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## SYSTEMATIC REVIEW ON PHYSICAL EDUCATION TEACHERS' CONCERNS

### REVISÃO SISTEMÁTICA SOBRE PREOCUPAÇÕES DE PROFESSORES DE EDUCAÇÃO FÍSICA

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#### ABSTRACT

The study aimed to map the scientific evidence regarding physical education teachers' concerns linked to Fuller and Bown's theory by a systematic review. The review study was based on the following guiding question: What is the evidence in the scientific literature on physical education teachers' concerns? The search in the scientific bases was carried out between March 2019 and May 2024. The included studies publication years ranged from 1983 to 2024, wherein the studies have used predominantly a quantitative approach, applying the Teacher's Concern Questionnaire. The highest physical education teachers' concern was related to the Impact dimension. We could also verify the existence of new aspects that results in teacher's concerns, but they are not present in the concerns theory.

**Keywords:** Professores. Physical education. Teaching work.

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#### RESUMO

O estudo teve como objetivo mapear as evidências científicas sobre as preocupações dos professores de educação física vinculadas à teoria de Fuller e Bown por meio de uma revisão sistemática. O estudo de revisão foi baseado na seguinte questão norteadora: Quais são as evidências na literatura científica sobre as preocupações dos professores de educação física? A busca nas bases científicas foi realizada entre março de 2019 e maio de 2024. Os anos de publicação dos estudos incluídos variaram de 1983 a 2024, e os estudos utilizaram predominantemente uma abordagem quantitativa, aplicando o Teacher's Concern Questionnaire. A maior preocupação dos professores de educação física foi relacionada à dimensão Impacto. Também foi possível verificar a existência de novos aspectos que resultam em preocupações dos professores, mas que não estão presentes na teoria das preocupações.

**Palavras-chave:** Professores. Educação física. Trabalho docente.

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#### Introduction

The teaching duty has specific characteristics that range from the relationships established in the work environment, to the actions, infrastructure, and decisions to be made to carry out the labor activity<sup>1,2</sup>. We may mention as roles of the teaching labor to instruct and train the individuals to act in the most diverse roles in society, promoting the full student development, as well as helping them to adapt to the current reality<sup>3-5</sup>.

It is also noteworthy that the teacher's professional practice in Physical Education area presents some particularities, such as the class site and materials, the topics covered by the subject, the visibility that physical education has in the school staff, extracurricular events (choreographic composition, championships), vestment, grading method, and others<sup>3,4,6,7</sup>.

From the inconsistencies and diverse situations that occur in the teaching duty, including the topics disposition, relationships with the school social community, classroom management, and many others, the teachers build their careers, mediated by factors that are in fact limiting to their pedagogic performance, such as the teaching concerns<sup>1,8</sup>.

The teaching concerns correspond to the feelings, problems and anguish realized by the teachers during the professional duties<sup>9,10</sup>. These concerns arise from issues related to their personal and scholar realities, as human resources, relationships in the work environment, students' learning and development, social scholar reality<sup>10, 11,12</sup>.

Identifying the most frequent concerns among the teachers allow the understanding of the real teachers' necessities, as well as the difficulties that influence their pedagogic performance. It is important to emphasize that despite the existence of one study in the literature that has reported a theoretical trial<sup>13</sup> on this theme, that identified the importance of the theory, as well as some needs for updates. However, there is a lack of studies there is no study that has investigated and synthetized, through a search in scientific databases, publications on this specific issue aiming to identify which characteristics interfere in the teachers' concerns and, consequently, develop a most robust scenario on the empiric studies on this theme.

As a precursor to studies on teaching concerns, Fuller<sup>10</sup> began the research on this specific theme in a North American reality, and since then sought to understand teachers' inquietudes and concerns evidenced during their professional development. These concerns are associated with social, political, economic, and personal aspects<sup>10</sup>.

