





Current status of Brazilian interprofessional education: a national survey comparing physical therapy and medical schools

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SUMMARY

OBJECTIVES: To investigate how many Brazilian medical and physical therapy schools have initiatives and courses related to IPE in their curricula, assessing the barriers and factors associated with their implementation and comparing the differences between both programs.

METHODS: This nationwide survey was carried out in 2017 and included representatives of all physical therapy and medical schools in Brasil. Offers of interprofessional activities and related opinions and barriers were evaluated.

RESULTS: A total of 76 (33.9%) of the medical and 159 (41.4%) of the physical therapy schools answered the questionnaires. At least 68.4% of the medical schools and 79.2% of the physical therapy schools have IPE initiatives, although the number of mandatory courses and clerkships is still low. Despite recognizing IPE's importance in health education, school representatives see the lack of integration of programs, conflicting schedules, and the lack of institutional support as barriers. In physical therapy, there is a smaller perception of barriers and greater incorporation of mandatory programs in the curriculum.

CONCLUSION: These results will help in the development of future interventions that can enhance IPE in curricula in developing countries.

KEYWORDS: Interprofessional education. Medical students. Physical therapy specialty.

INTRODUCTION

Interprofessional education (IPE) in health is an approach that promotes an interactive and shared learning process, striving to improve collaboration and the quality of focus on health, providing collaborative professional action¹.

In this context, the curriculum needs to promote key IPE attributes such as clarifying interprofessional (IP) competencies, fostering systematic and longitudinal curricular activities, and using active methods

that make students able to have early contact with different professions³. In the same way, evidence has emerged that this approach to teaching leads to better outcomes, such as improved perceptions of and attitudes about IPE, changes in attitudes/skills, and improved patient care³.

Despite growing evidence from research, the teaching of interprofessionality is still very heterogeneous throughout the world, varying from 14% to 80%⁴⁻⁷. The

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main barriers to implementing IPE are restrictions in the curriculum, lack of planning, lack of resources, communication among different professions, large class size, and stereotypes^{4,5,8}.

In this context, little is still known about the presence of IPE in developing countries, including those in Latin America⁹ and, to the best of our knowledge, there is still no survey of IPE initiatives in Latin America and, particularly, in Brasil, considered one of the countries with the highest number of health-care schools¹⁰.

Attempting to fill these gaps, the present study aimed to investigate the number of Brazilian medical and physical therapy schools with initiatives and programs related to IPE in their curricula, evaluate the barriers and factors associated with this implementation, and compare whether there are differences in the inclusion of and opinions about IPE between both programs.

METHODS

Study design and participants:

This is a nationwide online survey carried out in 2017, in which representatives from all Brazilian physical therapy and medical schools were invited to participate. This project was approved by the Research Ethics Committee of the Federal University of Juiz de Fora, Brasil. All participants received a letter presenting the project via email with a direct link to the survey questionnaire and signed an online consent form.

Criteria for eligibility

All Brazilian physical therapy (PT) and medical (MD) schools registered with the Ministry of Education having programs in these areas were invited to participate. Schools that did not fill out the form or had no valid phone/email contacts were not included. In the case of duplicate responses, or when two representatives from the same school responded, we used the response of the person who occupied the highest position.

Concept used

For this study, we assumed that IPE “involves educators and learners from 2 or more health professions and their foundational disciplines who jointly create and foster a collaborative learning environment”².

Instrument Used

Data was collected using a 10-minute electronic questionnaire sent by email to the school’s coordinator or director, containing:

- Sociodemographic data, respondent’s position in the school, number of students graduated per year, type of school (public or private), and the school’s geographical location;
- Interprofessional learning activities offered, whether there are mandatory or elective classes and internships, course semesters when activities are offered, main areas and which educational strategies were used. If there were programs related to IPE, the person responsible for the institution was asked to describe the programs’ names, syllabus, and characteristics;
- Opinion about IPE and potential barriers to its implementation, a questionnaire with 13 items created by the authors and adapted from published literature⁸, evaluating the respondents’ perception about IPE’s importance and the implementation of IPE in their institution. The questions were answered using a Likert scale that varied from Strongly Disagree (1) to Strongly Agree (5).

