

PUBLIC HEALTH TRAINING IN PHYSICAL EDUCATION CURRICULA: A CURRENT PORTRAIT

A FORMAÇÃO EM SAÚDE COLETIVA NOS CURRÍCULOS DE EDUCAÇÃO FÍSICA: UM RETRATO ATUAL 

FORMACIÓN EN SALUD COLECTIVA EN CURRÍCULOS DE EDUCACIÓN FÍSICA: UN RETRATO ACTUAL 

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Abstract: This study presents a national analysis of Public Health training in the undergraduate Physical Education degree programs of public universities. A document analysis of the curricular structures, syllabus and programs of disciplines offered by these universities was carried out, evaluating the content, the practical immersion in the SUS and the workload in Public Health. A sum of 173 active and regular undergraduate curricula from 87 public institutions were analyzed and some gaps in health education were identified: when mandatory, Public Health disciplines are presented as isolated components; there is a predomination of content related to the biological sciences; there is a limited course load and there is a lack of immersion and dialogue with health services of the SUS. Some curricular configurations were identified as presenting advancements in health education, but still in a very timid manner, especially in view of the urgency that the reality resulting from the COVID-19 pandemic demands from health education programs.

Keywords: Physical Education. Higher Education. Public Health. Unified Health System

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1 INTRODUCTION¹

Physical Education is a higher education profession recognized as a multidisciplinary member of health teams, being, such as other professions, and in the core of its knowledge and competence, qualified to act in the prevention of diseases, health promotion and recovery (BRASIL, 1997).

The national curricular guidelines (Diretrizes Curriculares Nacionais [DCN]) for Physical Education undergraduate degree programs direct the training into two strands: one, for acting in primary education in the teacher training degree program (licentiate) and another, for the bachelor's degree, enabling professionals to act in different scenarios - health, sports and leisure (BRASIL, 2018a).

The field named as Public Health, with its content, presents important aspects for both of these strands of Physical Education training. While bachelor programs direct themselves towards health care in the unified health system (Sistema Único de Saúde [SUS]), in care or management; licentiate programs direct themselves towards the school setting, since health content is included in Physical Education's school curricula, as foreseen in the national curricular parameters (Parâmetros Curriculares Nacionais) (BRASIL, 1998) and the common national curriculum base (Base Nacional Curricular Comum) (BRASIL, 2018b).

However, Public Health content gap in Physical Education undergraduate curricula is widely known in both strands of training (LOCH; RECH; COSTA, 2020). Even though the national health council (Conselho Nacional de Saúde [CNS]), in 1997, had acknowledged this specific area as a sub-area of health. The prevalence of perspectives and content directed towards fitness, training and competition, with a strong natural sciences bias is also perceptible in the graduate studies area (MANOEL; CARVALHO, 2011).

Nevertheless, with the expansion and consolidation of the SUS and the opening for practice, achieved by the field of Physical Education and other health sub-areas, this context has been reorienting itself and demanding a significant readjustment in the training, so as to enable health care in accordance to the principles and guidelines of health public policies.

Still, many studies have been pointing out the huge curricular gaps in health training in Physical Education degree programs throughout the country, making present the reflection on the need for engagement in the process of reformulating the curricula, in line with the matters directed to Public Health (BRUGNEROTTO; SIMÕES, 2009; COSTA *et al.*, 2012; OLIVEIRA; ANDRADE, 2016; OLIVEIRA; GOMES, 2020; PASQUIM, 2010).

The great complexity of the Brazilian health system requires professionals of the field, knowledge, experiences and deepening in different scenarios of the SUS, other than the traditional knowledge contemplated by the training in Physical Education (motor control, exercise physiology, biomechanics and anthropometric measurements). Those which are considered, within the principles of the health system, to be insufficient to account for an action that meets social needs (BRASIL, 2018c).

¹ The study is a product of the final phase of the first author's master's thesis.

The DCNs for undergraduate degree programs in Physical Education recognize the need to reorganize the training process, including health as one of the three guiding domains, in addition to sports, culture and leisure (BRASIL, 2018a). This landmark, which is still recent, establishes an important moment of change that has been driving reflections, discussions and propositions of academic-scientific and philosophical nature in regards to health training in general.

In this regard, what is presented in this article derives from a study that has been conducting a national analysis of the training in Physical Education in public institutions of higher education (Instituições de Ensino Superior [IES]). In order to better describe how the interface with Public Health is set, aiming to contribute with curricular discussions as well, recognizing that through the curricula, it is established a play of power, interests and perspectives which have also been contributing to the debate of professional identity.