It is significant that with the development of research on the theme, years later Fuller and Bown<sup>14</sup> identified and condensed the teaching concerns in three distinct dimensions: Self Dimension, which addresses concerns related to survival and teacher fitting in the work environment; Task Dimension, in which it is manifested the concerns relative to the development, planning and execution of the many sort of tasks that have to be concluded through teachers' obligation; and Impact Dimension, which approaches the empathy concerns in relation to the teacher and the real learning and development necessities of the students<sup>14</sup>. Each dimension presents their own markers and features regarding the teachers' concerns and they may be related to the varied moments and phases of the teaching career<sup>7</sup>.

Thus, it is clear the importance of this theme for a better comprehension of the aspects, necessities and anxieties that may affect the teachers' performance to propose actions that favor the profession exercise. Although there is a considerable and still growing body of evidence regarding this specific theme of study, there is a clear lack of systematization of the already existent knowledge about this issue. In this sense, the present study aims to map the evidence in the scientific literature on the of Physical Education teachers' concerns linked to Fuller and Bown's theory.

## Methods

This study is characterized as a systematic review<sup>15</sup>. This database investigation occurs by means of methods, and it results in a synthesis of the relevant evidence and factors, providing an overview of what has been discussed on a given topic<sup>15,16</sup>. The current systematic review has the following main question: What is the evidence in scientific literature about the physical education teachers' concerns?

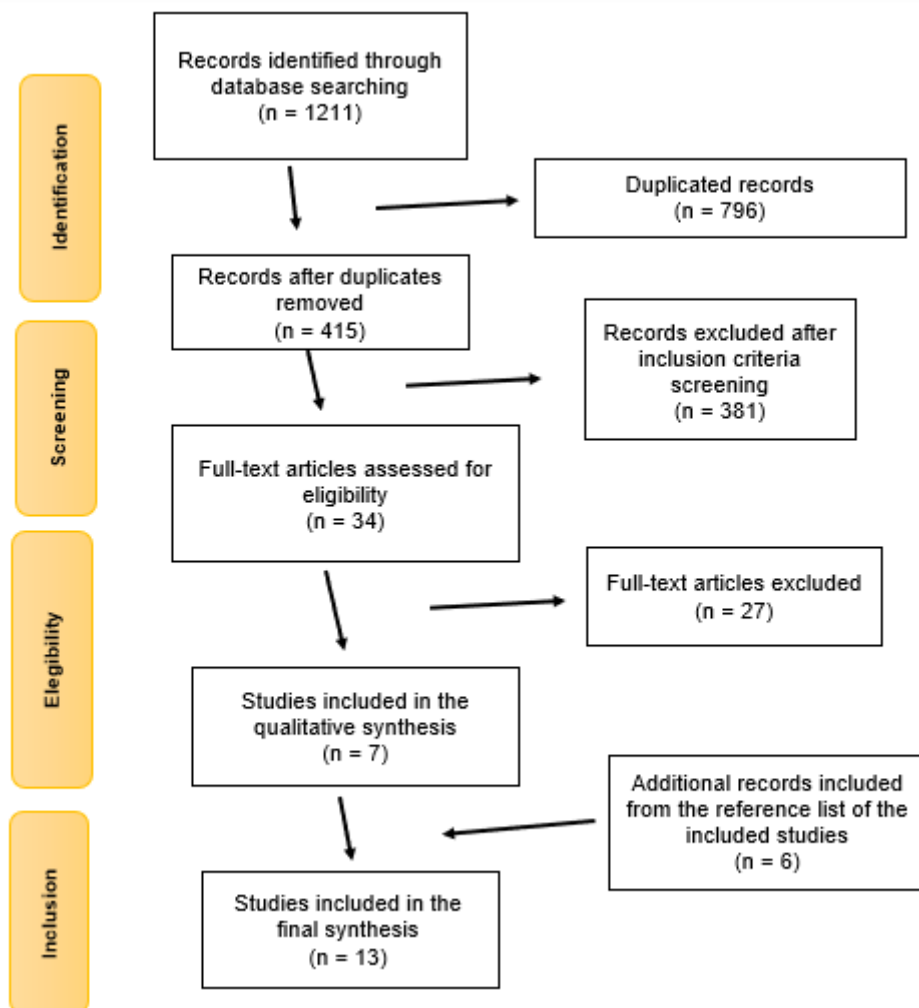
The searches were performed between March 2019 and May 2024 on the databases that are beacons for Qualis in area 21 of the Coordination for the Improvement of Higher Education Personnel (CAPES), in which Physical Education is inserted: Lilacs, Scielo, Redalyc, Web of Science, PubMed and Cinahl, as well as the Scopus and DOAJ databases, which made it possible to expand access to works in other languages due to the scope of these databases. Three search terms were used in the associated databases by Boolean operator 'AND', the first related to the concerns, the second related to the teacher, and the third referent to the physical education. The following keywords were applied in Portuguese: 'preocupações', 'preocupações pedagógicas', 'aflições', 'dificuldades', 'angústia', 'agonia', 'aprensão', 'inquietações', 'docente', 'professor', 'educação física', 'educador físico'; in English: 'concerns', 'apprehension', 'worry', 'unrest', 'difficulties', 'pedagogical concerns', 'afflictions', 'agony', 'anguish', 'uneasiness', 'discomfort', 'teacher', 'physical education', 'physical educator' and in Spanish: 'preocupaciones', 'dificultades', 'preocupaciones pedagógicas', 'aflicciones', 'agonía', 'angustia', 'docente', 'instructor', 'profesor', 'educación física', 'educador físico'.

