

Outdoor movement education in primary school during COVID-19 pandemic in the synthetic perceptions of primary school university training student

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ABSTRACT

The problem is the new scenario for the school in the SARS-COVID-19 pandemic era, especially in physical education (PE) because of the extreme difficulty to practice body and physical activity by distance for students 5-11 age. The aim is to detect the opinions of master's degree courses in primary education students to have the complex aspects of contents and objectives of PE in outdoor mode. Through a qualitative survey carried out by submitting specific questionnaires by the Google Modules platform at the random sample of primary education master student population of Salerno and Basilicata in the southern part of Italy. Questionnaire is made by 28 questions related to: demographic data (1-5), practice of indoor and outdoor physical activity (6-14), physical education in school during pandemic (15-18), the future practice or possibility of practicing outdoor lessons (19-23), on the psychological impact due to social distancing / closure of gyms (24-26) and on the perception of the importance of physical and motor activity during COVID-19 (27-28). The data showed how active are students, where they practice, how the pandemic and the smart configuration of life affected their lifestyles, what are their perceptions and perspectives about outdoor movement education. Thus, it needs different university training about the teaching methods of PE, the need to provide training actions also on the teaching of outdoor movement education, by providing these knowledges during teachers' training, it is possible that they can increase children chances of moving and of a global development of their skills.

Keywords: Distance teaching/learning; Teacher training; Physical activity levels.

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INTRODUCTION

The new scenario for the school in the SARS-COVID-19 pandemic era, especially in physical education (PE), has produced new critical issues because of the extreme difficulty to practice physical activity by distance for students from 6 to 11 years old. The current debate on the present and the future of physical education and sport is fully absorbed by the issues of safety at school and these issues influence the qualitative and quantitative levels of physical activity practiced both in distance and in presence lessons. This could be an opportunity to rethink the organization of the school, its aims and its role in society, the teaching methods and the learning processes, also remodelling the teacher training process.

Taking into due consideration the new needs imposed by the virus, it is crucial to search for new spaces and environments for the practice of physical activity in educational contexts. It would be desirable to bring physical education back to green spaces, in the school yard, in city parks, reintegrating it into the social life of children and young people. The redesign of spaces and environments for the practice of physical education refers to specific contents and tools but also to teaching methods more appropriate for the learning processes and growth of the children. The redesign of the teaching imposed by the COVID-19 emergency it is an opportunity to review the teacher training processes, whit particular references to the classes of teaching methods of physical education. Outdoor education (OE) is characterized as an educational strategy, vast and versatile, based on active pedagogy and experiential learning; is determined by the principle of applying to the external and natural environment. It can be used in multiple educational itineraries suitable for deepening, expanding, detailing what is done indoors. In this sense, it is not a strategy that replaces the more traditional education system, but rather supports it, completes it with experiences that the closed environment cannot offer. The external environment, which is part of everyday life, must be experienced by the child as an educational environment that develops social, cognitive, emotional but, above all, sensorimotor skills. Its main feature lies in the exploratory, observational, manipulative freedom with which the child can relate to the external environment and to develop knowledge, skills and competences through concrete and direct experiences. If we rethink the outdoor as an educational environment, then going out is not casual or limited to the situation of good weather, but it is daily because it is part of the educational experience, connected to what is done inside, inserted in the planning and in the daily routine. It is precisely by using different environments that we can get out of the classroom boundary, thus stimulating teaching approaches and different interactions between students. In addition to school spaces outside the classroom, such as laboratories, gardens, gyms, it is possible to explore the area surrounding the school as a live learning context. Today more than ever, given the restrictions to protect us from the spread of COVID-19, external alternatives are an added value to learning.

METHODS

This is an initial study for which it has been adopted the cluster methodology, which aims to explore the field of childhood and pre-adolescence physical education whit particular reference to the content and the learning outcomes of classes on Teaching methods of physical education addressed to the future teachers that who attend master's degree courses in primary education sciences. A questionnaire made by 28 questions has been administered by the Google Modules platform at the random sample of primary education master student population of the southern part of Italy and attending the Universities of Salerno and Basilicata. A sample of 201 future teachers (98% female) took part in the study with an average age of 23.6. Particular attention has been paid to the data on:

- Personal physical practice.
- Barriers or facilities that influence the practice of physical activity.

- Perceptions of physical activity and the influence of COVID-19.
- Perceptions of physical activity in relation to the school context.
- Outdoor physical activities.

For data analysis has been used descriptive statistics to calculate the variables expressed as a percentage and the chi-square test was used to verify the existence of a relationship between the following variables: personal data, on individual physical activity level, on the possible presence of structural barriers, perceptions on the importance of physical activity, personal teaching experience towards physical activity, on the consequences of COVID on physical activity and on the possibility of practicing outdoor physical activity in primary school. The standard statistical software package (IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp) was used. The level of significance was set at $p < .05$.