2 METHOD

The present work is a descriptive study derived from a document analysis regarding the Public Health content present in Physical Education undergraduate programs of public federal and state universities in Brazil. The undergraduate curricular structures, syllabus and programs of disciplines offered were evaluated. The survey of the curricula took into account active degree programs in Brazil registered as “Physical Education”. It was used as database, the list of higher education undergraduate programs issued in april 2020, available in the Ministry of Education’s archive repository (Repositório de Arquivos do MEC [RAMEC]) (BRASIL, 2020).

For the analysis of the curricular structure, were utilized informations available in official websites or in the online academic management systems of each IES, curricular bases and Projetos Políticos Pedagógicos (PPP) (political pedagogical projects). As inclusion criteria, was considered belonging to active undergraduate Physical Education degree programs in a public Brazilian IES, and as exclusion criteria it was considered not providing access to the curricular basis or to the programs and syllabus of disciplines in official electronic portals of the course or institution.

For the analysis of the curricular bases, were sought disciplines which had the word “health” in its name or other terms which referred to the Public Health area (SUS, epidemiology, primary/basic care, hospital care, integrity), as well as any other term that indicated the discipline’s link to the theme. After the initial selection, the programs and syllabus of each discipline were analyzed, based on the recommendations of the DCNs for undergraduate programs in Physical Education (BRASIL, 2018a) and the orientations of the CNS for the training in courses of the Health field (BRASIL, 2018c). Hence, the following analytical categories emerged: 1. Content; 2. Practical immersion in the SUS and 3. Course load in Public Health.

3 RESULTS AND DISCUSSION

A sum of 172 active and regular curricula of undergraduate Physical Education degree programs of 87 IESs in Brazil were analyzed: 106 licentiate degree programs (61%) and 66 bachelor degree programs (39%); 154 presented disciplines associated with the field of Public Health; 19 (10.5%) of Physical Education degree programs in public IESs did not present any discipline which contemplated the thematic, which was represented by 17 licentiate degree programs and 2 bachelor degree programs.

The complete absence of the discussion regarding Public Health in the curricular structure of the bachelor degree programs in public IESs is very concerning, even when occurring in only two programs. Thus, given the acknowledgment, since 1997, of the profession as integrating the health field and the fact that the first DCN for undergraduate programs in Physical Education foresees content relative to health care as part of the general attributions of such professionals (BRASIL, 2002).

In licentiate degree programs curricula, even though not conflicting with what is proposed by the new DCN (BRASIL, 2018a), which clearly defines the acting field of the licentiate as only in primary education, the absence of discussions on health in disciplines reflects the unawareness or disregard referring to discussions in referring to education, disregard health actions as part of the school curriculum and reinforce a fragmented, partial and reduced training. Hence, producing effects in the professional identity, which has been produced and reproduced through the labour market, perpetuating itself. The training and professional performance, which need to be revised and to reinvent themselves in the university environment, do not find strength and, therefore, cannot find room to oppose the *modus operandi*.

For the analysis of the curricular bases, were evaluated the syllabus and/or programs of the identified health disciplines, observing the content covered, the practical immersion in the SUS and the course load in Public Health distributed along the period of training. In this stage, were evaluated 132 degree programs that publicly provided the syllabus and programs of the components, with 22 degree programs (11 licentiate degree programs and 11 bachelor degree programs) being excluded from the analysis due to the unavailability of access to the syllabus and programs.

3.1 CONTENT

The content identified in the curricular bases were listed, and a reference board for Public Health themes was created, based on the DCN and the rResolution of the CNS (BRASIL, 2018a; 2018c). From this board (Board 1), gaps and absences in the area were identified, the themes most valued by the programs were also surveyed. It is important to note that the themes listed bring together distinct theoretical-methodological approaches of each of the fifteen themes, encompassing the biological-physiological as well as socio-critical perspectives found in different curricula.

Board 1 – Board with the content present in the curricular bases of Physical Education undergraduate programs of public Brazilian IESs.

