transcribing and checking the material was carried out by the indigenous authors of this article. Once they had been transcribed and the research had been completed, all the recordings were discarded.

The data gathered through the documentary survey and the questionnaires was described using simple measures of frequency and proportion, presented in tables and graphs.

The material from the semi-structured interviews is being analyzed using Thematic Content Analysis (Deslandes et al., 2013). Sorting, fragmentation, identification of nuclei of meaning, categorization and preparation of an interpretative synthesis were carried out, allowing dialogue between the axes identified and the experience of the students, the objectives and initial questions of the research.

Thus, three categories were defined: learning during participation in the PET group; participation in PET as a strategy to stay in undergraduate studies; relationships between participation in PET and professional life.

The results are presented in two parts: first, a description of the mapping of graduates, followed by the participants’ experiences presented in thematic categories. There was a dialog with other research and theoretical discussions by authors in the field.

To begin this research, the project was cleared by the National Research Ethics Committee (CONEP), with CAAE number: 38815120.3.0000.5504.

**RESULTS AND DISCUSSIONS**

*Part 1: Mapping the group’s graduates*

In the first twelve years of the group’s activity, i.e. between 2010 and 2022, there were 46 participants in the PET Indigenous - Health Actions. Of these, seven are still active in the program in May 2023. That makes 39 indigenous graduates.
Of the 39 members, it was possible to recognize that while they were in the group, they were studying for different degrees. There was one participant from Occupational Therapy, Biological Sciences, Computer Science, Materials Engineering, Physical Engineering, Special Education, Linguistics, Image and Sound, Library Science and Information Science. There were two from Pedagogy and three from Physiotherapy and Gerontology. There were four PET students from the Physical Education and Nursing courses. There were seven PET students from the Medicine course. For three graduates, it was not possible to identify their course. Graph 1 shows this description.

Graph 1. Degree courses of participants graduating from the Indigenous PET - Health Actions, Brazil, 2010 to 2022

There is a concentration of courses in the health area, especially undergraduate courses in Medicine, Nursing, Psychology, Physiotherapy, Gerontology, Occupational Therapy and Physical Education. There are courses in areas related to health, especially those linked to education, which also feature prominently, such as Pedagogy and Special Education. There are also other diverse courses, which are not necessarily related to health, but which have made it possible to build bridges with health, such as Computer Science, Materials Engineering, Biological Sciences, Physical Engineering, Image and Sound, Linguistics and Library and Information Science.

Of the 39 graduates in the group, 30 agreed to take part in the research and answered the questionnaire and 9 could not be contacted or chose not to answer.

The age of the participants in the survey ranged from 22 to 47 years old. As for gender, 13 identified themselves as female and 17 as male. As for the participants’ marital status, 23 said they were single, 6 were married or in a stable union and 1 said they were married to someone else.
Table. Profile of participants graduating from PET *Indígena Ações em Saúde*, 2010 to 2022

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
<th>Frequencies</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age range</strong></td>
<td>20 - 25 years</td>
<td>5</td>
<td>17.24</td>
</tr>
<tr>
<td></td>
<td>26 - 30 years</td>
<td>15</td>
<td>51.72</td>
</tr>
<tr>
<td></td>
<td>31 - 35 years</td>
<td>3</td>
<td>10.34</td>
</tr>
<tr>
<td></td>
<td>36 - 40 years</td>
<td>3</td>
<td>10.34</td>
</tr>
<tr>
<td></td>
<td>More than 40 years</td>
<td>3</td>
<td>10.34</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29</td>
<td>100</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Men</td>
<td>17</td>
<td>56.67</td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>13</td>
<td>43.33</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td>Single</td>
<td>23</td>
<td>76.67</td>
</tr>
<tr>
<td></td>
<td>Married/Civil Union</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>1</td>
<td>3.33</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

In terms of ethnicity/people, there was one student from the Arapassó, Dessana, Kaxinawa, Omágua/Kambeba, Piratapuia, Tupinikim, Yepá Mahu/Tukano peoples. There were two from the Balatiponé-Umutina and Pankará peoples. Three from the Pankararu people. Four from the Atikum-Umã and Tariana peoples. And seven from the Terena people. One student declared himself to belong to two peoples, Baniwa and Tariana.

