

A Comprehensive Review of the Formal Training of Future Schoolteachers in Health, Safety, and Risk Prevention in Spanish Public Universities. Is This Training in Line with International Recommendations?

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Abstract—Advanced countries aim to integrate health and safety training at all educational stages. Research suggests that providing teachers with basic training in health, safety, and risk prevention before they begin teaching could help achieve this goal. Therefore, it is recommended that the preparation of schoolteachers should begin as early as the undergraduate level. This study presents a comprehensive review of the subjects, contents, and curricular elements related to health, security, and risk prevention in Primary Education and Early Childhood Education degrees offered by Spanish public universities (33 universities that met the pre-established requirements were included). The results indicate that most Spanish public universities do not provide sufficient coverage of basic training in health, safety, and risk prevention for future primary and early childhood education teachers in their degree programs.

Keywords—education, teacher training, risk prevention, health and safety, health and risk prevention, whole-school approach

I. INTRODUCTION

The integration of health and safety training at all educational stages has become an ideal to be achieved in the most advanced countries, being promoted in the EU by some European agencies such as EU-OSHA [1]. Along these lines, what is known as the “wholeschool approach” has been defined as a global approach to integrating risk education and health and safety management in schools. This would encompass all school activities and operations, ensuring that health and safety measures are integrated into school life and involve both staff and pupils in the management of school safety.

However, the current situation in Spanish schools seems to be far from this ideal [2–4]. As a result, the question has arisen as to whether teachers should receive

basic training in health and risk prevention to enable them to carry out the necessary tasks within the school’s comprehensive approach [5].

In 2021, Burgos-García [6] showed that teachers have a high regard for training in risk prevention as a valuable learning resource. He suggested that providing teachers with basic training in health and safety and risk prevention prior to their teaching activity could lead to an improvement in school teaching and learning [7]. Accordingly, it has been recommended that the preparation of schoolteachers should begin as early as the undergraduate level [8].

Different national and international bodies and institutions have recognized the need to integrate health and safety training at all educational levels, as well as to train future teachers [9, 10]. This means that university degrees in education should basically train future teachers in maintaining their own well-being in the exercise of their profession, as well as in basic training on health and risk prevention to their future pupils [11].

Scientific evidence [5, 12–14] suggests that adequate training in health and risk prevention is necessary for future teachers. It is possible that future teachers in the Early Childhood Education (ECE) and Primary Education (PE) degrees are not being adequately trained in basic health and risk prevention concepts.

This study aims to carry out an in-depth review of the current offer of subjects, contents, and other curricular elements related to health and risk prevention in university degrees of PE and ECE in Spanish public universities.

II. MATERIALS AND METHODS

The study conducted a comprehensive analysis of requests for modification of verification reports from public universities in Spain for ECE and PE Teacher Training (TT) degrees. The study aimed to evaluate the current subjects and contents offered to students, as well as

other curricular elements related to health, safety, and risk prevention. With this objective in mind, the curricula published on the official websites of all Spanish public universities were reviewed.

It was decided to take as a reference only the requests for modification of the verification reports that had been published subsequently in the Official State Gazette (Boletín Oficial del Estado or BOE) at the date of completion of the review study (28/02/2021).

This means that the requests for modification of the verification reports of those universities that published them beyond the reference review period were not included.

Thus, the requirements for inclusion in our study for each university were as follows (this is the sum of all of them):

- (1) Be a Spanish public university.
- (2) To present an offer of regulated training in the degrees of TT in ECE and/or TT in PE.
- (3) Request for the verification report of the degrees of TT in ECE and/or TT in PE published on their official website until February 28, 2021.

Finally, the requests for modification of the verification reports selected for review corresponded to a total of 33 universities [15–78].

In these 33 universities, which met the requirements, the contents and subjects present in their applications for modification of the verification reports of the TT in ECE and TT in PE degrees were investigated. Fig. 1 illustrates the geographical distribution of the 33 universities in question.

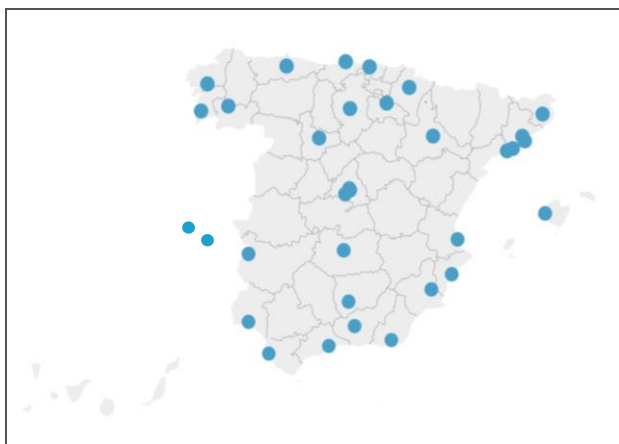


Fig. 1. Geographical location of the public universities that met the requirements and where the in-depth review of the verification report applications was carried out.