1. Interdisciplinary and multiprofessional performance
2. Physical Education professional performance in Health
3. Characterization of the Brazilian population: Brazilian social, epidemiological and sanitary profile/ demographic and epidemiological transition; biological, ethnic-racial, gender, generational, gender identity, sexual orientation, inclusion of the disabled person, ethics, socioeconomic, cultural, environmental dimensions and other aspects.
4. Concept of health: distinct conceptions of health; expanded health concept; bio-psycho-socio-cultural determination of the health-disease process.
5. Defense of life and of the SUS: organizations, principles, guidelines, history; Sanitary Reform, health paradigms, Health Care models;
6. Community development: Autonomy of populations, individuals communities; Health in the Territory; Popular participation and Social Control; Social needs in health
7. Health management, Organization and Planning
8. Teaching, service and community integration: insertion in the practical settings of the SUS and the social equipment since the beginning of the training, Permanent Education in Health
9. Integrality and the health care network (Redes de Atenção à Saúde [RAS]): organization of networks and systems; Integral health; Integrative and Complementary Practices as constituting elements of training.
10. Stages of care: primary, secondary and tertiary health care (UBS/USF, CAPS, Rehabilitation centers, Hospitals)
11. Notions of epidemiology: Health indicators, morbidity and mortality, Information and health systems
12. Health policies and programs: Programs of Physical Education in health
13. Health issues: populational aging, Chronic Noncommunicable Diseases (NCD), patient safety, urgency and emergency, risk and disease prevention
14. Health promotion: assumptions, health education, health promotion in school
15. Health Surveillance: sanitary, epidemiological, environmental and workers' health

Source: research data (2021).

According to the CNS's Resolution, health training must balance content in Public Health as well as in clinical practice/health care, in addition to providing the development of abilities and aptitudes coherent to this approach (BRASIL, 2018c). On the other hand, the Resolution foresees a training that provides a service-teaching-community integration, bringing the students closer to the reality of the SUS since the beginning of their education. Therefore, a training process integrating all the content in the reference board would be in compliance with these recommendations.

However, what was observed was a great heterogeneity in content distribution, with degree programs which only offered such content in elective disciplines or those which only met cross-cutting issues (human rights, ethical aspects, first aid, disabled or with low mobility people, environmental education, ethnic-racial relations). Others met up to 7 of the 15 items of content listed (50%) in the reference board, and a minority of degree programs met more than seven items of the listed content. A significant difference is still observed when comparing licentiate degree programs and bachelor degree programs, as it can be noticed in Table 1.

Table 1 - Brazilian Physical Education degree programs of public IESs by level of presence of mandatory Public Health content in the curricular basis, according to the reference board.

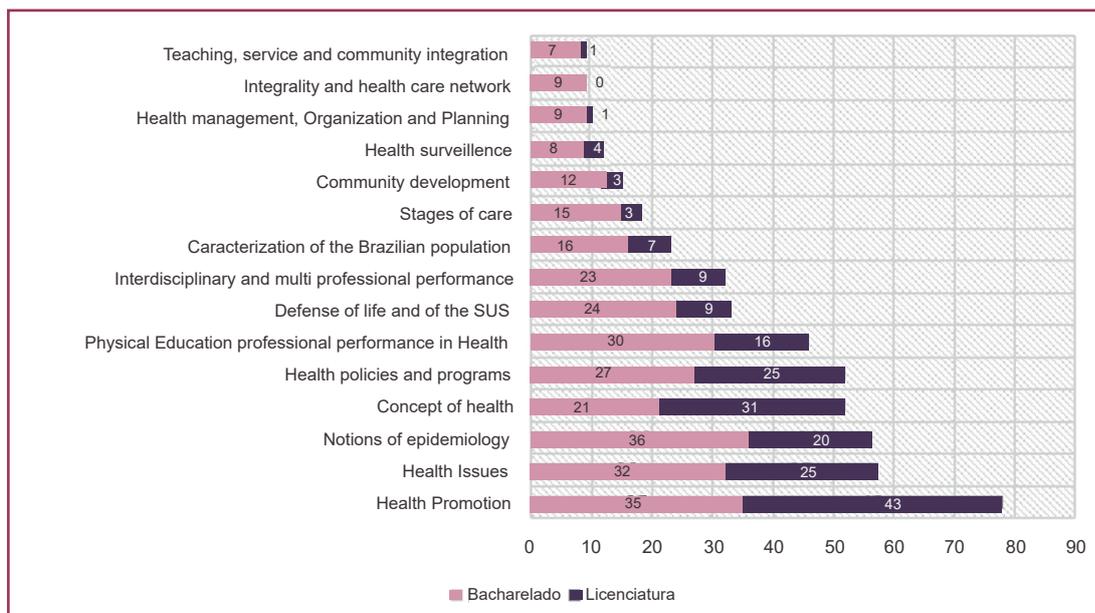
	No content n (%)	Contemplates up to 50% of content n (%)	Contemplates more than 50% of content n (%)	Contemplates all content n (%)	TOTAL n (%)
Bachelor	5 (3.8)	36 (27.3)	12 (9.1)	1 (0.7)	54 (40.9)
Licentiate	15 (11.4)	62 (47)	1 (0.7)	0 (0)	78 (59.1)
TOTAL	20 (15.2)	98 (74.3)	13 (9.8)	1 (0.7)	132 (100)

Source: research data (2021).