Boolean operator 'NOT' was also used for the terms: medicine; psychology; mathematics; and sciences, with the aim of better delimitate the search on the aforementioned databases.

Studies published in journals until May 2024 were considered in the literature search. It should be noted that the following were used as inclusion criteria: (1) studies that had as main outcome the physical education teachers' concerns; studies that used the theoretical basis proposed by Fuller and Bown<sup>14</sup>; empirical studies. As exclusion criteria, opinions, theoretical trials, papers with a sample composed exclusively by intern students were not considered for inclusion and that applied different methodological processes to the samples.

Sequentially from the databases search, the studies were analyzed by title, abstract and full-text reading. The studies screening and assessment were performed by two reviewers independently. It is important to highlight that there were no discrepancies regarding the studies selection by the two reviewers. For data analysis, the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) was used, which is a protocol that covers 17 items of articles analysis. Among the papers analysis items, the article must present title, abstract, introduction, methods, results, and discussion from observational studies<sup>17</sup>.

After searching in the electronic databases, 1211 references were identified for screening, wherein 796 references were excluded due to duplicate records. Sequentially, 381 references were excluded after title and abstract reading (38.7% did not address the teachers' concerns; 21.2% had as sample teachers from another area of knowledge except physical education; 40.4% did not have the teachers' concerns as the main research question; 0.2% were not empirical studies). Thereafter, 34 studies remained for full-text assessment, wherein 27 studies were excluded (22 studies did not use the teacher' concerns s as the main research question as well as the theoretical model from Fuller and Bown<sup>14</sup>, and five studies did not use physical education teachers as sample). Then, seven articles were included for further analysis. Moreover, the reference lists from the included studies were assessed aiming to retrieve any potentially relevant study for inclusion. Thus, 13 studies were included in the present systematic review. Five of these were written in Portuguese and six in English (Figure 1).



**Fig 1. Flowchart of the search process and selection strategy of articles on Physical Education Teachers' Concerns.**

Source: The authors.

The detailed full-text reading of the selected studies was performed by two reviewers, according to the inclusion criteria. The methodological assessment of the included studies was performed, and even though some studies<sup>18-21</sup> did not reach 100% of the methodological quality inclusion criteria established by Lockwood et al.<sup>22</sup> and Munn et al.<sup>23</sup>, they were considered for this review, for the aim of the current study was to map the studies regarding this specific theme, which is novel in the literature. Hence, the final text was written based on the available evidence from the included studies, allowing the establishment of a proper scenario about the investigated issue.

## Results and Discussion

From the studies found in the literature about the physical education teachers' concerns, we were able to synthesize the information concerning this issue. Notably, to optimize the results presentation and discussion, we divided the themes in topics as following: studies characterization, teaching concerns; Self Dimension; Task Dimension; Impact dimension; and new dimensions of concerns. The studies description is detailed in Chart 1.