Details of the questions asked can be seen in the results section.

Procedures

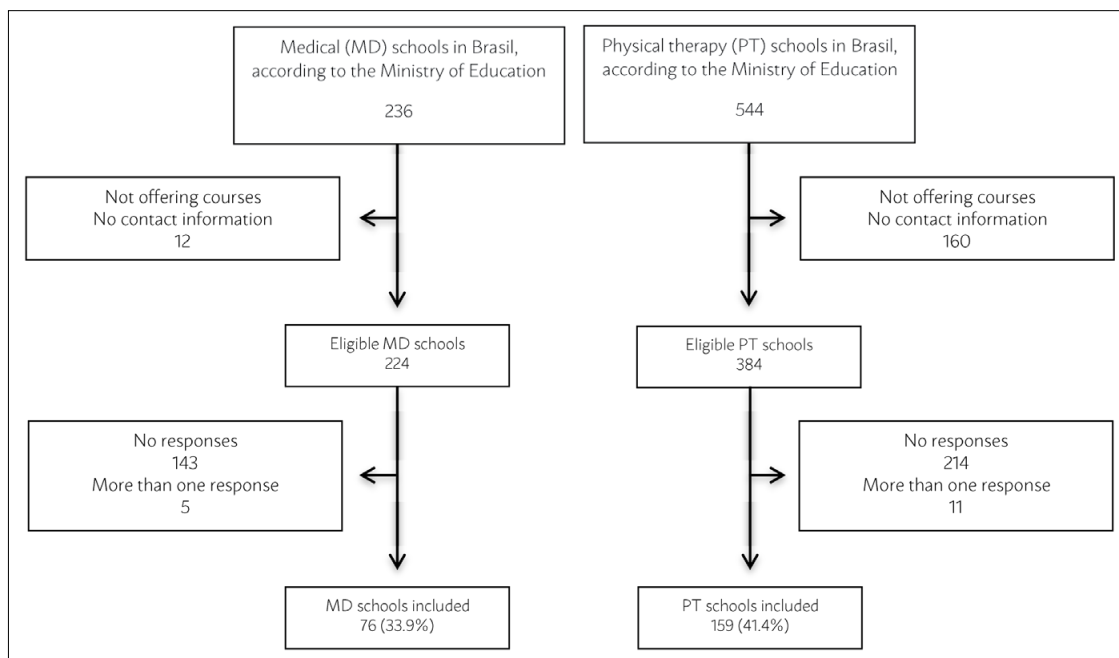
To verify how many medical and physical therapy schools there are in Brasil, we consulted the Ministry of Education’s website, from which we compiled the names of the programs and contact information for their leadership. This procedure revealed a total of 224 medical and 384 physical therapy schools to which we were able to send the questionnaires (Figure 1 – supplementary material).

In order to increase responses, the form was sent up to three times to those who had not yet answered it yet, during the year when the data was collected, with a deadline of 60 days each time. We also chose to make contact by telephone to confirm that the email was correct and to remind people to answer the questionnaire.

Data analysis

Descriptive analysis describing the schools’ characteristics and the details of IPE activities in MD and PT courses was carried out using frequency, percentage,

SUPPLEMENTARY FIGURE 1. DATA COLLECTION FLOWCHART



mean, and standard deviation. Inferential analysis was then conducted as follows: first, a comparison concerning organizational characteristics and the presence or absence of different IP activities between MD and PT courses was made using chi-square for categorical variables and independent t-test for continuous variables. The same procedures were used to compare the MD and PT representatives' opinions.

Then, stepwise-forward logistic regression models were used to investigate which factors were associated with the presence or absence of IP activities. SPSS version 21 (SPSS Inc.) was used, and a $p < 0.05$ was considered significant.

RESULTS

A total of 78 (33.9%) of 224 Brazilian medical schools and 159 (41.4%) of 384 physical therapy schools responded to our questionnaires. A detailed flowchart of this process can be found in Supplementary Figure 1.