RESULTS AND DISCUSSION

The answers highlights how active are future teachers, where they practice, how the pandemic and the new “*smart*” configuration of life affected their lifestyles, what are their perceptions and perspectives about physical education and its importance for the achievement of children development goal at the end of the primary school. Some issues emerged were common with the results of other studies (D’Isanto et al., 2021, D’Elia et al., 2021, Raiola et al., 2021a,b, Raiola et al., 2020).

Data on personal physical practice

Question 6. Are you physically active? Yes 16.8%; Partially 56.4%; No 26.7%.

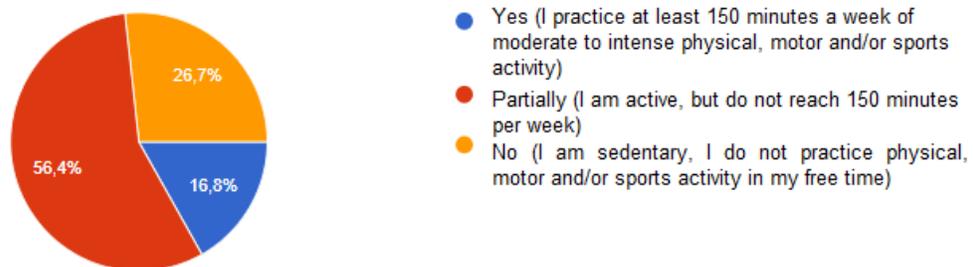


Figure 1. Level of physical activity.

Question 7. Where do you practice physical activity? (answers of active and partially active) 79.6% indoor; 20.4% outdoor.

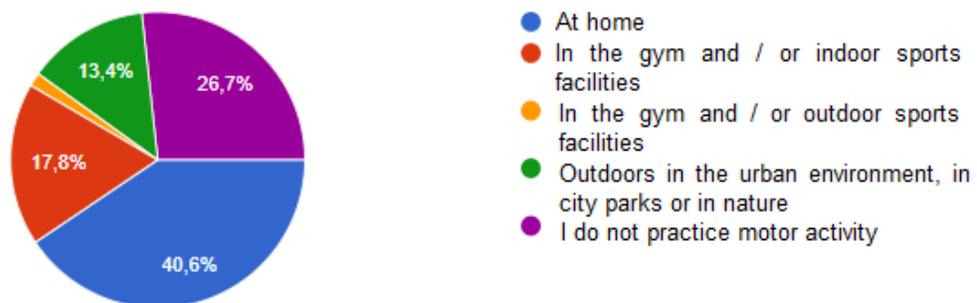


Figure 2. Place of physical activity.

Question 10. What activity do you usually do? 9% Structured activities; 91% unstructured activities.



Figure 3. Type of sport/physical activity practiced.

Question 12. How important do you consider the practice of physical and / or sports activity in daily life? 81.6% very high.

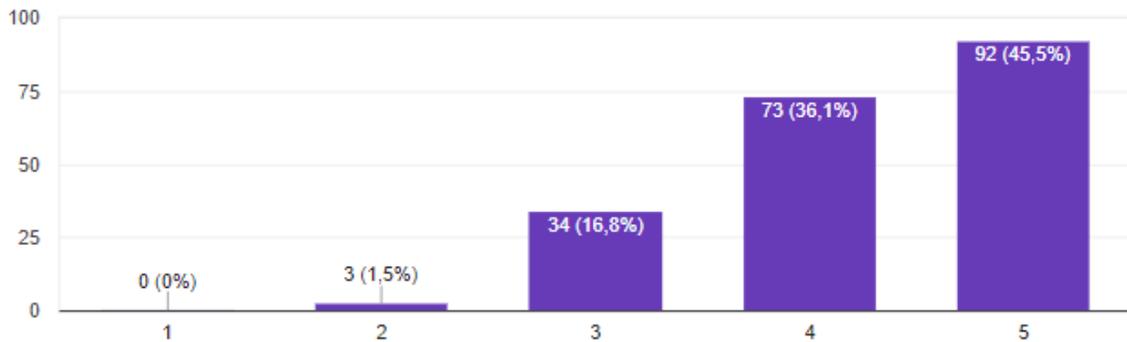


Figure 4. Importance of sport/physical activity in everyday life.

Data on barriers or facilities that influence the practice of physical activity

Question 8. Are there indoor sports facilities and / or gyms near the area where you live? 83.7% yes.

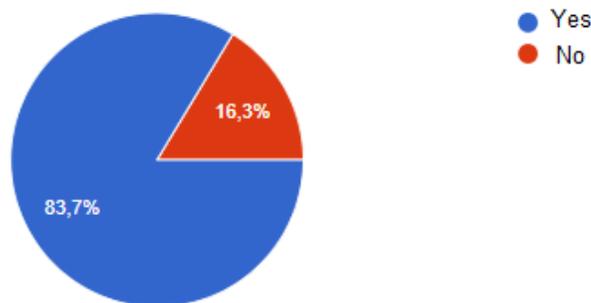


Figure 5. Presence of indoor barriers that influence sport/physical activity.

Question 9. Are there pedestrian paths, parks or outdoor sports facilities near the area where you live? 53.5% yes.