**Chart 1.** Systematization of studies about the Physical Education teachers' concerns.

Authors	Sample	Tool	Main outcome	Main evidence
McBride <sup>21</sup>	Six physical education teachers that were participating in the Stanford Teacher Education Program (United States).	Teacher Concerns Questionnaire (TCQ) Interview Teachers observation form.	Teachers concerns.	Teachers from the experimental group with different treatment presented less concerns than the control group teachers.
Wendt and Bain <sup>24</sup>	40 unexperienced students that have just concluded a high-school internship, and 40 physical education teachers from Texas (United States).	Sociodemographic questionnaire Teaching stress events inventory TCQ.	Stressful events. Teacher concerns.	Higher concern with their performance in the work and less concern with the class and misbehavior management. Concerns that do not fit in the concerns' theory, such as violence, aggression, and strike participation.
Fung <sup>19</sup>	141 physical education students from a teacher preparation program that have just concluded their first school teaching internship and 197 physical education teachers with an average of seven years as teachers (United States).	TCQ Sociodemographic questionnaire.	Teachers concerns.	They have identified some caveats regarding the TCQ questionnaire. The sequential order of the concerns' theory has been refuted. Teachers demonstrated a higher concern with the task dimension.
McBride <sup>25</sup>	1 <sup>st</sup> phase: 100 elementary school physical education teachers; 2 <sup>nd</sup> phase: 302 high-school physical education teachers; 3 <sup>rd</sup> phase: 31 physical education teachers (United States).	1 <sup>st</sup> phase: Identification of five daily teaching concerns; 2 <sup>nd</sup> phase: Questionnaire developed according to the phase 1 with 10 identified concerns from the teaching tasks; 3 <sup>rd</sup> phase: The TCQ-PE has been applied as a retest with the experienced physical education teachers.	Teaching concerns.	Identification of five new items regarding the task dimension concern according to the physical education teacher reality to the TCQ-PE.
Conkle <sup>9</sup>	138 men e 127 women physical education teachers	Sociodemographic questionnaire TCQ - PE.	Teaching concerns.	Higher concerns referred to the impact,

	from Alabama (United States), with an average experience of 14,5 years.			regardless the teaching practice time.
Folle and Nascimento <sup>26</sup>	Four physical education teachers from the public state school system in Florianópolis (Brazil) and three work colleagues that worked in the school as administrative, pedagogic and teacher agent of each teacher investigated.	Semi structured interview.	Life background, career, teaching, and teaching concerns.	At the beginning of their careers, the dimension that concerns the most is the task dimension. At the end of their teaching careers, the dimension that concerns the most is the students' social issues.
Gordon <sup>20</sup>	Two physical education teachers that have just concluded the course.	Observations Field diary Semi structured interview Documental analysis.	Teaching concerns.	They identified personal concerns with their students and concerns with management and security in class.
Vieira et al. <sup>7</sup>	92 physical education teachers from the city and state school systems from Maringá (Paraná - Brazil).	Sociodemographic questionnaire EPP	Teaching concerns.	Less concerns with the self dimension and high concerns with the impact. It refutes the concerns' theory. Teachers from the state school system presented higher task concerns.
Favatto and Both <sup>27</sup>	16 physical education teachers from the 1 <sup>st</sup> to 4 <sup>th</sup> grade from the state and city school systems from Maringá (Paraná - Brazil).	Semi structured interview	Teaching career. Teaching concerns.	The task and impact dimensions appear since the beginning of the teaching career. The concerns associated to the self-dimension diminish through the career. It was also identified some concerns that are not addressed in the Concerns' Theory such as: health, student social reality, public policies, and discipline status.
Fernandes et al. <sup>18</sup>	1 <sup>st</sup> phase: 14 teachers from the Cianorte school system (Brazil). 2 <sup>nd</sup> phase: eight teachers from the	Sociodemographic questionnaire EPP Semi structured interview	Teaching concerns.	Higher concern with the impact dimension. Younger teachers presented higher concerns with the task dimension. Other