Table 1 presents a comparison of these schools' characteristics and the type of IPE programs offered. PT schools were more frequently private institutions (79.9% versus 52.6%, $p < 0.001$) while MD schools had more students graduating yearly (87.7 versus 52.7, $p < 0.001$). As for IPE programs, 79.2% of PT schools and 68.4% of MD schools reported having IPE activity ($p = 0.076$). PT schools offered more mandatory IPE courses (45.3% versus 27.6%, $p = 0.010$) and

more mandatory IPE clerkships (42.1% versus 17.1%, $p < 0.001$), while other IPE courses and activities were offered similarly between courses.

Supplementary tables 1 and 2 show details concerning each IPE activity in both courses. Both usually feature mandatory courses for students in the early undergraduate years and mandatory clerkships for those in late undergraduate years; most courses were related to primary care and public health. The traditional method was still the most used for almost all courses, but other strategies such as problem-posing education, problem-based learning, and team-based learning were also frequently used.

The opinions of the MD and PT school representatives are presented in Table 2. Almost all representatives tended to agree or strongly agree that IPE activities are important and that students should be prepared for interprofessionalism (99.1%), that institutional support has an influence on the development of IPE activities (92.8%), and that their institution works with other courses in an integrative manner (59.6%). However, they also agreed that Brazilian schools (16.2%) and the Brazilian health system (23.4%) are not paying enough attention to IPE. Almost half of them reported problems with time/schedule incompatibilities (46.4%) between courses. Comparing schools, PT representatives tend to believe more that their institution works with other courses in an integrative and collaborative manner and that their institution does not have "free time" for their

students. On the other hand, MD representatives tend to believe more that their school curricula are very heterogeneous, hindering an interaction between students and teachers. These results can be seen in Supplementary Table 3.

Stepwise-forward logistic regression (Table 3) revealed that “institutions that work in an integrative and collaborative manner” were more likely to have IPE activities, mandatory IPE courses, and mandatory IPE clerkships. On the other hand, institutions that did not financially support IPE activities had lower chances of having mandatory IPE courses, and institutions that did not academically support IPE activities had lower chances of having IPE activities and mandatory IPE clerkships. Finally, PT courses were more prone to having mandatory IPE clerkships, but

not IPE activities and mandatory IPE courses after the logistic regression.

DISCUSSION

In this study, we have outlined the current status of IPE initiatives in Brazilian medical and physical therapy schools' curricula.

In this study, the scenario identified in Brasil, with almost 80% of physical therapy and 69% of medical schools having IPE, is comparable to previous studies in medical schools conducted in New Zealand/Australia (80%)⁶ and in the United States (66%)⁵; it is also greater than in Japanese physical therapy schools (14%)⁷. However, it is still different from Canada, where 100% of the schools have this type of initiative⁴. Despite this

TABLE 1. COMPARISON OF MEDICAL AND PHYSICAL THERAPY SCHOOLS' CHARACTERISTICS AND TYPE OF INTERPROFESSIONAL COURSES OFFERED.