The selection criterion followed, for this purpose, was to be related to topics related to:

- (1) Health (including here the topics corresponding to “hygienic and nutritional habits” and “violence against people” according to the World Health Organization (WHO) report (2002).
- (2) Safety and/or risk prevention (that related to the prevention of violence would also be included here according to the WHO report of 2002).

The contents and subjects that met these criteria and were selected were grouped in the following list:

- Health in childhood.
- Basic hygiene habits (brushing teeth, washing hands, etc.) and nutritional habits.
- Sleep and schedules.
- Violence and bullying.
- Drugs.
- Traffic rules and road safety.
- Protection against risks (electrical, physical, biological...).
- First aid and action in emergency situations.
- Prevention of risks at home and in the study or workplace.
- Risks of using data display screens and new technologies (Internet).
- Teacher welfare.
- Risk prevention in the exercise of teaching.

It should be added that the contents and subjects aimed at educating students on the adoption of preventive measures for the promotion of their own well-being and that of their future students have also been considered in the preparation of this list.

This was carried out to know the current state of the offer of subjects, contents, and other curricular elements related to health, safety, and risk prevention in the TT in ECE and TT in PE degrees to approach the formative reality in our country of the future teachers of the stages of ECE and PE. With this objective in mind, the curricula published on the official websites of all Spanish public universities were reviewed.

We can, therefore, point out that the requirements that each university had to fulfill for its inclusion in our study were the following (this is the sum of all of them):

- (1) Spanish public university.
- (2) Offering formal training in TT in ECE and/or TT in PE degrees.
- (3) Request for verification report of the TT in ECE and/or TT in PE degrees published on its official website until February 28, 2021.

Consequently, a total of 10 degrees from 6 universities were discarded [19, 32, 33, 72–78].

III. RESULT AND DISCUSSION

A. ECE Degree in the Spanish Universities Studied

1) Subjects, contents, and learning outcomes

100% of the requests for modification of the revised verification reports of the TT in ECE degree have included a subject dedicated to “health in childhood”, offering 88.88% a subject dedicated to “basic hygienic and nutritional habits”.

None of these universities seems to offer training on the item “Drugs”, and only 18.51% of the degrees a subject dedicated to “Risks of using data display screens and new technologies (Internet)” and 7.4% on “First aid and action in emergency situations”.

The presence of contents and competencies to be acquired in “First aid and emergency situations” is almost anecdotal. Undoubtedly, this is a serious deficiency in the training of future ECE teachers, which should be remedied

for obvious reasons and even more so after the experience of a health crisis, such as the one caused by the SARS-CoV-2 pandemic.

2) Compulsory subjects related to children's health

In most of the TT in ECE degrees, a basic subject is offered and, therefore, of compulsory study, which is generically aimed at "health in childhood". These basic (mandatory) subjects, due to their title and contents, should be focused on preparing future teachers of ECE for the promotion of health at school, the development of healthy habits in their students (the promotion of self-care from infancy), and an incipient culture of prevention. However, due to the differences that can be seen in the names of the subjects offered, it is likely that, in practice, the approach given to the compulsory subject of health in each university will be different.

The verification of the existence of a wide range of denominations suggests a possible diversity in terms of the contents taught and the competencies to be acquired by those who, in different universities, pursue the degree in ECE. At this point, it is worth reflecting on the need to harmonize and standardize basic competencies to be acquired in the field of health by TT in ECE graduates in Spain and the European Community, as has been required for the free movement of professionals in the common European area since the end of the 20th century and in order to comply with what is currently being indicated as a common objective for EU member countries in the field of health.

B. PE Degree in the Spanish Universities Studied

1) Subjects, contents, and learning outcomes

In contrast to what has been verified for the TT in ECE degrees, only 45% of the universities studied offer a subject, content, and/or learning outcome related to "health in childhood". In addition to the above, it should be noted that when such an offer is made, the teaching of the subject is compulsory in only 10% of the cases.