Graph 2. Indigenous peoples of participants graduating from PET Indigenous Health Actions, Brazil, 2010 to 2022
As for their state of origin, 10 are from Amazonas, 7 from Mato Grosso do Sul, 8 from Pernambuco, 2 from Mato Grosso, 1 from Espírito Santo, Acre and São Paulo. It can be seen that the majority of indigenous students came from the states of Amazonas, Pernambuco and Mato Grosso do Sul. This student profile can be justified by two reasons: the lack of affirmative action for access to university in the regions where these students live and the decentralization of the UFSCar indigenous entrance exam (Cohn, 2018; Dal'Bó, 2010; Luna, 2021).

The indigenous entrance exam has been held in different locations and regions of Brazil every year, and this is defined by the institution’s indigenous groups. This profile of indigenous students from different and distant regions of the country at UFSCar has also been described by other studies, and is a striking feature of the institution (Jodas, 2019; Luna, 2021). Graph 3 shows the origins of the students by Brazilian region.

Graph 3. Geographical regions of origin of participants graduating from PET Indigenous Health Actions, Brazil, 2010 to 2022

The graph above shows a higher concentration of graduates in states in the North and Midwest regions. The Northeast region appears next, having stood out in recent years and among the group’s current participants. The South region had no participants in the group, which is also characteristic of the indigenous people who enter UFSCar, since in that region there are a greater number of places for indigenous people through affirmative action (Bergamaschi et al., 2018).
The Southeast region, where UFSCar is located, had only two participants, which reinforces the institution’s characteristic of having many indigenous people from other regions of the country.

The time spent in the group ranged from 5 months to 9 years, with an average of three and a half years, which shows that participation is not just temporary, but long-lasting. Some participants even remain in the group until they graduate. In this sense, it is necessary to recognize the PET as a strategy for indigenous people to remain in universities (Freitas, 2015; Jesus, 2017; Luna, 2021).

With regard to whether or not they completed their course, 13 (43.3%) completed the course they were doing at the time of the PET and 17 (56.7%) did not. It should be noted that some of them are still studying for their degree and others have changed course and/or institution.

Regarding the current occupation of the graduates: 12 of them work in their respective areas of training; eight are still studying for their degree, sometimes on a different course to the one they were on; seven have changed course and institution; one works in a different area to his degree; two said they were unemployed. It can thus be seen that the majority have gone on to work in the health field, which shows that participation in the PET has an impact on their future career paths.

**Part 2: Experiences of graduates**

Category 1: Lessons learned during participation in the PET group

In this first category, participants highlighted activities carried out in the PET, highlighting both positive and negative experiences. The possibilities of gaining new knowledge through extension activities were described as being powerful for the population of São Carlos, as well as for their communities of origin, reinforcing the importance of university extension as a two-way street:

We took part in various workshops and projects. One that we took part in a lot, which is in the Santo Eudóxia community, we did a sex education activity for the students. I can’t remember if it was high school or elementary school. I know we went every fortnight. On a Friday afternoon, we did these activities there (BURITI).

... we spent about three years doing projects on sexual and reproductive health with the students and it was very enriching. We studied, planned and then developed them there, always with what the group thought was important. And it turned out that because we were different, from different peoples, it helped to plan something to develop (GUAVIRA).

And there was this work in the schools, usually we would talk about sexually transmitted diseases, which were the topics they were most interested in... because we were a PET health program, and since they didn’t focus so much on these subjects at school, they asked us to develop them. [...] We both learned and taught (CAJU).