| | | Total (n=235) | Medicine (n=76) | Physical Therapy (n=159) | p |
|--------------------------------|-------------------|---------------|-----------------|--------------------------|--------|
| Type of University | Public | 68 (28.9%) | 36 (47.4%) | 32 (20.1%) | <0.001 |
| | Private | 167 (71.1%) | 40 (52.6%) | 127 (79.9%) | |
| Region | South | 59 (25.1%) | 16 (21.1%) | 43 (27.0%) | 0.616 |
| | Southeast | 97 (41.3%) | 35 (46.1%) | 62 (39.0%) | |
| | Center-West | 19 (8.1%) | 4 (5.3%) | 15 (9.4%) | |
| | Northeast | 46 (19.6%) | 16 (21.1%) | 30 (18.9%) | |
| | North | 14 (6.0%) | 5 (6.6%) | 9 (5.7%) | |
| Respondent | Director | 11 (4.7%) | 5 (6.6%) | 6 (3.8%) | 0.408 |
| | Dean/coordinator | 199 (84.7%) | 61 (80.3%) | 138 (86.8%) | |
| | Other professors | 25 (10.6%) | 10 (13.2%) | 15 (9.4%) | |
| Students graduating yearly | | 64.0 (44.1) | 87.7 (43.3) | 52.7 (39.9) | <0.001 |
| Type of IP Activity | Interprofessional | 81 (34.5%) | 24 (31.6%) | 57 (35.8%) | 0.149 |
| | Multidisciplinary | 41 (17.4%) | 15 (19.7%) | 26 (16.4%) | |
| | Both | 97 (41.3%) | 28 (36.8%) | 69 (43.4%) | |
| | None | 16 (6.8%) | 9 (11.8%) | 7 (4.4%) | |
| Do you have any IP Activity? | Yes | 178 (75.7%) | 52 (68.4%) | 126 (79.2%) | 0.076 |
| | No | 57 (24.3%) | 24 (31.6%) | 33 (20.8%) | |
| Mandatory IP Courses | Yes | 93 (39.6%) | 21 (27.6%) | 72 (45.3%) | 0.010 |
| | No | 142 (60.4%) | 55 (72.4%) | 87 (54.7%) | |
| Elective IP courses | Yes | 86 (36.6%) | 26 (34.2%) | 60 (37.7%) | 0.665 |
| | No | 149 (63.4%) | 50 (65.8%) | 99 (62.3%) | |
| Mandatory Clerkship | Yes | 80 (34.0%) | 13 (17.1%) | 67 (42.1%) | <0.001 |
| | No | 155 (66.0%) | 63 (82.9%) | 92 (57.9%) | |
| Elective Clerkship | Yes | 21 (8.9%) | 7 (9.2%) | 14 (8.8%) | 0.919 |
| | No | 214 (91.1%) | 69 (90.8%) | 145 (91.2%) | |
| Other IP Activities | Yes | 172 (73.2%) | 50 (65.8%) | 122 (76.7%) | 0.085 |
| | No | 63 (26.8%) | 26 (34.2%) | 37 (23.3%) | |
| Extension project | Yes | 165 (70.2%) | 49 (64.5%) | 116 (73.0%) | 0.223 |
| | No | 70 (29.8%) | 27 (35.5%) | 43 (27.0%) | |
| Training Project | Yes | 46 (19.6%) | 20 (26.3%) | 26 (16.4%) | 0.080 |
| | No | 189 (80.4%) | 56 (73.7%) | 133 (83.6%) | |
| Undergraduate Research Project | Yes | 112 (47.7%) | 31 (40.8%) | 81 (50.9%) | 0.164 |
| | No | 123 (52.3%) | 45 (59.2%) | 78 (49.1%) | |
| Colloquium/Symposium | Yes | 109 (46.4%) | 30 (39.5%) | 79 (49.7%) | 0.163 |
| | No | 126 (53.6%) | 46 (60.5%) | 80 (50.3%) | |
| Congresses | Yes | 65 (27.7%) | 17 (22.4%) | 48 (30.2%) | 0.275 |
| | No | 170 (72.3%) | 59 (77.6%) | 111 (69.8%) | |