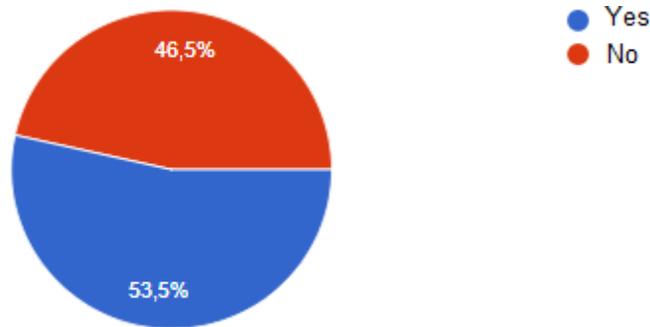


Figure 6. Presence of outdoor barriers that influence sport/physical activity.

Data on perceptions of physical activity and the influence of COVID-19

Question 11. The current restrictions have affected the quality / quantity of physical activity you carry out? 81.2% yes

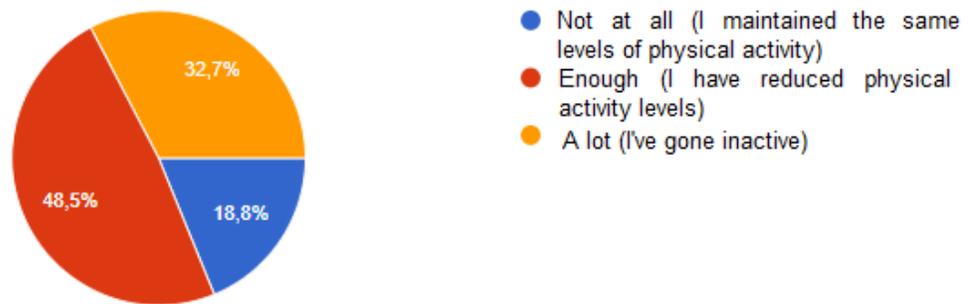


Figure 7. Perceptions about restrictions on sport/physical activity.

Question 24. With the current "smart" configurations of work, study and social relations, do you have more free time to devote to physical activity? 72.8% no.

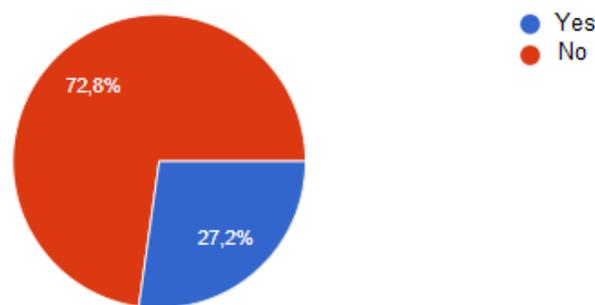


Figure 8. Perceptions of free time with "smart" configurations.

Question 25. How motivated do you feel to engage in physical activity right now? 41.6% scant; 33.7% enough; 24.7% high.

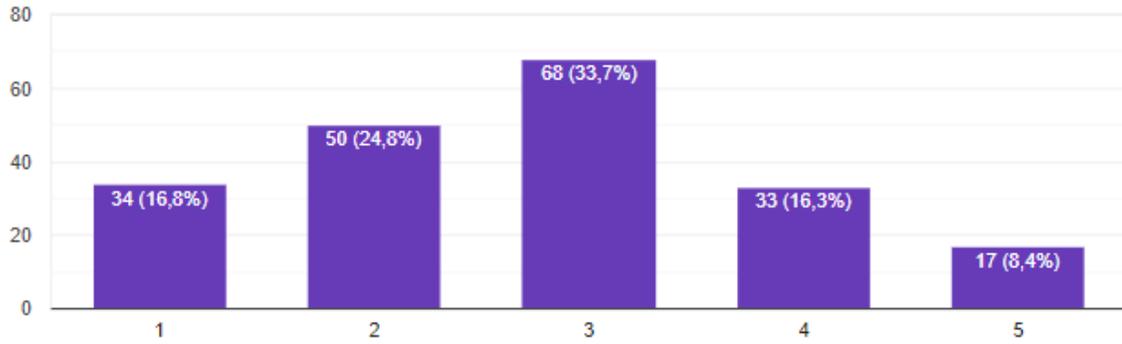


Figure 9. Motivation perceived in practicing sport/physical activity.

Question 26. Which of the following restrictions affects the performance of physical activities the most? 42.1% closure of gym and facilities; 47.5% home insulation; 9.4% social distancing.