... and the program ended up fostering an interaction between the indigenous students themselves and an interaction with the community, which from the outset we were able to bring back through the activities we carried out in our communities, during the vacation period, provided by the PET (JABUTICABA).
As can be seen from the interviewees’ statements, the group developed activities in the field of health that were not specific to indigenous health, since there were few indigenous residents in the municipality of São Carlos. Thus, the strategy developed at the time was to develop popular health education activities in outlying communities in the municipality, using dialog and collective work. Thus, similar to what Jesus (2017) described in an article discussing the experience of the PET Indigenous Communities at the Federal University of Bahia, we can see the student protagonism in the actions, as well as the possibility of shared construction between the different peoples in collective decisions.

Some participants emphasized the contribution to personal and academic experience, the development of social skills, as well as cultural enrichment in the exchange of experiences due to the diversity of courses, regions and peoples present in the development of activities:

PET provided me with social skills. I was very shy when I came to university, so it gave me knowledge of a very wide range of courses too, because we were students from various areas of health and the humanities. So we exchanged knowledge, exchanged experiences between relatives (AÇAÍ).

... In a way, it gave us training so that we could adapt to teaching undergraduate courses, because we know that undergraduate courses demand a lot from us, especially for those who are a bit more... I like to use that word, a bit more shy, with difficulty speaking. That’s normal, it’s specific to each person. We learn at the PET to break down these barriers in a healthy way because when we’re undergraduates we have a lot of pressure, especially in the form of seminars, there’s a kind of pressure that our psyches sometimes can’t handle and the PET has added a lot in this sense (GUAVIRA).

The indigenous PET program came into our lives, within the university. It helped us a lot to develop the issue of adaptation and these things that we had more difficulty with. What’s more, we work more on indigenous issues, we end up interacting with other relatives from other ethnic groups, from other places (BURITI).

But it was very good, [...] as the student PET member himself said. Speaking of which, it was nice to work with indigenous people because we’re always related to white people, right? And then, no. We worked in an indigenous collective (UMBU).

This meeting of diversities in a protected environment between “relatives”, as indigenous people from different peoples in Brazil call themselves, allowed difficulties inherent to the university environment to be shared and overcome. In the experience of PET Potiguara, in the state of Paraíba, it was discussed that weekly meetings were essential for solving problems in the dynamics of university life (Barcellos, 2015). According to Barcellos, the PET Potiguara guaranteed the indigenous people of that institution moments of sharing and exchanging knowledge and listening, with academic development.

Within the PET Health Actions experience, one of the highlights was the organization of events related to indigenous health, including the Workshop on the Health of Indigenous Peoples and the Conversation Circles on the Health of Indigenous Peoples, which enabled the construction of collective projects that sought to overcome the invisibility of indigenous peoples and issues related to their health in the university environment:

There were the conversation circles on indigenous health that we... I think the people in the group had already been wanting to do something here within the university on
indigenous health, the ideal would be to do it within the disciplines in the courses, but we wanted an activity that was... that we could try to introduce this to the people at the university (CAJÚ).

The Workshop is a seed that was planted at PET and is now growing. It’s one of the things I’m very proud to say that I was part of the development of the workshop and I hope you’ll continue with it, because it’s only grown and evolved. And it’s grown in a big way, so it’s very pleasing for us to see from the outside how much PET is evolving in this and the evolutions that have taken place within PET (GUAVIRA).

It was my first workshop on indigenous health. In fact, I was born in the middle of its creation, so it’s very important to me because I took part in practically all of the event’s processes, including the last one in 1921. Planning and then carrying it out was important because we had this objective of bringing the discussion of indigenous health (AÇAÍ).

There was also a course on indigenous health, which we mediated during the pandemic. It was an introductory course on indigenous health, I remember. This course was good both for us, who were in the organization, as mediators, and also for several other universities, both indigenous and non-indigenous. So, it was a moment of dialog to strengthen this exchange of experiences with non-indigenous and indigenous people (UMBU).

In the interviewees’ speeches, the invisibility of indigenous health issues at university is evident, even in undergraduate health courses where indigenous students are present. Developing actions that highlight and discuss this field of knowledge can break with processes of institutional violence and raise the interest of other students to work in indigenous contexts (Aurora, 2018; Luna et al., 2020).