	Cianorte school system (Brazil).			concerns were evidenced, related to the family structure/social context and teaching formation.
Trusz et al. <sup>28</sup>	61 teachers (27 working in early childhood education, 34 in elementary education, 37 admitted on a temporary basis and 24 permanent) (Brazil).	Teacher Concerns Questionnaire – Physical Education - TCQ- PE	Teaching concerns.	highly concerned about the task and the impact and significant association of the self dimension and the teaching level was observed, whereas regarding the employment relationship of investigated teachers, significant association with the task dimension was found.
Vieira et al. <sup>29</sup>	20 physical education teachers from the city and state school systems from Maringá (4 teachers from each professional development cycle established by Farias et al. <sup>1</sup> ) (Brazil).	Semi structured interview	Teaching concerns.	Teachers with less teaching experience were more concerned with the self-dimension and this concern decreases as their career progressed. Teachers with more experience showed concerns about the development and impact of the tasks performed.
Vieira et al. <sup>30</sup>	20 physical education teachers from the city and state school systems from Maringá (Brazil).	Semi structured interview	Teaching concerns.	Two new dimensions of concerns were highlighted: public policies and social issues. Two indicators were found for the self dimension: teacher training and health.

Source: The authors.

### *Studies characterization*

After analyzing the studies found in the systematic review on the physical education teachers' concerns, a geographical limitation was identified with studies carried out only in North American and Brazilian reality. It is important to highlight that the Concerns Theory, developed by Fuller and Bown<sup>14</sup> emerged in the United States. This may explain the predominance of studies regarding this specific theme in this location, as well as the cultural reality linked to the English language context.

In this sense, it is evidenced that the spreading of the concerns theory by Fuller and Bown in 1975 was a determining aspect, having in mind that after this period some authors have begun to study this theme. The first research with physical education teachers was published in 1984<sup>21</sup>.

In relation to Brazilian context, the first study found was from 2011<sup>26</sup>, and since 2018 there was a considerable increase in the amount of research addressing this specific topic of discussion, trying to deepen the discussion on the national reality<sup>7,18,27-30</sup>.

Regarding the research methodology, we could verify that the majority of the studies used a quantitative data analysis<sup>7,9,18,19,24,25,28</sup>. Among the tools used to perform the quantitative analysis, four research used sociodemographic questionnaires for the relation of these variables with the teachers' concerns<sup>7,9,18,19,29</sup>.

Interestingly, the majority of the research used the TCQ and its derivations (i.e. TCQ-PE and EPP) to measure the concern levels<sup>7,9,18,19,21,24,25,28</sup>. It is important to reiterate the importance of the quantitative research. It aids to describe and characterize the theme to be studied, allowing a deep analysis of the current scenario<sup>31</sup>. As an example, the evidence identified by the studies that used the quantitative approach provided a population characterization and its association with sociodemographic variables.

Some authors warned about the questionnaires (e.g. TCQ, TCQ-PE and EPP) due to the lack of adequation of these tools to the new necessities and circumstances faced by the physical education teachers<sup>18,24,25</sup>. The national reality and the new educational necessities may explain this evidence. Moreover, studies on the concerns with students interns and physical education teachers also evidenced the absence of feasibility of these assessment tools, requiring consideration of cultural and political aspects in which the population is inserted in and, among some questions of the instrument and the respective dimensions they represent<sup>32,33</sup>.

Concerning the variables investigated alongside with the concerns, we highlight sex; employment bond<sup>17,18,28</sup>; time as being a teacher<sup>7,9,18-20,24,26,27</sup>; teaching level<sup>28</sup> and stressful events<sup>24</sup>.

Analyzing the qualitative assessment tools, we identified that the majority of the studies used semi structured interviews<sup>18,20,21,25-27,29,30</sup>. In addition, some studies used observations from the teaching and report practices of these respective moments<sup>20,21</sup>. One study from the North American reality applied the Problem and Stress Report Form<sup>24</sup> along with other questionnaires.

The predominance of the utilization of semi structured interviews provides the deepening of the reality analysis, once this research type, and consequently, this assessment tool valued the experience, allowing a detailed analysis of this specific theme and sample<sup>34,35</sup>. Corroborating with this evidence, the studies that used the qualitative approach allowed to identify pertinent evidence that indicates the existence of new teaching concerns, which will be addressed later in this study.