It was noted a significant difference between bachelor degree programs and licentiate degree programs: licentiate curricula presented in the most part less than 50% of the content, while the curricula with over 50% of the content are almost unanimously those of bachelor degree programs. This data confirms a differentiation between the two modalities of training, already emphasized by previous studies, in which licentiate programs present a distancing from Public Health, marked by a lower offer of disciplines when compared to bachelor programs (ANJOS; DUARTE, 2009; BRUGNEROTTO; SIMÕES, 2009; COSTA *et al.*, 2012; OLIVEIRA; GOMES, 2020).

This finding evidences an understanding of Physical Education training very tied to a fragmented professional performance, in which licentiate degree programs must privilege the education field, whereas bachelor programs must prioritize health, sports and leisure. Loch, Rech e Costa (2020) emphasize, however, the need to overcome the common notion of health as a theme exclusive to bachelor training and, in the same manner as Oliveira e Gomes (2020), propose that the new DCN reinforces professional performance fragmentation, while reaffirming the performance in the health field as attributed to bachelor degree programs and not mentioning the theme in licentiate training, which may obscure discussions on health in licentiate programs' curricula.

Nevertheless, it is necessary to highlight that both modalities of training present generally insufficient content related to Public Health, with the bachelor degree program of the Universidade Federal de Goiás, Goiânia *campus*, being the only one to aggregate all the content listed. It is also worth mentioning that the distribution of the content in curricula also did not happen in a homogenous manner, in the sense that some are prioritized over others, as it is observed in Figure 1.

Figure 1 – Public Health content present in the curricular bases of licentiate and bachelor degree programs of public Brazilian IESs.

Source: research data (2021).

There is a difference in predominance of themes in both modalities. In licentiate programs, themes linked to the health promotion (with an emphasis in the health promotion in school), to the concept of health, to health issues (focused in health in school) and public policies, mainly related to health and education, predominate

There is a low prevalence of content related to the SUS and to professional performance in this setting (life and SUS defense; interdisciplinary and multiprofessional performance; characterization of the Brazilian population; health surveillance; stages of care; community development; management, health organization and planning; teaching, service and community integration; integrity and health care networks - themes addressed in less than 15% of the degree programs evaluated).

Bachelor programs, in turn, prioritize content related to notions of epidemiology, health promotion (focused on disease prevention and quality of life promotion) and health issues (prioritizing the relationship between physical exercise and chronic illnesses). Among the least prioritized content is that of management, organization and health planning; integrity and health care networks; health surveillance; and teaching, service and community integration. Thus, highlighting a greater privilege of theoretical-conceptual approaches, with low practical integration and a perspective of individual care; centered on the professional and physical exercises, as little value is placed on thinking about network care, health surveillance, management and service and health care planning.

The predominance of themes linked to health promotion, notions of epidemiology and health issues, disclose a tendency observed in the literature, in which there is a notion of health in the Physical Education field that is strongly linked to biological components, quality of life, physical aptitude and well-being (ANJOS; DUARTE, 2009; BRUGNEROTTO; SIMÕES, 2009; OLIVEIRA; GOMES, 2019; OLIVEIRA; GOMES, 2020).

Loch, Rech e Costa (2020) point out that the field has been focusing on discussions on physical aptitude and exercise as a factor for the promotion of quality of life and has been neglecting fundamental health knowledge such as sanitary measures and epidemiology. The situation is attributed to conflicting positions disclosed by class councils and physical education professional, which is especially evident during the COVID-19 pandemic, in which, whilst facing the growing death toll caused by the virus, it was requested the reopening of gyms on the grounds of the health benefits of the regular practice of exercises.

This type of shallow causal association between physical activity and health, still widely prevalent in training, and the absence of practical immersion in the SUS, with the prioritization of private scenarios for students' practice, only deepens this type of perception and weakens the training process for professional performance in Public Health.