These activities in the field of indigenous health, as well as the technical visits, were related to maturation and new understandings of indigenous health services, with the emergence of opportunities and professional experience:

... we were often invited to take part in conversation circles outside. I remember one event we went to in Botucatu, at the Botucatu medical congress, and it was really nice to share our experiences. And that was very beneficial for us as “Petianos”, as undergraduates and future professionals. [...] We also had the opportunity to visit the Indian outpatient clinic at Unifesp, which was a technical visit we made, and it was very enriching, because we were able to see how a health service for indigenous peoples worked (GUAVIRA).

There was a concentration of the group’s activities in the field of women’s health and family planning in the first few years of the group’s existence, with a transition to other health discussions, especially indigenous health. These trajectories can be explained by the changes in the group of students over the years and by the training of the group’s tutors, initially a gynecologist and obstetrician, followed by an anthropologist and currently a family and community doctor in the field of indigenous health.

There has also been an increasing rapprochement with education, including a greater number of undergraduate students from the social sciences and humanities, broadening the teaching-learning processes and the exchange of knowledge and experiences of the participants, which may be more related to indigenous ways of building, where there is integration of different areas of knowledge:

For example, in the beginning it was just nursing, or medicine. It’s also an area that we ended up focusing a lot on, which was health, women’s health and so on. Afterwards, this became more widespread, when there was more education and other areas (TUCUMÅ).
... The indigenous PET was only focused on the health area and over time we, the PET students, were able to see that we needed to... we don't talk about health in a single way, we need to talk about health as a whole, we don't talk about health apart from education. Health and education need to go hand in hand (GUAVIRA).

In addition to the group’s specific activities, the participants highlighted their collaboration in the institution’s indigenous collective spaces, especially the welcoming of indigenous freshmen:

We also did, within PET, the welcome, which is very important, with the indigenous students who arrive at UFSCar. Within our reality, within what we could manage, we set up a group, usually with those who were in São Carlos and who hadn’t returned to their city of origin, because indigenous students arrive well before classes start, so we helped them with whatever they needed, we were able to participate together with the indigenous collective... (GUAVIRA).

It’s interesting to note that in addition to their academic and health work, the participants brought new learning possibilities to their work in the institution’s own indigenous movement. Thus, taking on responsibility for welcoming other indigenous people, as well as representing the institution in collegiate spaces and events, was brought up as a political strategy for the group. These experiences are similar to those reported in a study on indigenous people at UFSCar, which highlights the importance of building this sense of belonging for indigenous university students (Jodas, 2019).

The graduates reported that among the difficult experiences during the period of PET activities, the most challenging was working in a multidisciplinary team, considering opinions and positions. They justified this by the fact that the group was very heterogeneous, given the diversity of indigenous peoples and degree courses, which led to divergent discussions in certain situations, but also required a capacity for dialog and consensus-building.

... So working within an interdisciplinary group is difficult. Teamwork requires a lot of companionship and often this didn’t happen. So we didn’t understand each other. So we had to sit down again to readjust our point of view, to try to bring everyone’s ideas together so that everyone felt included (AÇAÍ).

The Indigenous PET was focused only on the health area and over time we, the Petianos, managed to gain this visibility that we needed to - we don’t talk about health in a single way, we need to talk about health as a whole, we don’t talk about health apart from education, health and education need to go hand in hand. This was often very difficult, but we ended up learning to deal with all these differences (GUAVIRA).

The difficulty is dealing with people. They are people with different knowledge, different ideas, different professions. So working within an interdisciplinary group is difficult. Teamwork requires a lot of companionship [...] So we didn’t understand each other. So we had to sit down again to readjust our point of view, to try to bring everyone’s ideas together so that everyone felt included (AÇAÏ).

It was nice to take part because it was multidisciplinary, involving several courses. So we exchanged experiences and also went out on projects. Of course, the group will always have conflicts, but constructive ones. We always respect each other’s opinions (UMBU).

This diversity of experiences, both positive and challenging, allowed the graduates to come into contact with a range of possibilities in the fields of teaching, research and extension, favoring the development of learning that they wouldn’t have had the
opportunity to do in the usual university spaces. They learned about interdisciplinarity, interprofessionality, dialog, leadership, planning and interculturality.