After performing the characterization of the temporal period of publication from the included studies, it is possible to understand the temporal aspects that influenced in the development of these studies as well as the characteristics that permeate the increase or not of the concern levels of teachers. Additionally, by mapping the methodological approaches we could verify which type of research allows a deeper or integrate analysis of the theme, and which are the main assessment tools used to scale the concerns and whether they are consistent to what they aim to evaluate.

On the other hand, the evidence from the sociodemographic variables offers a basis that allows the proposition of consistent and specific actions to a specific population, optimizing the teaching practice.

### *Teachers' Concerns*

Fuller and Bown's<sup>14</sup> concern theory was used as basis in the included studies, evidencing the importance and contribution of this theory in the development of the research in this area. In this respect, it is necessary an analysis of the propositions and development behavior of the concerns that the model proposes.



In a sequential way, the development proposal of the concerns dimensions begins with the appearance of survival concerns in work environment (Self dimension), evolves to concerns with teaching tasks (Task dimension) and finishes the progression with the impact of teaching to the student (Impact dimension).

Regarding the affirmation of the theory by Fuller and Bown<sup>14</sup> and the sequential progression of the concerns in the advance of the teaching experience, some studies refuted this hypothesis<sup>7,9,18,19,24,26,27</sup>. Somehow, the concerns progression from self to the task and posteriorly to the impact are not completely evident. However, it is important to underline that the dimensions proposed by Fuller and Bown<sup>14</sup> are constantly present in the research.

Research that used teachers, advisors, and students/interns from diverse areas also refuted the sequential progression hypothesis proposed by the Fuller and Bown theory<sup>14,36,37,38,39,40</sup>.

The national and temporal research reality may explain these evidences, given that the period and necessities that motivate the theory development have relation with that period of time and its characteristics<sup>9,11,12,27</sup>.

To understand the tendency of the teachers' concern levels evidenced in the research allows identifying its relationship with the theoretical model proposed by Fuller and Bown<sup>14</sup> and whether it is still present in the current reality of physical education teachers. Furthermore, it shows the need to present the manifestations of the concerns dimensions of each work.

### *Self-Dimension*

Having in mind the Self dimension, three studies in Brazilian context identified that this dimension promotes the least concern in teachers<sup>7,18,27</sup>. On the other hand, a study with teachers from Texas/USA demonstrated higher concerns with their performance at work, which might present association with Self dimension<sup>24</sup>.

The difference of the concern level regarding the Self dimension presented may be explained by the reality of both conditions and environment of each study. Moreover, another aspect that might be involved in this apparent alteration of the concern level in the Self dimension is the organization of the initial formation. Once it is presented completely unlinked to the reality, it causes a shock with the professional reality, and when it is closer associated with real teaching situations, it offers a higher support at the beginning of the teaching career<sup>39,41</sup>.

Linked with the Self dimension, some studies evidenced that teacher with less experience presented higher concerns with this dimension<sup>7,24,27,29</sup>. In addition, other studies showed that teachers in the beginning of their careers presented higher concerns related to the survival in the work environment<sup>10,40,41</sup>.

Based on this, it was evidenced that the impact of the work reality, the necessity of new adaptations to the pedagogic practice and the relationship with co-workers concern the newer teachers. Indeed, the beginning of the teaching profession generates a conflict to the new professionals, which may generate concerns related to Self dimension<sup>10,42</sup>.

A study with teachers that were almost finishing their master's degree, in the North American reality, compared the concerns of the physical education teachers with teachers from other areas. The program used a pedagogical practice experience with the monitoring of a supervisor. In this study they could identify higher concerns associated to survival in the work environment, short time of teaching by the teachers, and program supervision. Therefore, the study revealed the necessity of a constant monitoring of the teachers' concerns aiming that teacher formation could be coherent to the pedagogical practice<sup>21</sup>.

Identifying the concerns behavior associated with Self dimension provides a complete scenario of the relationship established in the professional practice and the way this work environment and its relationships affect the teaching practice. In this sense, understanding this

dimension development allows the elaboration of actions that aid the professional practice and personal teaching life, mitigating the feeling and agonies, which when linked to this dimension proposes psychological characteristics.