The need to approach the SUS is being discussed in researches which dedicate to understanding the aspects of the educational training process. Fraga, Gomes e Carvalho (2012) signaled the absence of mention of the SUS in the DCNs in effect in Physical Education. Although the current version of the DCN includes the SUS in the health emphasis for the training of bachelors, the materialization of it in the curricula still occurs in a timid manner. Taking into consideration that the DCN was published in December 2018 and that it attributes a deadline of two years for the adequation of active curricula, and that 2020 was an atypical year due to the COVID-19 pandemic, curricular reformulations, in order to attend to these new propositions, must occur in a foreseeable future.

3.2 PRACTICAL IMMERSION IN THE SUS

The guiding documents recommend a practical immersion in the SUS as a part of the health training with diversification of practice settings, enabling students to experience health policies, flows of network care and of labor organization in interprofessional teams.

What appeared in a predominant manner, in the investigated licentiate programs as well as bachelor programs, was the complete absence of immersion in the SUS. However, a higher contingency of programs which guarantee public health service as a practice setting was noted in bachelor programs, as it is observed in Table 2.

Table 2 – Practical immersion in the SUS in Physical Education undergraduate degree programs of public IESs

	Absence of immersion in the SUS n (%)	Does not disclose the practical course load in the SUS n (%)	Discloses the practical course load in the SUS n (%)	TOTAL n (%)
Licentiate	71(53.8)	2 (1.5)	5 (3.8)	78 (59.1)
Bachelor	30 (22.7)	9 (6.8)	15 (11.4)	54 (40.9)
TOTAL	101 (76.5)	11 (8.3)	20 (15.2)	132 (100)

Source: research data (2021).

The need to clarify the practice scenarios and the commitment to interprofessional performance in the curricular components and the PPP are signaled by the CNS document, as a means of ensuring valuing of immersion and training for acting in the SUS. It was observed, nonetheless, that 11 degree programs brought, in their disciplines programs', a practical immersion in the health field, but without naming services of the SUS as said fields. This type of gap allows gyms, clubs and other private settings to be prioritized as fields of performance in health, and the student to graduate without experience in the public service.

The inclusion in the beginning of the educational training is another recommendation of the CNS (BRASIL, 2018c), as a strategy to integrate education-labor and health. However, when analyzing syllabus and programs, only in 4 undergraduate programs it was identified a contact with services of the SUS in the first year of training. In 2 licentiate programs, of the Universidade do Estado da Bahia, Guabambi and Jacobina *campuses*, and 2 bachelor programs, in the Universidade Estadual de Maringá and the Universidade Federal de São Paulo.

This early immersion is a means to guarantee that the students approach the field of the SUS in the beginning of the training, with the goal of getting to know the SUS from inside and appropriate the complexity of the System by successive approaches throughout the educational process. It is worth noting, however, that initial immersion without a longitudinal experience in the SUS and with the content of Public Health has no significant impact in the formative process, which is what occurs in two licentiate programs mentioned: throughout the training process are not identified other disciplines which propose a dialogue with the field of Public Health and, therefore, do not offer the necessary foundation, making practical immersion an isolated and one-off experience.

3.3 COURSE LOAD IN PUBLIC HEALTH

The CNS Resolution (BRASIL, 2018c) does not highlight health content course load, advising only the total course load of 4,000 hours for health courses, while the DCN for Physical Education recommends a minimum of 3,200 hours (BRASIL, 2018a).

In the present study, complete bachelor programs course loads had a minimum of 3,374 hours, while licentiate programs presented an average of 3,268 hours, although with differences in the room reserved for Public Health in the curricula of licentiate programs and bachelor programs, as it is verified in Table 3.

Table 3 – Public Health course load in Physical Education undergraduate programs of Brazilian public IESs.

	Electives	<90h	≥90h; <200h	≥200h	TOTAL
Licentiate	7	54	17	0	78
Bachelor	2	17	14	21	54
TOTAL	9	71	31	21	132

Source: research data (2021).

Curricular bases had a mandatory course load in Public Health lower than 90h, presenting it generally condensed in only one discipline of theoretical character, with the absence of practical immersion in the SUS and arranged in the final years of training. A large part of licentiate programs' curricular bases focused in this type of curricular arrangement, revealing an isolated training which does not meet the DCN.

The programs grouped between 90h and 200h presented a course load distributed along 2 or 3 disciplines, without content integration and arranged in the final years of training. A lesser amount of programs (4 bachelor and 5 licentiate programs) presented a practical course load in the SUS, but the remaining were restricted to a theoretical approach to health. Such licentiate programs are those of the Universidade do Estado da Bahia - Teixeira de Freitas, Guanambi e Jacobina *campuses*, the Universidade Federal da Bahia and Instituto Federal de Educação, Ciência e Tecnologia do Ceará - Canindé *campus*.