Category 2. PET as a strategy for retention in undergraduate courses

In this second category, the graduates talked about the PET’s contribution to the development of their undergraduate course. They also highlighted the importance of this space as a way of staying at the institution:

As I said a little while ago, the PET added to my degree in a very direct way, both in terms of facilities to keep me going, so that I could focus on my degree [...] it ended up helping me to graduate (GUAVIRA).

It's what I said, I think one complements the other, the PET not only in terms of content, which also helps a lot within the course, but also in terms of posture, working with different people, I think this was important for me to improve my performance in the degree course itself (CAJÚ).

Through the development of activities related to indigenous health in the PET, the graduates identified that it was an opportunity to fill gaps in the undergraduate program itself, since there was no such approach in the regular undergraduate activities. This is not only the reality of this university in Brazil, but of most health courses, which make the contexts of indigenous peoples invisible, generating graduates who have no approach to the subject (Diehl & Pellegrini, 2014).

We were able to work on topics related to the courses, in my case, I did nursing. We worked on a lot of projects focused on the health of the indigenous population. We did some bibliographical research related to indigenous health. We were able to understand the relationship between indigenous health and my course a little more. As the university and the course itself didn’t have a specific subject in indigenous health, the PET helped us to understand a bit more about what indigenous health is, right? (BURITI).

... I didn’t see much about indigenous health in the curricula at university. But the PET program gave me a lot in terms of having a critical view in relation to this, in relation to the experiences, and then I saw that I had learned about indigenous health, which was important for my training in my course (AÇAÍ).

And going back to indigenous health, as I didn’t have anything about indigenous health during my degree, within my curriculum, what I did have about indigenous health was within the PET, both in the discussions we had at the meetings and in our round table discussions (GUAVIRA).

In addition to the exchange of experiences between PET members, we also observed the issue raised by the graduates about the importance of the work carried out with the population of São Carlos through the conversation circles, which sought to give visibility to the indigenous peoples, represented there by the indigenous students of UFSCar. These off-campus activities, presenting the diversity of peoples, break down the stereotypes brought up by textbooks:

I believe that the thing that covered the most in relation to the two, in this health and education interface, was when we went to the schools, which were closer to us, that did Special Education. And teachers as a whole, and we gave those talks to the students. The only problem was that we only went when it was Indian Week, Indian Day, and that’s a shame. We wanted to go more often, to present our proposals, our experience, the university itself, as indigenous people (UMBU).
... indigenous health, indigenous education, it’s in all fields, it’s in all spheres, but not everyone is aware of it or doesn’t seek it out and ends up having an obstacle afterwards, so I believe that the PET has added a lot to this. [...] the conversation circles we had, which we opened up to the population of São Carlos, were one of the coolest things we did and added a lot to our knowledge (GUAVIRA).

But I think that in the circles we bring these processes a little more deconstruction, of criticism, so when we approached something, I don’t know, a little different and related to my area. So I emphasized it in a way that I could contribute and bring reflection to the group and also to myself, because I was learning there (TUCUMÃ).

One interesting experience described was carrying out research and activities in their territories during their undergraduate studies, with the aim of finding answers to some questions that bothered them, which was not foreseen in their regular courses. As in the experiences of the universities in Paraná, getting closer to projects in their communities of origin strengthened their ethnic-community belonging and their sense of belonging and collective commitment (Amaral & Baibich-Faria, 2012).

According to Luna’s (2021) discussions on indigenous people in higher education in Brazil, especially in medicine, the author says that there is a disagreement between the location of indigenous populations and the institutions where they study, and that these large displacements bring more difficulties, such as distancing themselves from their families, the impossibility of returning frequently to their communities and a feeling of being even stranger in that new location (Luna, 2021). In this sense, taking part in the PET group made it possible to form a collective of indigenous people who could strengthen ties and build activities together, easing their difficulties.