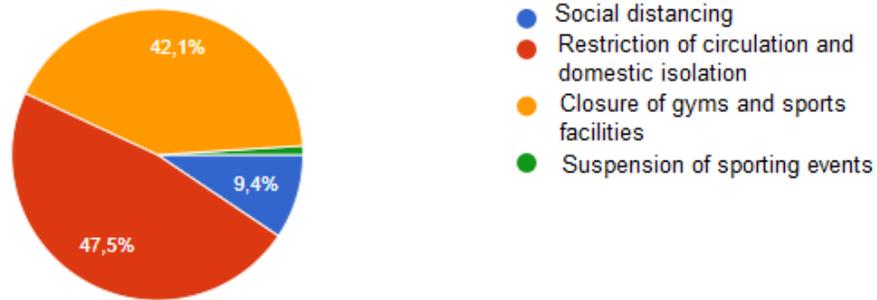


Figure 10. Type of restriction that affected sport/physical practice.

Question 27. Do you think that the practice of physical activity can have beneficial effects against COVID-19? 71.3% yes; 28.7% no.

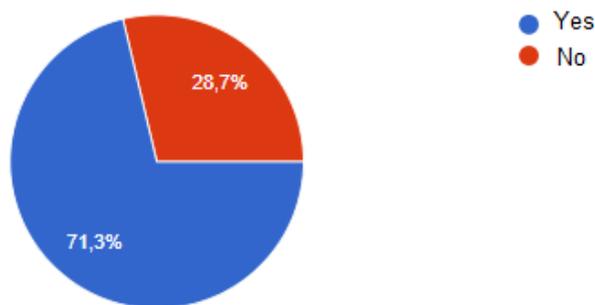


Figure 11. Perceptions on the benefits of physical activity against COVID-19.

Data on perceptions of physical activity in relation to the school context

Question 13. How useful do you think, for the purposes of your training and as a future teacher, to study methods and didactics of motor activities? 91% very useful.

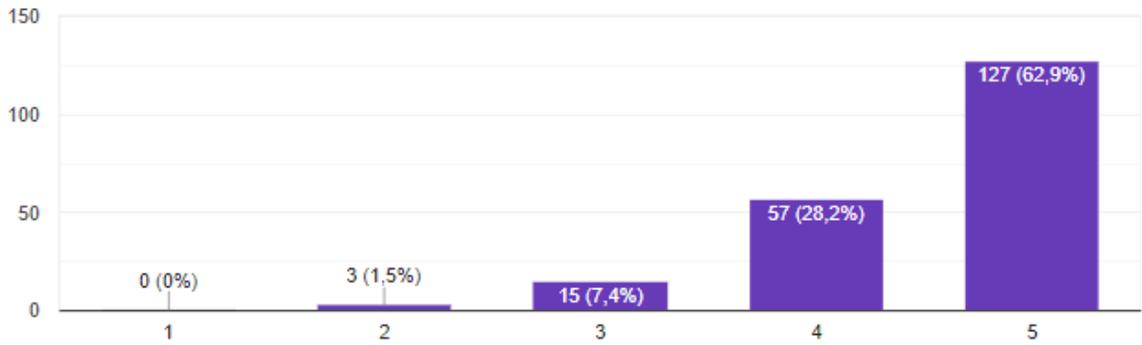


Figure 12. Perception of the importance of the study of methods and didactics of motor activities.

Question 14. Do you think that physical activity carried out outdoors can contribute to achieving the development goals of primary school? 100% yes.

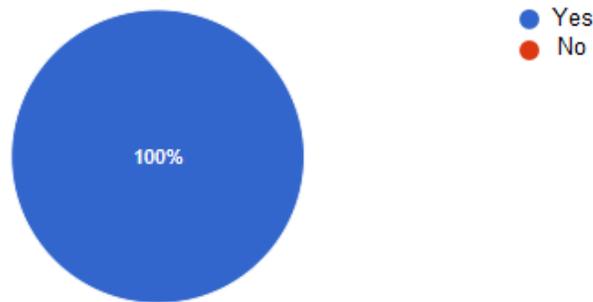


Figure 13. Perception of the importance of outdoor physical activity to reach development goals of primary school.

Question 15. In your internship experience, have you observed physical education classes? 55.9% never, 38.6% few times.

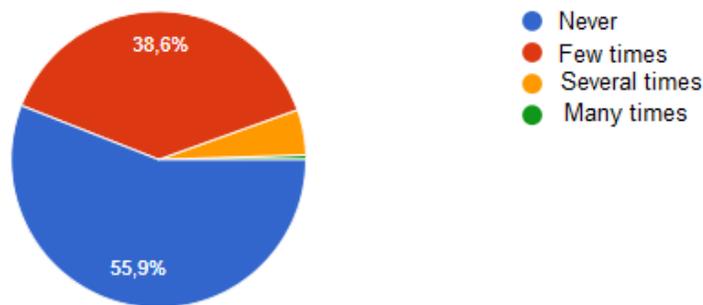


Figure 14. Frequency of physical education classes during internship experience.

Question 16. Which activity do you think is safer to carry out? 75.2% both outdoor and indoor activities.



Figure 15. Perception of the safest place to practice motor activity.

Question 17. Which activity do you think is safer to carry out in school? 70.3% both outdoor and indoor.