The discipline offered by the IES of Ceará is of curricular practice, mandatory and in the 6th semester, having the goal of approaching the fields of professional performance in the health promotion, including, beyond the school setting, also fields of the SUS. Whereas the IESs of Bahia presents disciplines of supervised internship, mandatory and in the 7th semester, with a course load between 75-100h, contemplating supervised licentiate student practice in health services. This tendency showcases the historical struggle of these institutions against professional fragmentation in licentiate and bachelor degree programs, and in favor of reunifying educational training. As another result there is the lack of active bachelor programs in public IESs in the state until nowadays, once the political defense that is carried out is of a full and expanded licentiate program (TAFFAREL, 2012).

The programs which were identified to have a mandatory course load in Public Health of over 200h were exclusively bachelor programs, which presented a distribution of themes along the 4 years of training and with practical and theoretical disciplines. Four programs presented a health course load of over 400h (Universidade Federal de Goiás - Goiânia *campus*, Universidade Federal de São Paulo, Universidade Federal de Pernambuco, Universidade do Estado de Minas Gerais - Divinópolis *campus*). In spite of the fact that the presence of a course load is not a guarantee of quality in training, nor in the preparation for practice in the SUS, to have room for the theme in the curriculum indicates advancements.

Another significant tendency observed were curricula, in some IES, with an emphasis in other thematic areas (health, sports, leisure). This type of educational training is recommended by the Associação Brasileira de Ensino da Educação Física para a Saúde (ABENEFS) (Brazilian Association of Physical Education Teaching for Health), which intends to mitigate regional and academic imbalances caused by the impact of the training of graduates with a greater preparation in health (FONSECA et al., 2012).

The curricula identified to have an emphasis in health (bachelor programs in the Universidade Federal de São Paulo, Universidade de São Paulo - Zona Leste *campus*, the Universidade Federal do Rio Grande do Sul, the Universidade Federal de Santa Catarina, the Universidade Estadual de Londrina, the Universidade Federal de Juiz de Fora) presented a health related course load of over 200h, distributed

throughout all the period of training. However, the multitude and divergences on the concept of health, present in the curricula, is an issue worth noting. Once only one curriculum presented a practical immersion in health explicitly directed by and for the SUS (UNIFESP). It is worth observing that the expansion and targeting towards the health field are not sufficient, since once the programs are structured around a healing conception or turned to private interests, the formative gap to perform in the SUS will persist.

Still, it is important to highlight that trainings with an emphasis open up gaps that allow Physical Education professionals of the remaining thematic emphasis to graduate with a low experience in health and who may, once there are no legal or regulatory restrictions, to occupy posts and functions in the SUS, reinforcing the weaknesses of professional performance in the field. Therefore, this ends up not being a solution, but rather only a way to fragment professional training.

Some authors have been pointing to the need to institute Public Health as a cross-cutting theme in Physical Education curricula, as an alternative to the absences and shortcomings, aiming to strengthen training for practice in the SUS (ABENEFS, 2016; PASQUIM, 2010). However, the elaboration of curricula is a collective process marked by knowledge, identities and power disputes. Which reflect the different societal project of the agents involved in said elaboration and in which, many times, is constituted as a space of legitimization of the professors' practices. In this perspective, the final product of this dispute tends to preserve conceptions guided by a certain tradition in Physical Education, established in a setting that is already legitimized, making it a challenge to elaborate a common project, ethically, aesthetically and politically oriented towards a counter-hegemonic strand of health, such as Public Health (ALVIANO JR; NEIRA, 2017).

Furthermore, cross-cutting the theme does not ensure overcoming a reductionist view on health and the human body. Madel Luz (2007) highlights that Physical Education professionals' training in Public Health should not be restricted to a "sanitary conscience", which involves thinking about health, life, vitality and not only the physical aspect and biomechanics. Rather, it requires a repositioning of the function of training and enabling, to a new arrangement in which cognitive, sensory, emotional, social and spiritual are contemplated. Experimentation, the search for other perceptions and conceptions of the body, health, vitality and autonomy are pointed as necessary for an undergraduate education which prepares the student for encountering these existing human complexities and diversities.