TABLE 2. THE OPINIONS OF MEDICAL AND PHYSICAL THERAPY SCHOOLS' REPRESENTATIVES CONCERNING INTERPROFESSIONAL EDUCATION

| Likert (% of those who agree or strongly agree) | Total (n=235) | Medicine (n=76) | Physical Therapy (n=159) | p |
|---|---------------|-----------------|--------------------------|--------|
| Do you consider Interprofessional Education activity to be important for training professionals in the area of health? | 233 (99.1%) | 75 (98.7%) | 158 (99.4%) | 0.543 |
| Do you agree that students should be prepared to act interprofessionally while still in undergraduate school? | 233 (99.1%) | 74 (97.4%) | 159 (100.0%) | 0.104 |
| Do you agree that your institution manages to produce undergraduate curriculum for healthcare courses in an integrative and collaborative manner? | 140 (59.6%) | 32 (42.1%) | 108 (67.9%) | <0.001 |
| Do you agree that both institutional and academic institutional support interferes with the development of interprofessional activities in undergraduate health courses? | 218 (92.8%) | 73 (96.1%) | 145 (91.2%) | 0.281 |
| Do you agree that undergraduate health courses in Brasil have paid adequate attention to interprofessional work? | 38 (16.2%) | 9 (11.8%) | 29 (18.2%) | 0.258 |
| Do you agree that the Brazilian Health System has paid adequate attention to interprofessional work? | 55 (23.4%) | 23 (30.3%) | 32 (20.1%) | 0.100 |
| My institution does NOT support interprofessionalism ACADEMICALLY. | 28 (11.9%) | 13 (17.1%) | 15 (9.4%) | 0.130 |
| My institution does NOT support interprofessionalism FINANCIALLY. | 55 (23.4%) | 20 (26.3%) | 35 (22.0%) | 0.511 |
| Undergraduate course curriculum at my institution is heterogeneous, which makes the interaction between students and faculty difficult. | 82 (34.9%) | 43 (56.6%) | 39 (24.5%) | <0.001 |
| My institution does not offer "green zones" (* shared free time, without activities) in course schedules, thus making the interaction between students and faculty difficult. | 86 (36.6%) | 19 (25.0%) | 67 (42.1%) | 0.014 |
| There are difficulties in communication between courses at my institution. | 66 (28.1%) | 22 (28.9%) | 44 (27.7%) | 0.877 |
| There are difficulties in time management between courses at my institution. | 109 (46.4%) | 40 (52.6%) | 69 (43.4%) | 0.209 |

TABLE 3. FACTORS ASSOCIATED WITH THE PRESENCE OF INTERPROFESSIONAL ACTIVITIES USING STEPWISE-FORWARD LOGISTIC REGRESSION*

| IP activities ^a | | | | |
|-------------------------------------|------|-------|-------|-------|
| | OR | Lower | Upper | p |
| Integrated Curriculum | 2.68 | 1.35 | 5.30 | 0.005 |
| Not Supported Academically | 0.64 | 0.46 | 0.89 | 0.008 |
| Mandatory IP course ^b | | | | |
| | OR | Lower | Upper | p |
| Integrated Curriculum | 1.52 | 1.13 | 2.04 | 0.005 |
| Not Supported Financially | 0.73 | 0.54 | 0.97 | 0.034 |
| Mandatory IP clerkship ^c | | | | |
| | OR | Lower | Upper | p |
| Physical Therapy School | 2.98 | 1.46 | 6.05 | 0.002 |
| Integrated Curriculum | 1.45 | 1.04 | 2.02 | 0.025 |
| Not Supported Academically | 0.63 | 0.43 | 0.91 | 0.015 |

a: Hosmer Lemeshow Chi-square=6.06, p=0.194; Cox & Snell R Square = 0.113, Nagelkerke R Square= 0.154

b: Hosmer Lemeshow Chi-square=10.54, p=0.229; Cox & Snell R Square = 0.102, Nagelkerke R Square= 0.126

c: Hosmer Lemeshow Chi-square=5.18, p=0.738; Cox & Snell R Square = 0.146, Nagelkerke R Square= 0.202

* The variables entered in the model were type of institution (private or public), number of students, course (PT or MD), region (wealthy or poor) and all representatives' opinions.

apparently satisfactory number, most of the initiatives are still sporadic, not longitudinal and non-mandatory in the curriculum, which differs from the reality in countries like Canada, New Zealand, and Australia⁶.

As for courses offered in IPE, we found that primary care is the most common field, and the area of Public

Health is the one most used. These findings reinforce the idea that IPE and interprofessional practice (IPCP) are enhanced when students and professionals work together with patients and the community in the real world, seeking decision making in complex situations, such as those experienced by family health teams.