Thus, recognizing that one of the aims of studying for a degree is to acquire knowledge and return to their communities, the PET movement brought undergraduate students closer to their communities of origin, allowing them to be more motivated to stay on the course:

... during the vacations it allowed me to study mental health, people’s behavior, the plurality of peoples that exist here in Amazonas, especially in São Gabriel da Cachoeira da Cachoeira. I worked during the vacations, in which most of the projects are here within the PET scholarship program, so it gave me the chance, first of all, to answer some questions that I had a lot of doubts about. One of them was about mental health, about psychology within psychosocial care, which I was going to do after graduating (AÇAÍ).

Highlighting the work done by the tutors, the graduates emphasized how important this accompaniment is, and the fact that the teachers are already close to the indigenous peoples makes it easier to interact with the group and develop the activities, with a strong role in listening to and integrating the group:

It’s because the two tutors we had at the time really pushed us to develop in the course (...) so the interaction was very significant because we always brought something from the PET or medicine to both places, so the connection was very good (JABUTICABA).

In working with the Potiguara PET, this role of listening, dialoguing and encouraging indigenous people to stay at university and complete their degree courses was discussed, through coexistence and identifying motivations and building projects of common interest (Barcellos, 2015).

Therefore, from what the graduates say, we can see that participation in PET has contributed to the journey of indigenous students at university, with an emphasis
on permanence. Having an environment where they can talk about their difficulties, whether in relation to the course or even something personal, is of the utmost importance for them to remain in undergraduate studies, as reported in other studies (Barcellos, 2015; Freitas, 2015; Jesus, 2017).

In this sense, the PET Indigenous Health Actions was described as a strategy for staying in the material sphere, mainly due to the payment of scholarships to the PET students. In the pedagogical sphere, as a space in which to learn the complex dynamics of university institutions, with the establishment of a protected environment among indigenous people and the support of a teacher, the tutor. And in the symbolic sphere, with the strengthening of collectivity, ethnic-community belonging and activism for indigenous rights.

It is also noteworthy that several opportunities have arisen, in the reports from participation in the PET, of how indigenous students have managed to make the university and community connection, seeking to bring traditional knowledge into the academic environment. Thus, while recognizing some limitations, they highlighted the possibilities of traditional knowledge going hand in hand with scientific knowledge, with a view to valuing indigenous culture, as well as breaking down stereotypes, showing the diversity of peoples existing in Brazil.

Category 3. Relationships between participation in the PET and professional life

The activities carried out in the PET provided the participants with enriching experiences that had an impact on their professional work after graduating. In their speeches, the graduates, who are now professionals, reported where they saw the use of knowledge, skills and attitudes developed during their time in the group, which went beyond basic undergraduate learning in their courses:

For my professional life [...] I think that our communication, our positioning, our outlook, on the issues that people bring up in the group, within the circles, within the workshops that we participate in. And I think that in terms of my professional life, it has certainly helped me a lot in terms of my repertoire (TUCUMÃ).

When we go to work within the PET program, we go into various areas, we go into education, we go into health, we go into social work. So it opens up a wide range of objectives that we need to achieve, one of which I had never noticed was in relation to education, which is where I've been working recently. And I'm from the health sector (AÇAÍ).

Teamwork has been even more present in indigenous health, because we are in the area for several days together and I need these teamwork skills even more (TUCUMÃ).

In view of the work carried out, the experiences with members of other courses and the tutors’ guidance, it can be seen that the current professionals who took part in the PET have become responsible for a variety of functions in their current working environment. As the learning space is interdisciplinary and interprofessional, it generates interesting skills in communication, planning and evaluation, which are currently in demand in their working environments.

Some of the participants interviewed mentioned that taking part in the PET program influenced their choice and definition of their areas of work, helping them to make some decisions and providing a critical view of the professional sphere:
The PET gave me these subsidies to influence what I wanted for my training and then for my future work. I didn’t have anything about indigenous health in my degree and the PET provides this in a culturally rich way. So it had a positive influence on this, both in the conversation circles and the sensitivity it gives us as students at the time and now that I’m already a professional (GUAVIRA).