3.4 PERSPECTIVES AND ADVANCEMENTS

The insufficient training in the specific field referring to Public Health is not recent and the necessities encountered in this work (prevalence of a healing and biologically oriented training, without immersion in the SUS and with an inadequate course load) are being indicated as extensive by other authors. But, in spite of the distant scenario from what is aimed for in Public Health work, it is necessary to recognize that a lot has been achieved and that these gaps come from model disputes and that changing demands time.

Anjos e Duarte (2009) point out that the Physical Education program of the Universidade Federal de São Carlos, until the moment of publication, offered only a licentiate modality and did not present disciplines which approached Public Health, nor Collective Health and, even less, internships in health services. The findings in this work showcase a difference in the institution, which possesses nowadays two modalities. Also, in the bachelor degree program, the mandatory course load in health is now above 200h, approaching themes in public and collective health, ensuring experiences and immersion in the SUS.

While differences between documental analyses and those which occur in the micropolitics in the IESs exist, and even considering the absence of these analyses *in loco* with the social agents of UFSCar, which would help to think about the true modifications which occurred in the last 10 years, the advancements in terms of curricular structure and, therefore, the impacts that this has been unleashing in the professionals trained by the institution in this period cannot be denied.

Moreover, there are formative experiences in Brazilian universities which have been standing out and gaining evidence for the defense they make of this alignment of the training in Physical Education with the principles and guidelines of the SUS, and for the effort of overcoming many of the aforementioned limitations.

The bachelor program of the Universidade Federal de São Paulo - Baixada Santista *campus* represents one of these experiences. In an institution which has a theoretical and epistemological postulate interprofessional education in undergraduate health programs, the UNIFESP hosts, beyond Physical Education, other six undergraduate programs, all of which are structured around 3 common emphases common to all programs: being human and its biological dimension; the human being and its social immersion; and labor in health, and a specific emphasis in an area related to the practice specific to health. Thus, the students of health fields have, throughout the training, a formative experience among other health domains. Also, including immersion in the SUS in the beginning of the training, with the perspective of creating scientific and academic-institutional contexts for the encounter with interdisciplinary practices through interprofessional teaching (UNIVERSIDADE FEDERAL DE SÃO PAULO, 2019).

The disciplinary format in curricula is rooted in a historically built process of specialization of scientific knowledge, and interdisciplinarity is pointed as a solution to such fragmentation, with the perspective of addressing the complexity of modern issues through overcoming barriers between diverse content (AIRES, 2011). This helps to reflect on the fact that there are boundaries which the mere inclusion of disciplines in the curriculum is not able to overcome. And that to in order to meet the “complex and dynamic health needs” (BRASIL, 2018c), the bet that is being made is oriented towards strengthening interdisciplinarity among the content.

The elaboration of this interdisciplinarity is, however, very challenging, many times presented in the curricula in the form of the content in some disciplines. But, as practice, in a very limited manner. In the curricula evaluated, the majority of programs (75.7%, n=100) did not include interdisciplinarity as content, out of which, the most part (93.7%, n=31) was limited to only a theoretical discussion regarding professional

performance. But, the dimensions of work and interdisciplinary practices, and the own curricular configuration does not advance.

The experience of UNIFESP, which seeks to part with rigid disciplinary models by the integration of diverse knowledge, disciplinary fields and professionals, stands out in the elaboration of an innovative curricular proposal for Physical Education and for being in compliance with the recommendations of the new DCN and CNS Resolution (BRASIL, 2018a; 2018c), being able to inspire curricular reformulations which must be followed in the next years.

4 FINAL CONSIDERATIONS

A significant gap persists in Physical Education training regarding the dialogue with Public Health. This study showcases that, when present in a mandatory manner in curricula, health field disciplines are presented as isolated components, which are not articulated with other disciplines. The content that predominates is linked to the biological area, with a limited course load and no immersion and dialogue with the SUS. The most severe gaps were identified in licentiate degree programs.

The advancements have been taking place in an insufficient manner and even with the intense modifications that the field has gone through ever since its acknowledgement as a health profession by the CNS, with the involvement of physical education professionals in different public policies, it is still necessary to strengthen Public Health and the SUS as guiding emphases in educational training.

The process of parting with hegemonic, isolated professional practice, private and biological perspectives, the bet on the SUS as a formative field and the integration with health services, as users and managers of the system; and the opening of room for political, human and social sciences in the curricula are still distant realities. This scenario will continue to be perpetuated in the curricula whilst there is no effective responses that are committed to the 2018 DCN in regards to the SUS and Public Health in Physical Education training.