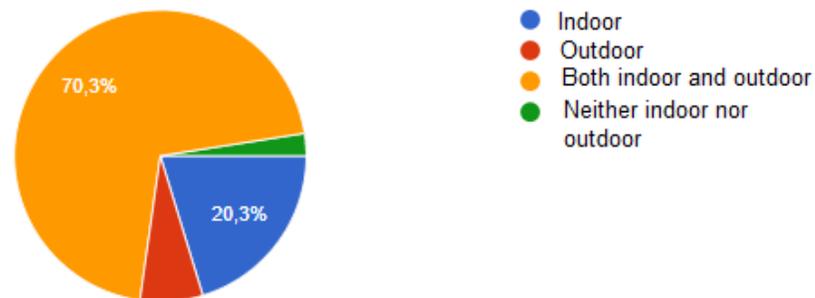


Figure 16. Perception of the safest place to practice motor activity in school.

Question 18. In this period, do you think it is safer to practice outdoor or indoor physical activity? 77.7% outdoor.

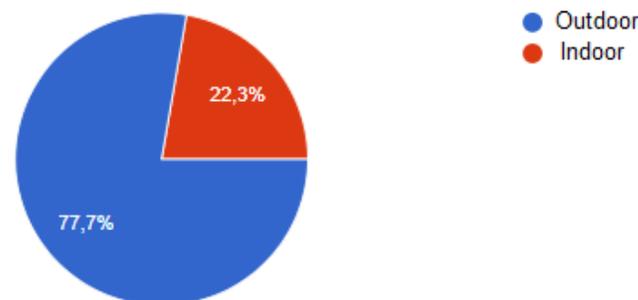


Figure 17. Perception of the safest place to practice motor activity in this period.

Question 19. Do you think it is possible to practice physical activities on a daily basis in primary school? 88.6% yes; 11.4 no.

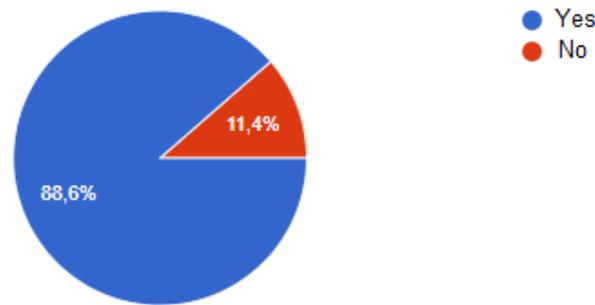


Figure 18. Perception of the possibility of practicing physical activity on a daily basis in primary school.

Data on outdoor physical activities

Question 20. In organizing experiences related to physical education in primary school, how much importance do you attach to outdoor activities? 90.6% high importance.

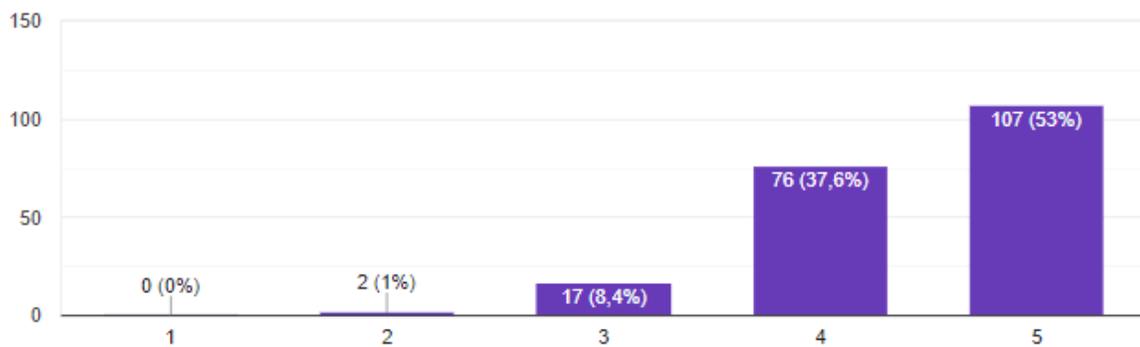


Figure 19. Perception of the importance of outdoor activity.

Question 21. Have you ever participated or conducted outdoor physical activity experiences (in parks or in the natural environment)? 66.3% yes; 33.7% no.

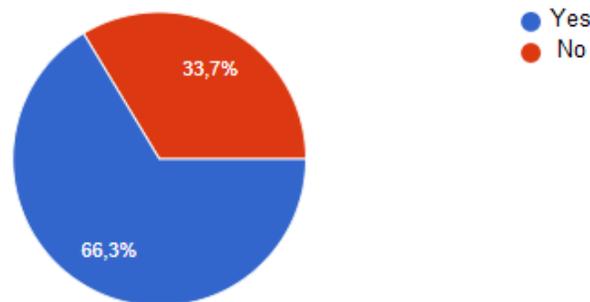


Figure 20. Experience in outdoor activities.

Question 22. Would you like to do outdoor physical activities in your teaching activity? 98% yes; 2% no.