### *Task Dimension*

After analyzing the evidence related to the concerns with the teaching task, two studies showed the highest teaching concern with this dimension<sup>19,26</sup>.

Additionally, two studies with teachers from Santa Catarina, Brazil, identified that the teachers in the beginning of their careers demonstrated higher concerns with the Task dimension<sup>11,26</sup>. Hence, the concerns related to this dimension such as infrastructure, characterize governmental action plans from the city, state, and country, which are specific from each region or location.

When analyzing the Task dimension and its relation to the sociodemographic variables, Vieira et al.<sup>7</sup> showed that the female teachers were more concerned with this dimension than their male counterparts. Corroborating with this, some studies also have identified that women are more concerned than men<sup>11,43</sup>. The highest concern levels that women present may be related with the overload of tasks and activities that are given to them in both personal and professional life<sup>7</sup>.

According to the analysis regarding the teaching network in which the teachers are involved with, it was identified that teachers from the state school system are more concerned with the task dimension in comparison to teachers from the city school system. The reality between these contrasting school systems is different, wherein the state school system often presents poorer infrastructure, materials, and planning methods than the city school systems<sup>7</sup>.

Again, we highlight that the work conditions from each place, as well as the bureaucratic demands, material availability, and infrastructure are macro organizational aspects, which depend on government actions and public budget to its effectuation<sup>12</sup>. Moreover, a study with British physical education students suggested that the concerns related to the task may be understood as support to the Impact dimension concerns, such as the number of students per class<sup>32</sup>.

Lastly, McBride<sup>25</sup> showed the poor factorial load for the Task dimension for the physical education teachers in the TCQ. In this sense, the author identified five new items to be added in the Task dimension. These new items provided a better adequation of the physical education teachers' concerns in the Task dimension. Among them, we could identify the continuity in the Physical Education annual program, working with many students, the lack of administrative support, the poverty and inadequacy of physical education class organization, and the absence of a physical education consistent classification policy<sup>25</sup>. This caveat regarding the Task dimension in the questionnaire may be explained by the physical education teacher activity characteristic and singularity, as local and work material, which is different from other areas of knowledge<sup>9,25</sup>.

Effectively, the knowledge of the teaching concern level linked to Task dimension allows to settle an overview of the difficulties directly related to the act of teaching. Thus, it is possible to identify which are the factors that concern the teachers in their main function, which is planning, organizing, assessing, and teaching.

### *Impact Dimension*

The scientific literature reveals that the highest concern of the physical education teachers was with the Impact dimension<sup>28</sup>, regardless of their time working as a teacher<sup>7,9,18,27</sup>.

Accordingly, other research that also investigated the students' or teachers' concerns in many different areas has identified that the Impact dimension is the one that presents the highest levels of concern<sup>36,43</sup>.

Gordon<sup>20</sup> investigated two physical education professors, one in the first teaching year that demonstrated higher levels of self-concern and underwent an alternative formation process. The other teacher was in his second year of teaching and presented higher concerns regarding the impact of his teaching to the students. He has received a traditional teaching formation. According to the author, these differences might be established by the formation, and consequently the experiences that these teachers have faced.

It is identified a current lessening in the concerns referent to Self dimension, which reflects the concerns perceived in relation to the work environment, concomitantly to a tendency for the teachers to present higher concerns with the impact of teaching to the students, therefore, with the immediate product of their pedagogical performance.

Thereby, it is evidenced a contemporary inclination where the teachers are concerned with aspects that are more associated to them, and depend directly on them to its effectuation, such as the impact of their individual performance. This may be explained by the national and temporal features and necessities of the research, the social reality hardening in which the scholar community is inserted in<sup>13</sup> and the naturalization of some teaching situation, as the high number of student per class, which has implicating in some teaching concerns that are not linked to the dimensions proposed by Fuller and Bown<sup>14</sup>.