Faced with the difficulties imposed by the Covid-19 pandemic, the interviewees had to reinvent themselves in their work environments when practicing their profession, most of whom are working in health and in the indigenous context. They reported that it was difficult to have the experience of dealing with the unexpected and caring for people without really knowing what was going on:

There was a time in the first few months when we weren’t prepared in terms of the structure of the hospital. There were times when I had patients needing oxygen, I had to choose which patient I was going to put on oxygen, which patient was more serious, I had a queue of patients to stay in bed and so at the beginning I ended up taking on some responsibilities. The PET experience helped in these situations. I had to take responsibility (JABUTICABA).

The fear of taking the virus back home was also a major concern for graduates who worked professionally during the COVID-19 pandemic. The social distancing measures and overload on frontline professionals also had an impact on everyone’s mental health.

These impacts were even more felt by those working in indigenous health, since during the COVID-19 pandemic, situations of vulnerability of indigenous peoples in Brazil became evident. Due to the complexity of socio-historical issues, different groups have accessed and experienced situations in unequal ways, with issues relating to race, color, ethnicity, gender and economic status being relevant (Lima et al., 2021).

And then you’re working there every day seeing patients who are positive, their risk is very high, exposure, so there was this moment that gave a very big fear because in the first wave it was a lot of elderly patients, in this second wave it was a lot of young patients and apparently, we’re seeing a rise in cases again (JABUTICABA).

So, we can see that whether we like it or not, mental health has suffered the most, in every sense. Our mental health has undergone major changes in terms of concern (AÇÃI).

Even so, they sought to be present in the spaces and build with the uncertainties, as indigenous people did in the various confrontations with COVID-19 throughout Brazil, building and creating, in a creative and assertive way, forms of resistance, with emphasis on the search for visibility of the indigenous situation in the pandemic and the protagonism of indigenous women in the various contexts (Tavares, 2022).

At the time, I ended up doing a lot of telephone work. So someone would get sick and call me, and then I’d be able to provide care and send them a prescription, which at that time they were accepting. So, I was able to provide certain types of care for those who needed it. I was able to help my community, even though I didn’t work there (JABUTICABA).

Therefore, it can be seen that in the case of the PET graduates, their professional work in the indigenous context was favored by the possibility of learning about indigenous health in the group’s activities. Experiences during undergraduate studies, with approaches to the indigenous universe through immersion in the local culture, can help health students overcome the romantic imaginary, understanding historical processes of exclusion from public policies, as well as developing respect and appreciation for traditional knowledge, but these experiences are still infrequent (Luna et al., 2019). These academic experiences are also important for the indigenous students themselves:
I think we face a lot of things in there. Sometimes we end up feeling a bit angry and indignant, especially about our training, because we don’t talk about indigenous health, it’s not part of our training. If it hadn’t been for the PET program, I would have arrived there very unaware. And these issues aren’t always discussed at work (TUCUMÁ).

The PET had an influence on my professional life because, during my undergraduate studies, I always had a vision of working with the indigenous population. So the indigenous PET helped me understand a lot about indigenous health, how it works in other places, right? That indigenous health is part of the SUS. That they created a subsystem so that it could serve the indigenous population, because the municipality and the state couldn’t take health to the villages and then, with the creation of SESAI, health was able to reach the villages, regardless of location (BURITI).

In their speeches, the interviewees also discussed how cultural differences and prejudice directly affected relationships in their workplaces, reporting that an indigenous professional was not always welcome there. It was also reported that there is little awareness of the presence of indigenous people in the work teams, somewhat limiting the possibilities of building innovations:

There are only a few people who know I’m indigenous and who know me. Then they admire me: “Wow, you come from a community!” And then they ask what it’s like to live in a different reality. But that’s rarer, in general it’s as if they don’t even see me as indigenous, since I’m a professional. It’s as if I couldn’t be both indigenous and professional (JABUTICABA).