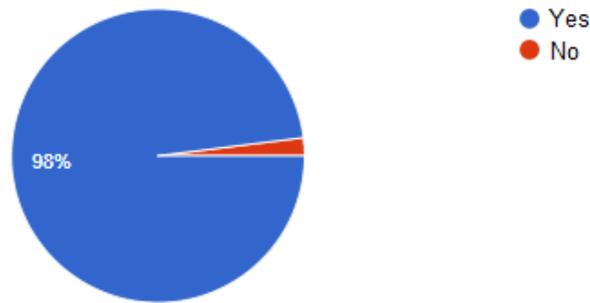


Figure 21. Perception on the possibility of practicing outdoor physical activity.

Question 23. Do you think your training is adequate to be able to carry out physical activities outdoors? 65.8% yes; 34.2% no.

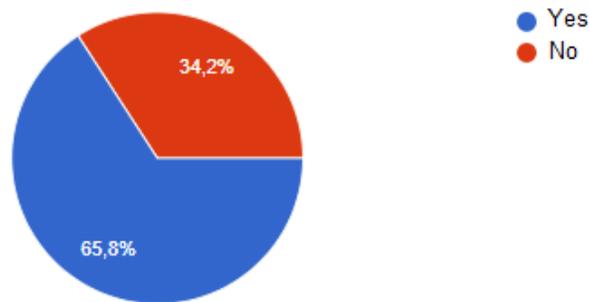


Figure 22. Perception of the adequacy of one's training to carry out outdoor activities.

Question 28. Do you think that the increase in outdoor physical activities, especially in primary school, can favour the resumption of teaching activities in the presence? 55.4% yes; 44.6% no.

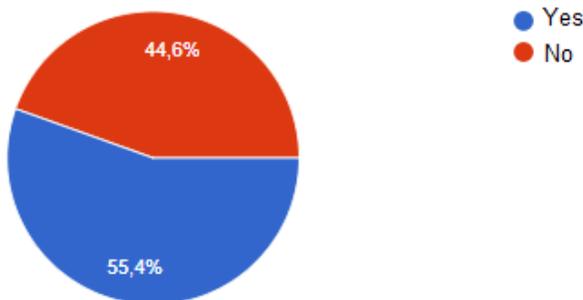


Figure 23. Perception on the possibility that outdoor activities can favour the resumption of didactic activities in presence.

In particular, chi-square test show that there are the following relationships:

Between being physically active (Question 6) and:

Question 11) the perception on the influence of restrictions on the quality / quantity of activities carried out. Most of those who are physically active have reduced their levels of physical activity enough, unlike most of the sedentary who have become inactive due to the restrictions (Fig 1-7; $p < .001$).

Question 12) the perception of the importance of physical activity levels. Most of those who are physically active believe that the practice of physical activity is more important than those who do not (Fig 1-4; $p < .001$).

Question 25) the current motivation for practicing physical activity. Most sedentaries do not feel motivated at all, while those who train are partially, but not maximally motivated (Fig 1-9; $p < .001$).

Question 23) the perception of the adequacy of one's training for practicing outdoor activities. Those who practice physical activity feel more prepared than those who do not (Fig 1-22; $p < .003$).

Question 21) the experience of outdoor physical activity. Those who are physically active have had more experience of outdoor activities than those who do not (Fig 1-20; $p < .005$).

Question 27) the perception of the perceived benefits of physical activity against COVID-19. Those who practice physical activity think that the latter may have greater effects on COVID-19 than those who do not (Fig 1-11; $p < .01$).

It emerges that the restrictions have had a negative impact on everyone, even if to varying degrees, in fact one part has become completely inactive and another has reduced the quantity and quality of training; furthermore, motivation is currently low as well. However, this could also be due to the importance given to the practice of physical activity in daily life, because those who are inactive do not give it the same importance as those who have continued to train. Finally, those who are inactive think that it brings fewer benefits than practitioners, against COVID-19. As for perceptions of outdoor physical activity and the possibility of offering it in schools, currently those who are more active have had more experience in this field and feel more prepared to carry it out in schools. We should therefore work on those who have had less experience.

Between the presence of gyms near home (Question 8) and:

Question 26) the perception on the influence of restrictions on physical activity. Those who have a gym nearby believe that the restriction that most affects the performance of physical activity is the closure of gyms and sports facilities, and the limitation to circulation and domestic isolation. Those who do not have a gym nearby, on the other hand, believe that the restriction that most affects is the limitation to circulation and domestic isolation (Fig 5-10; $p < .01$).

Between the presence of pedestrian paths / parks / outdoor structures near home (Question 9) and:

Question 21) personal experience with outdoor physical activity. Those who have a pedestrian path / park / outdoor facility near their home have had more experience of outdoor physical activity than those who do not (Fig 6-20; $p < .005$).

Question 11) the perception on the influence of restrictions on the quality / quantity of activities performed. Those who have a walking path / park / facility near their home have reduced or maintained physical activity levels, compared to those who have not, who have mainly become inactive or reduced physical activity levels (Fig 6-7; $p < .02$).