SUPPLEMENTARY TABLE 1: DETAILS CONCERNING EACH INTERPROFESSIONAL EDUCATION ACTIVITY IN MEDICAL COURSES

| |
|--|
| Mandatory Course – present in 21 (27.6%) medical courses |
| Period offered: 1st (6), 2nd (9), 3rd (9), 4th (9), 5th (9), 6th (4), 7th (3), 8th (3), 9th (3), 10th (3), 11th (5) and 12th (4) |
| Most common areas: Health management: 7, public health: 17, clinical areas: 7, health education: 9 |
| Level of focus: Primary: 20, secondary: 5, tertiary: 0 |
| Methods used: Traditional: 7, problem-posing education: 15, PBL: 3, TBL: 9, others: 3 |
| Average number of students involved per semester: 161.6 (SD: 148.9) |
| Elective Course – present in 26 (34.2%) medical courses |
| Period offered: 1st (6), 2nd (6), 3rd (8), 4th (5), 5th (6), 6th (6), 7th (8), 8th (6), 9th (4), 10th (3), 11th (3) and 12th (3) |
| Most common areas: Health management: 7, public health: 17, clinical areas: 13, health education: 11 |
| Level of focus: Primary: 24, secondary: 12, tertiary: 8 |
| Methods used: Traditional: 16, problem-posing education: 17, PBL: 5, TBL: 11, others: 3 |
| Average number of students involved per semester: 79.8 (SD: 110.8) |
| Mandatory Clerkship – present in 13 (17.1%) medical courses |
| Period offered: 1st (0), 2nd (0), 3rd (0), 4th (0), 5th (1), 6th (0), 7th (1), 8th (1), 9th (7), 10th (7), 11th (7) and 12th (7) |
| Most common areas: Health management: 5, public health: 10, clinical areas: 9, health education: 7 |
| Level of focus: Primary: 13, secondary: 7, tertiary: 6 |
| Average number of students involved per semester: 95.9 (SD: 94.5) |
| Elective Clerkship – present in 7 (9.2%) medical courses |
| Period offered: 1st (0), 2nd (1), 3rd (2), 4th (2), 5th (2), 6th (2), 7th (3), 8th (3), 9th (3), 10th (3), 11th (3) and 12th (2) |
| Most common areas: Health management: 2, public health: 6, clinical areas: 4, health education: 1 |
| Level of focus: Primary: 6, secondary: 4, tertiary: 3 |
| Average number of students involved per semester: 26.8 (SD: 20.6) |
| Other Initiatives – present in 50 (65.7%) medical courses |
| Extension project: 49/ Training project: 20 / IC Project: 31 / Colloquium/symposiums: 30 / Congresses: 17 |
| Methods used: Traditional: 28, Problem-posing education: 31, PBL: 13, TBL: 18, others: 17 |

Bold indicates the most prevalent answers

A recent systematic review showed that IPE usually occurs in the community, reinforcing our findings⁹.

In relation to educational strategies, our study highlights the prevalence of ongoing use of traditional learning strategies (lectures for large groups that tend to avoid interaction among students), thus, in a sense, violating some of IPE's fundamental precepts. This finding demonstrates that the way IPE is taught in Brasil is still fragile. On the other hand, there is also a high prevalence of using the “problem-posing education” approach developed by Paulo Freire in both medical and physical therapy schools. That is a striking characteristic of IPE in Brasil, as international studies have shown that the main strategies used are problem-based learning, simulation, and case-based discussions^{4,11}.

Important barriers to incorporating IPE in Brazilian medical and physical therapy schools were also identified. Most school representatives say there is a lack of focus from universities and even Brasil's health system on IPE. Among the main barriers cited are the heterogeneous curriculum, difficulties in administering time,

and communication. The incorporation of IPE is significantly influenced by the heterogeneous curriculum and by financial and academic support, results corroborated by previous studies in Canada⁴, the United States¹¹, and New Zealand/Australia⁶. These barriers can help educators jointly rethink their curricula, seeking to create space and shared schedules for students and educators from different areas in structured curricular disciplines to have experiences together^{4,9}.