As for "basic hygienic and nutritional habits", it can be concluded that it is only taught in 45% of the universities studied and with the same percentage of compulsory subjects.

The item "violence and bullying" is offered more frequently, with a subject, content, and/or learning outcome in 70% of the cases and being a compulsory subject in 45% of the universities studied.

As for the item "Risk prevention at home and in the study or workplace", it is only offered as a subject, content, and/or criterion in 15% of the universities considered in our study.

It is striking that only 10% of the universities offer some type of training or criterion related to the item "drugs", only 20% of the degrees a subject dedicated to "Risks of using data display screens and new technologies (Internet)" and 25% on "First aid and action in emergency situations".

As in the case of the degree in ECE, there is a limited presence of training on certain health risks in university degrees in PE in Spain, despite the fact that students at this stage are more mature and, therefore, their exposure to

these risks is expected to be greater (use of data visualization screens and drugs) and, consequently, the need for prevention of unhealthy behavior is more urgent.

Likewise, the scarce presence of contents and competencies to be acquired in "First aid and emergency situations" is also striking. This is even lower than that which has been found in the degrees of TT in ECE when the opposite should be expected. Students between the ages of 6 and 12 (PE stage) should be physically and mentally more prepared than younger students to react to a health problem that may arise in the school environment.

Training in first aid and emergency situations should be compulsory for students of primary education, not only to train others, but also to be able to act appropriately in situations of this type. We need to reflect on this point just by remembering the health crisis and alarm situation experienced very recently and the need to be prepared for a new crisis of this or any other caliber in the future.

2) Subjects related to childhood health

The health contents that are basic in the training of future primary education teachers can only be acquired, in a general way, by taking those voluntary subjects aimed at becoming a teacher specialized in Physical Education.

C. Overall Results of ECE and PE Degrees

1) Contents, subjects, or learning outcomes related to risk teacher and student training

78.12% of the requests for modification of the verification reports of the PE degrees have included subjects, contents, or learning outcomes aimed at learning about health promotion, being part of a compulsory subject in 8% of the cases.

It is striking the almost total absence of training in health/hygiene contents as basic as:

- Ergonomics and postural hygiene, which is offered in 15.21% (in 6.5% as a mandatory subject) of the degrees reviewed.
- Oral health and hygiene, offered exclusively in 8.69% (in no case as a compulsory subject) of the degrees reviewed.
- The risks of physical activity in school, offered in only 6.5% (in no case as a compulsory subject) of the grades reviewed.

2) Contents or subjects related to the training of future teachers in their own well-being and risk prevention in the teaching profession

Only 4.34% of the university degrees reviewed offer a subject related to teaching well-being and always as a voluntary option or some content related to this item (8.69% of the degrees reviewed and only 4.34% as mandatory content). On the other hand, with respect to risk prevention in teaching, we found that only 4.34% of the universities offer a subject related to this item, which is mandatory. Once again, the figures speak for themselves and express the need to visualize these results, internalize them, and reflect on them to be able to take the necessary measures to adequately alleviate these significant deficiencies in the training of future teachers.

IV. CONCLUSION

The study investigated the current state of health, safety, and risk prevention training in the ECE and PE degrees of public universities in Spain. It identified the perceived training needs of students and the shortcomings or training needs of graduates with professional practice.

The in-depth review of the requests for modification of the verification reports of the teaching degrees in ECE and PE of the 33 Spanish public universities studied, shows:

- A lack of correspondence between the contents and competencies foreseen and the official curricula published on the respective websites.
- Furthermore, both degrees fail to cover fundamental safety and risk prevention topics, as well as information related to teacher wellbeing and certain basic health issues.
- A lower presence of health contents in the PE degree, with respect to the ECE degree. In the second degree, the presence of certain contents is verified in practically all the Universities investigated. These are the following: “Health in Childhood” and “Hygienic and nutritional habits”, their teaching being mandatory in 100% and 88.88% of the cases respectively. Next would be “Sleep and schedules” present in 48%.

In addition to this lower presence in the PE degree, there is the fact that health contents are present mainly and almost exclusively in the mention of Physical Education, forming part of a teaching offer that is also voluntary for the students. This results in a significant lack of health, safety, and risk prevention training, which does not align with European recommendations. This means that the verification reports deviate from these recommendations in this field.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

BA and BM-J: Conceptualization and methodology; BA: formal analysis; BA, JLB, and BM-J: investigation; BA: writing—original draft preparation; JLB: writing—review and editing; all authors had approved the final version.

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