The presence of pedestrian paths, parks and outdoor structures encourage the population to become active. With the current restrictions, those who had training areas close to their homes have maintained or reduced their levels of physical activity, compared to those who do not have them, who have become predominantly inactive; they also had a greater experience of outdoor physical activity, which could make them feel more

ready to carry out future outdoor physical activities in schools, essential for a gradual recovery in safety towards normality.

Between the perceived importance of physical activity in daily life (Question 12) and:

Question 6) being physically active, as already seen above (Fig 4-1; $p < .001$).

Question 13) the perception of the usefulness for the purposes of training the study of "*Methods and didactics of motor activities*". Those who consider physical activity very important in daily life, also consider the study of "*Methods and didactics of motor activities*" to be very important, unlike those who do not give importance to physical activity, who believe that the study of matter is "*quite*" important (Fig 4-12; $p < .001$).

Question 20) the perception of the importance of outdoor activities. Those who consider it important to practice physical activity in daily life, also give greater importance to outdoor activities (Fig 4-19; $p < .003$).

Question 19) the perception on the possibility of practicing physical activity on a daily basis in primary school. Those who consider physical activity very important in daily life, believe it is possible to practice physical activity daily in primary school, unlike those who consider it unimportant (Fig 4-18; $p < .004$).

Question 25) the current motivation in practicing physical activity. Those who do not find it important to practice physical activity in daily life do not feel motivated (Fig 4-9; $p < .01$).

The perceived importance of physical activity comparisons in daily life can affect both one's education and one's daily life. Those who do not consider the practice of physical activity to be very important in daily life, pay slightly less attention to the study of "*Methods and didactics of motor activities*", to outdoor activities and to the possibility of practicing physical activity on a daily basis in primary school. This could negatively affect the education of children in schools. Since they do not feel motivated, do not practice physical activity and do not consider it important, they should understand the reason for their beliefs and make them change their mind.

Between the current motivation in practicing physical activity (Question 25) and:

Question 11) the perceived influence of restrictions on the quality / quantity of physical activity performed. Most of those who feel more motivated have reduced levels of physical activity, compared to those who feel less motivated who have become predominantly inactive (Fig 9-7; $p < .001$).

Question 6) being physically active, as previously analysed (Fig 9-1; $p < .001$).

Question 12) the perceived importance of physical activity in everyday life, as previously analysed (Fig 9-4; $p < .01$).

Motivation to engage in physical activity is a fundamental aspect that has been lacking during the pandemic. The restrictions have had a great impact on physical activity and consequently only those who give greater importance to sports and physical activity, albeit with medium-low motivation, have continued to practice it, albeit in a reduced form.

Between the perception of the importance, for training purposes, of the study of "Teaching methods of physical education" (Question 13) and:

Question 12) the perception of the importance of practicing physical activity in everyday life, as previously analysed (Fig 12-4: $p < .001$).

Question 20) the perception of the importance of outdoor activities. Those who consider the study of this subject very important also give great importance to outdoor activities (Fig 12-19; $p < .001$).

Question 27) the perception of the beneficial effects of physical activity against COVID-19. Those who believe that the study of this matter is very important also believe that physical activity can have beneficial effects against COVID-19, unlike those who consider it quite important (Fig 12-11; $p < .005$).

Question 23) the perception of adequate training to be able to carry out outdoor activities. Those who consider the study of this subject very important, also think that their training is very adequate to be able to carry out outdoor activities, compared to those who consider it quite important (Fig 12-22; $p < .01$).

Those who consider the study of this subject quite important, believe that the practice of physical activity in daily life is not so important and that it does not have maximum benefits against COVID-19; they also give enough importance to outdoor activities, but do not feel trained enough to be able to do them.

Between the perception on the possibility of practicing physical activity daily in the primary school (Question 19) and:

Question 12) the perception of the importance of physical activity in daily life, as seen above (Fig 18-4; $p < .004$).

Question 27) the perception of the beneficial effects of physical activity against COVID-19. Those who believe it is possible to practice physical activity daily in primary school believe that it can have more beneficial effects against COVID-19 than those who believe it is not possible to practice it daily (Fig 18-11; $p < .008$).

Question 20) the perceived importance of outdoor activities. Those who believe it is possible to practice physical activity daily in primary school, give much more importance to outdoor activities, compared to those who believe it is less possible to practice it, which in any case attributed a medium-high value (Fig 18-19; $p < .01$).

Question 28) the perception that the increase in outdoor activities can favour the resumption of teaching activities in presence. Those who believe it is possible to practice physical activity daily in primary school, believe more that outdoor practice can favour the resumption of teaching activities in the presence (Fig 18-23; $p < .01$).

The choice of not wanting to practice physical activity daily in the primary school could be linked to a series of perceptions such as: the little importance attributed to physical practice in general and that it does not have maximum beneficial effects against COVID-19, the medium-high importance, attributed to outdoor practice and that it can contribute to the resumption of teaching activities in the presence.

Between the perception of the adequacy of one's training to be able to carry out outdoor activities (Question 23) and:

Question 6) being physically active, as already seen above (Fig 22-1; $p < .003$).