Experiences oriented towards mitigating these gaps have been occurring: the elaboration of curricula with an emphasis; interdisciplinary and interprofessional training in health; initiatives via university extension projects; PET-Saúde and Pró-PET-Saúde programs; and multidisciplinary residencies can be examples and have been shown as significant advancements in tackling the resistance and impasses. Thus, need to be strengthened.

Other training experiences, which extrapolate curricular dimensions investigated in this study, also deserve to be investigated in the future, such as student movements, university extension projects, groups and community mobilizations and other professors', students' and the own community's projects. It is also important that future investigations include private IESs, not contemplated in this study, but which are, nowadays, a growing entrance to Higher Education for many students.

Furthermore, it is necessary to highlight as a limitation of this study, the choosing of disciplines to be analyzed from their titles, and not from their programs and syllabus,

which may have resulted in disciplines not being included in the analyses. The analysis of educational training from the disciplines already characterizes a limitation. Thus, being necessary to carry out other studies with analyses from the PPPs of degree programs, in order to complement the results found in the present study.

It is expected that in the following years it is viable to monitor intense curricular reformulations in all Physical Education programs, aiming to meet the new 2018 DCN, as well as the new health reality brought by the COVID-19 pandemic. It is understood that this study contributes to strengthen Public Health in curricula, integrating teaching and services, bringing the students closer to different scenarios of the SUS and of primary care, guided by an expanded view on health and by interdisciplinary, interprofessional and community care.

Nevertheless, it is proposed here a daring and challenging invitation to the field: to promote meetings with the goal of thinking about the training that is aimed and that which is practiced. In order to define new and different paths for Physical Education, specially working with political pedagogical projects in a shared way at this time, which is so propitious also for discussions related to educational training and curricula in this field.

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Resumo: Este estudo apresenta uma análise nacional da formação superior em Saúde Coletiva nos cursos de graduação em Educação Física de instituições de ensino superior públicas. Foi realizada uma análise documental das estruturas curriculares, ementas e programas de disciplinas ofertadas por essas universidades, avaliando os conteúdos, a inserção prática no Sistema Único de Saúde (SUS) e a carga horária em Saúde Coletiva. Ao todo, 173 currículos ativos e regulares de graduação de 87 instituições públicas foram analisados, e observou-se defasagens na formação em saúde: quando obrigatórias, as disciplinas de Saúde Coletiva se apresentam como componentes isolados; predominam conteúdos ligados às ciências biológicas; possuem limitada carga horária e falta inserção e diálogo com os serviços de saúde do SUS. Identificou-se algumas propostas curriculares que avançam na formação em saúde, mas ainda de maneira muito tímida, especialmente frente à urgência que a nova realidade decorrente da pandemia de COVID-19 exige dos cursos de saúde.

Palavras chave: Educação Física. Educação Superior. Saúde Pública. Sistema Único de Saúde

Resumen: Este estudio presenta un análisis nacional de la educación superior en Salud Pública en los cursos de pregrado en Educación Física de las instituciones públicas de educación superior. Se realizó un análisis documental de las estructuras curriculares y programas de disciplinas que ofrecen estas universidades, evaluando los contenidos, la inserción práctica en el SUS y la carga de trabajo en Salud Pública. En total, se analizaron 173 currículos de pregrado activos y regulares de 87 instituciones públicas, y se observó lagunas en la educación en salud: cuando son obligatorias, las disciplinas de Salud Colectiva se presentan como componentes aislados; predomina el contenido relacionado con las ciencias biológicas; tienen horarios limitados y carecen de inserción y diálogo con los servicios de salud del SUS. Se han identificado algunas propuestas curriculares que avanzan en la educación para la salud, pero aún de manera muy tímida, especialmente ante la urgencia que la nueva realidad derivada de la pandemia de COVID-19 demanda desde los cursos de salud.

Palabras clave: Educación Física. Educación superior. Salud pública. Sistema Único de Salud

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CONFLICT OF INTERESTS

The authors have declared that this work involves no conflict of interest.

AUTHORS' CONTRIBUTIONS

Viviana Graziela de Almeida Vasconcelos Barboni: Conceptualization, Data curatorship, Formal analysis, Acquisition of funding, Investigation, Methodology, Writing - initial draft, Writing - revision and editing.

Yara Maria de Carvalho: Formal analysis, Acquisition of funding, Methodology, Projects management, Supervision, Visualization, Writing - revision and editing.

Vagner Herculano de Souza: Formal analysis, Methodology, Projects management, Supervision, Writing - initial draft, Writing - revision and editing.

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