Finally, our study found that medical schools perceive more difficulties in incorporating IPE and also offered fewer mandatory courses, which can indirectly reflect and corroborate the fact that medical students are less open to IPE than others. To our knowledge, no study has done this in relation to those who are responsible for these schools. This is important for corroborating data presented with students since those who are responsible for the institutions also have a role in curricular development and consequently in incorporating IPE.

This study has some limitations that should be pointed out. First, it is based upon opinions and information made available by institutions' representatives.

SUPPLEMENTARY TABLE 2. DETAILS CONCERNING EACH INTERPROFESSIONAL EDUCATION IN PHYSICAL THERAPY COURSES

| |
|---|
| Mandatory Course – present in 72 (45.3%) physical therapy courses |
| Period offered: 1st (33), 2nd (35) , 3rd (33), 4th (27), 5th (23), 6th (17), 7th (18), 8th (15), 9th (11), 10th (10) |
| Most common areas: Health management: 20, public health: 54 , clinical areas: 23, health education: 42 |
| Level of focus: Primary: 264 , Secondary: 42, Tertiary: 37 |
| Methods used: Traditional: 42, Problem-posing education: 45 , PBL: 26, TBL: 22, Others: 15 |
| Average number of students involved per semester: 84.3 (SD: 80.6) |
| Elective Course – present in 60 (37.7%) physical therapy courses |
| Period offered: 1st (9), 2nd (8), 3rd (15) , 4th (11), 5th (13), 6th (17) , 7th (12), 8th (11), 9th (8), 10th (9) |
| Most common areas: Health management: 15, public health: 32, clinical areas: 22, health education: 32 |
| Level of focus: Primary: 50 , Secondary: 33, Tertiary: 28 |
| Methods used: Traditional: 32 , Problem-posing education: 32 , PBL: 23, TBL: 21, others: 10 |
| Average number of students involved per semester: 45.2 (SD: 40.8) |
| Mandatory Clerkship – present in 67 (42.1%) physical therapy courses |
| Period offered: 1st (0), 2nd (0), 3rd (1), 4th (2), 5th (5), 6th (10), 7th (17), 8th (24), 9th (26) , 10th (22) |
| Most common areas: Health management: 14, public Health: 52 , clinical areas: 47, health education: 29 |
| Level of focus: Primary: 50 , secondary: 33, tertiary: 28 |
| Average number of students involved per semester: 37.9 (SD: 30.7) |
| Elective Clerkship – present in 14 (8.8%) physical therapy courses |
| Period offered: 1st (0), 2nd (0), 3rd (0), 4th (0), 5th (0), 6th (3), 7th (5), 8th (6), 9th (6) , 10th (5) |
| Most common areas: Health management: 1, public Health: 8, clinical areas: 13 , health education: 6 |
| Level of focus: Primary: 11, Secondary: 12 , tertiary: 7 |
| Average number of students involved per semester: 40.5 (SD: 31.1) |
| Other Initiatives – present in 122 (76.7%) physical therapy courses |
| Extension project: 116 |
| Training project: 26 |
| IC Project: 81 |
| Colloquium/symposiums: 79 |
| Congresses: 48 |
| Methods used: Traditional: 80 , Problem-posing education: 69, PBL: 41, TBL: 36, others: 21 |

Bold indicates the most prevalent answers

SUPPLEMENTARY TABLE 3.