### *New Concerns Dimensions*

Despite the concerns present in the theoretical model by Fuller and Bown<sup>14</sup>, there is evidence in the scientific literature of new factors that promote concern in the teachers. Among the contemporary concerns identified, in both North American and Brazilian realities, we emphasize the violence, aggression to teachers, participation in strikes<sup>24</sup>, social issues of students<sup>26</sup>, health, social reality of students, public policies and discipline status<sup>27</sup>, and the concerns referent to the family structure/social context and the teaching formation<sup>18,30</sup>.

The literature presents other studies with different samples (teachers and students/interns) that also showed concerns that are not present in Fuller and Bown's theory<sup>14</sup>, such as the work conditions and public policies<sup>8,12</sup>, the social problems that affect the scholar community<sup>11,12,37</sup>, the absence of the family in the student school life<sup>37</sup>, and the teaching learning and formation<sup>8,12</sup>.

The presence of new concerns that influence the teaching practice may be associated with the new reality and need that the teachers face during their work, depending on the context in which the school is involved. Moreover, we highlight that Fuller and Bown's theory<sup>14</sup> was developed from the necessities and situations of the investigative period. Starting with a *continuum* in the evolution of the teacher profession, it is necessary to assess the new necessities and the educational scenario where the teacher and the school are inserted in.

On the basis of this indicators, the study of Vieira<sup>44</sup> proposed two new concern dimensions: public policies, linked to the government issues from macro or micro organizational order, which are performed for the population; and Social Problems that represent the social context factors where the school is inserted in and are reflected in the school environment. Two new indicators were also proposed for the self dimension: Teacher Formation referring to the concerns regarding the initial and continued formation and its relation with the pedagogical performance, and lastly, Health, which is related to welfare issues which the environment and the work relationships present and affect the teachers' health.

In addition, the contemporary findings of new concern factors to the teachers settle and portrait the emphatic connection between the school environment and the society. In this sense, the school becomes a big funnel of the context that occurs around it and finishes mirroring the daily community situations.

## Conclusions

Using the current systematic review as basis, it is possible to delineate the overview of the research performed in the specific theme and the advance of the knowledge until now on the physical education teachers' concerns.

It was identified that after the development of Fuller and Bown's concern theory<sup>14</sup> in the North American reality, the research about this theme has received attention from some researchers in this area. The questionnaires used to scale the concern levels were also developed from Fuller and Bown's theory<sup>14</sup> and helped in the development and understanding of this theme. However, it was clarified the tool's need of adequacy for the current and national reality.

The physical education teachers' concerns are in their majority related to the Impact dimension. Self dimension is present in the beginning of the teaching career, having, posteriorly, a gradual decrease on concerns levels.

The three dimensions proposed by Fuller and Bown's theoretical model<sup>14</sup> are still currently present, but they are not enough to explain the reality of the teachers' concerns. We verified in the literature that there are concerns that do not fit in the three dimensions proposed by Fuller and Bown<sup>14</sup>. Among them, we may highlight the social problems that affect the students, public policies that affect the teaching reality, teachers' health, and salubrity, as well as academic formation. The presence of new concerns according to the searched bibliography make arise the need to review the theory, to adequate the new teachers' concerns that are currently present.

Additionally, it is necessary to consider the temporal aspects, having in mind that whilst the research in the Brazilian reality happened in the last three years, the research regarding the North American reality was performed two decades ago. We suggest as a possibility for further research the confrontation, by means of the documental and historical analysis, of the temporal existing differences in the development of the theoretical concerns model according to the current reality faced by the teachers. The limitations of the study are based on the exclusion criteria for the papers with a sample composed exclusively by intern students or articles that analyze other areas of teaching.

It is emphasized that studying the teachers' concerns has us propose an analysis of which factors truly interfere in the teaching performance, aiming to improve the work processes. In other words, the main studies goal in this theme is to understand how to optimize the teachers' work, diminishing the agony and worrying moment referent to the most variety of adversities present in the work environment.

In conclusion, it is evident the necessity to review Fuller and Bown's concerns theory<sup>14</sup>, which is the studies basis in this theme, with the aim to expand and identify the contemporary teachers' concerns. Consequently, there is the need to analyze the questionnaires that scale the concerns levels according to the new requirements established by the reality that the teachers face in schools.

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