In other scenarios, they discussed how powerful it has been to have indigenous people on the team, also bringing up positive experiences when they worked in an indigenous context and with other indigenous professionals:

They respect me a lot, because it’s a culture that’s from here. So much so that they try to explore it and pass it on to the students, especially those who aren’t indigenous, to get to know the reality. So this is very good, at least the people I work with here, in education, are very aware of this. And me being indigenous makes a lot of difference, it helps a lot (UMBU).

I work in an environment where most of the professionals are indigenous, which is great in the field. As an indigenous person, I see a difference in the fact that I am an indigenous person working in indigenous health. Because our outlook goes beyond what we learn in the classroom, since we work with different peoples. Our interventions and our approach to them respect their uniqueness, even if we don’t know them completely. This is something I learned from PET, because the group is rich in reflections and questions, with the different indigenous peoples of Brazil as the protagonists. Certainly, taking part in the group was an immeasurable asset for me (TUCUMÁ).

Thus, it can be seen that the current professionals have recovered lessons learned during their time in the PET during the exercise of their professions, as well as valuing the work of indigenous professionals in the various indigenous contexts, whether in their places of origin or elsewhere. In any case, they reinforce that indigenous professionals can act in a more competent and differentiated way, since they are also indigenous.

**Final Considerations**

The mapping of indigenous people who have been part of the PET Indigenous - Actions in Health group in its first twelve years of activity revealed a great diversity of degree courses and indigenous peoples, totaling 39 graduates.
Based on the research, it was possible to describe that the Indigenous Tutorial Education Program - Actions in Health has been important in the academic trajectory of indigenous people, both in terms of academic development, permanence and future work as professionals.

It can be seen that during their time in the PET, the indigenous students were able to build in a shared and collective way, exchanging experiences, which contributed to the development of knowledge, skills and attitudes. One of the outstanding features of these actions was the leading role in teaching, research and extension activities and the great diversity of degree courses, indigenous peoples and regions of the country.

The academic trajectory of indigenous students is permeated by many difficulties, such as being away from their family, their territory and their people. Being at university is challenging, with a different struggle every day. In this sense, PET has also become a point of support and respect for personal demands, which favors the academic day and helps students stay on their courses.

Another point observed is that the curricular matrix of the courses does not deal with indigenous health and the diversity of indigenous peoples in Brazil. In response, PET has become a subject, creating strategies to overcome this invisibility. Thus, the courses, events and discussions organized by the PET seek to take these discussions to various settings and have given the PET members the opportunity to develop creative strategies on how to address these issues in other spaces, with the aim of giving visibility and breaking down stereotypes in relation to indigenous peoples. Also in this discussion, we ratify the importance of themes related to indigenous peoples being part of the different curricular matrices, and in the case of health courses it is necessary to include discussion of the health of indigenous peoples with all students.

As for the traditional knowledge brought by indigenous people to the academic environment, it can be seen that it is more focused on ways of living together, building collectively, developing projects committed to indigenous peoples, as well as how to position themselves in the world. In the interviews, other traditional knowledge was not brought up, such as that related to indigenous health care practices, which could be more incorporated into the activities developed by the group, and this field was recognized as one of the group’s weaknesses.

Being in the PET program is an opportunity to align ideas related to the various topics they are interested in researching and give feedback to their community, which doesn’t happen in undergraduate courses. The guidance provided by the tutors helps and reinforces how important it is to research something related to their people, seeking solutions to real demands and thus collaborating to improve the condition of indigenous health.

With this in mind, we recommend strengthening the PET Connections of Knowledge program, which is made up of indigenous students, as well as expanding the number of groups with this composition. It is also important to reiterate that teachers and managers involved with these groups should recognize the specificities of these students and value indigenous protagonism in the various activities developed.

Therefore, the narratives of the program’s graduates reveal that learning from participation in PET influences their current professional performance, reiterating that it was a space to get closer to indigenous health, intercultural work, the
collective construction of knowledge and practices and a critical look at work. The PET and the indigenous presence at university has been a trajectory of occupying more spaces every day, showing the diversity of peoples, because each student is a reference, representing their people, telling the side of the story that is not known, leaving everything recorded, as a response to the struggles of our ancestors.

REFERENCES