| Likert (1 strongly disagree to 5 strongly agree) | Total (235) | Medicine (76) | Physical Therapy (159) | p |
|--|-------------|---------------|------------------------|--------|
| Do you consider Interprofessional Education activity to be important for training professionals in the area of health? | 4.74 (0.50) | 4.67 (0.61) | 4.77 (0.43) | 0.170 |
| Do you agree that students should be prepared to act interprofessionally while still in undergraduate school? | 4.78 (0.49) | 4.69 (0.67) | 4.83 (0.37) | 0.112 |
| Do you agree that your institution manages to produce undergraduate curriculum for healthcare courses in an integrative and collaborative manner? | 3.53 (1.10) | 3.17 (1.12) | 3.70 (1.05) | <0.001 |
| Do you agree that both institutional and academic institutional support interferes with the development of interprofessional activities in undergraduate health courses? | 4.38 (0.72) | 4.39 (0.67) | 4.38 (0.74) | 0.913 |
| Do you agree that undergraduate health courses in Brasil have paid adequate attention to interprofessional work? | 2.45 (0.91) | 2.34 (0.84) | 2.51 (0.94) | 0.157 |
| Do you agree that the Brazilian Health System has paid adequate attention to interprofessional work? | 2.64 (0.94) | 2.76 (0.93) | 2.59 (0.94) | 0.191 |
| My institution does NOT support interprofessionalism ACADEMICALLY. | 2.15 (1.00) | 2.28 (1.05) | 2.09 (0.97) | 0.163 |
| My institution does NOT support interprofessionalism FINANCIALLY. | 2.54 (1.09) | 2.59 (1.07) | 2.52 (1.10) | 0.646 |
| Undergraduate course curriculum at my institution is heterogenous, which makes interaction between students and faculty difficult. | 2.80 (1.17) | 3.27 (1.09) | 2.57 (1.14) | <0.001 |
| My institution does not offer "green zones*" (* common free time, without activities) in course schedules, thus making interaction between students and faculty difficult. | 2.82 (1.30) | 2.51 (1.24) | 2.98 (1.30) | 0.010 |
| There are difficulties in communication between courses at my institution. | 2.63 (1.16) | 2.72 (1.11) | 2.59 (1.18) | 0.437 |
| There are difficulties in time management between courses at my institution. | 3.12 (1.10) | 3.39 (0.99) | 2.99 (1.13) | 0.006 |

Second, our response rate varied from 32 to 42%, meaning that not all Brazilian schools responded to the questionnaire. Nevertheless, these rates were similar to the national IPE survey in the United States (38% of 126 schools), a country with a number of schools that most closely resembles Brasil's. Third, our study is unable to evaluate the quality of the IPE initiative, thus making it impossible to know if all of these initiatives follow the precepts of IPE.

CONCLUSIONS

In conclusion, we have estimated that at least three-quarters of Brazilian medical and physical therapy schools have IPE initiatives, although there

are still a small number of mandatory courses and clerkships. Despite recognizing IPE's importance, school's representatives present significant barriers to incorporating IPE in Brazilian schools such as low political/financial support; the lack of faculty development and clarification of IP competencies; the few IPE moments in the curriculum and work environment; and the lack of integration among courses and schedule incompatibilities. Physical therapy has a lower perception of barriers and greater incorporation of mandatory courses in the curriculum. These results, not yet explored in Brasil's reality, will serve for future interventions that can enhance IPE in the curriculum in Brasil and other developing countries.

RESUMO

OBJETIVOS: Investigar quantas escolas médicas e de fisioterapia brasileiras possuem iniciativas e cursos relacionados à EIP nos currículos, avaliando as barreiras e fatores associados com essa implementação e comparando as diferenças entre esses dois cursos.

MÉTODOS: Essa pesquisa nacional foi conduzida em 2017 e incluiu representantes das escolas médicas e de fisioterapia no Brasil. As ofertas de atividades interprofissionais, assim como as opiniões e barreiras para implementação, foram avaliadas.

RESULTADOS: Um total de 76 (33,9%) escolas médicas e 159 (41,4%) escolas de fisioterapia respondeu aos questionários. Pelo menos 68,4% das escolas médicas e 79,2% das escolas de fisioterapia possuem iniciativas de EIP, embora o número de cursos obrigatórios e estágios ainda seja baixo. Apesar de reconhecer a importância da EIP na educação em saúde, os representantes das escolas percebem como barreiras a falta de integração entre os cursos, associada a cronogramas incompatíveis e uma falta de suporte institucional. Na fisioterapia, existe menor percepção de barreiras e uma grande incorporação de cursos obrigatórios no currículo.

CONCLUSÃO: Esses resultados auxiliarão no desenvolvimento de futuras intervenções que promovam a EIP no currículo dos países em desenvolvimento.

PALAVRAS-CHAVE: Educação interprofissional. Estudantes de medicina. Fisioterapia.

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