Question 21) the experience of outdoor activities. Those who believe that their training is adequate to be able to carry out outdoor activities, have had more experience with regard to the same (Fig 22-20; $p < .006$).

Question 28) the perception that the increase in outdoor activities can favour the resumption of teaching activities in presence. Those who believe that their training is adequate to be able to carry out outdoor activities, believe more that they can favour the resumption of teaching activities in the presence (Fig 22-23; $p < .01$).

Question 13) the perception of the usefulness for the purposes of training the study of "*Methods and didactics of motor activities*", as already seen above (Fig 22-12; $p < .01$).

The perception of the insufficiency of one's training to be able to carry out outdoor activities could be linked to being physically inactive, to a lack of experience in these activities, to the perception that they cannot favour the resumption of teaching activities in presence and that the class of "*Methods and didactics of motor activities*" is quite useful, but not maximally.

Between the perception that the increase in outdoor activities can favour the resumption of teaching activities in presence (Question 28) and:

Question 21) experience with outdoor activities. Those who think that outdoor physical activity can favour the resumption of teaching activities in the presence, have had greater experience with regard to outdoor activities (Fig 23-20; $p < .004$).

Question 19) the perception on the possibility of practicing physical activity daily in the primary, as analysed previously (Fig 23-18; $p < .01$).

Question 23) the perception of the adequacy of one's training to be able to carry out outdoor activities, as previously analysed (Fig 23-22; $p < .01$).

Question 27) the perception that physical practice can have beneficial effects against COVID-19. Those who believe that the increase in outdoor activities can favour the resumption of teaching activities in the presence, also believe that physical practice can have maximum beneficial effects against COVID-19 (Fig 23-11; $p < .02$).

Those who are of the belief that the increase in outdoor activities cannot favour the recovery of teaching activities in the presence, have had less experience with this type of activity and that their training is not completely adequate to carry them out. They also think that it is not possible to practice physical activity daily in primary school and that it does not have maximum beneficial effects against COVID-19.

Between the perception that physical practice can have beneficial effects against COVID-19 (Question 27) and:

Question 21) the experience of outdoor physical activity. Those who believe that physical practice may have beneficial effects against COVID-19 have had more experience with outdoor activities (Fig 11-20; $p < .001$).

Question 13) the perception of the importance for the purposes of training the study of "*Methods and didactics of motor activities*", as previously analysed (Fig 11-12; $p < .005$).

Question 20) the importance attached to outdoor activities. Those who believe that physical practice can have beneficial effects against COVID-19 attach great importance to outdoor practice (Fig 11-19; $p < .005$).

Question 19) the perception on the possibility of practicing physical activity daily in the primary, as analysed previously (Fig 11-18; $p < .008$).

Question 28) the perception that the increase in outdoor activities may favour the resumption of teaching activities in the presence, as previously analysed (Fig 11-23; $p < .02$).

Question 6) being physically active, as previously analysed (Fig 11-1; $p < .01$).

It is claimed that the practice of physical activity can have beneficial effects against COVID-19. Those who think the opposite are also of the opinion that outdoor activities cannot favour the resumption of didactic activities in the presence and that it is not possible to practice physical activity every day in primary school. They are also mostly inactive and have had little experience in outdoor activities. Finally, they consider both outdoor activity and study to be quite important for the purposes of training about "*Teaching methods of physical education*".

CONCLUSIONS

It needs different university training about the teaching methods of PE, the need to provide training actions also on the teaching of outdoor movement education, by providing these knowledges during teachers' training, it is possible that they can increase children chances of moving and of a global development of their skills. Physical education and sport in school contexts set specific learning goals that covers a broad range of skills, as bodily, emotional, social, cognitive and moral concepts that cannot be limited to improving just physical or sport skills. The physical, personal and social development of children and youth cannot be achieved by relying only on the specialization course for teaching, since in approaching this training course the will-be teacher must already have the theoretical, technical, didactic and methodological basic elements to teach the PE and sport. We should consider specific contents about knowledges and understanding in PE for educative aims, such as the promotion of health and wellness, the awareness of active lifestyles, the development of psychological and social attitudes (i.e., psychological like self-confidence, self-esteem, mental balance; social like solidarity, fair play, respect of rules and others), discovering the enjoyment in doing physical education and sport.

The definition of core curricula (D'Elia 2019ab, Invernizzi et al., 2020) to teach physical education in the degree courses where educators and teachers are trained arises from the need for sensitize future teachers to a more active and experiential teaching that focuses on body and movement (D'Elia et al., 2020, Raiola 2011, 2013), considering them the centre of the teaching and learning process (Raiola, 2017), as well as placing future teachers in the conditions to adequately teach physical education in the primary school. Physical activity-related training and resources provided to primary school teachers appears to be very important: if future teachers training includes adequate focus on physical activity they will be better disposed to improve children physical activity (qualitative and quantitative) levels. Ensuring greater awareness of the importance of movement activity, during university training of teachers, could produce substantial educational benefits for children whose development could be influenced in a positive way.

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