

A new vision of mindfulness in physical education. Contributing to the social dimension of sustainable development.

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Abstract

Background: The Sustainable Development Goals (SDGs) aims to address a series of challenges facing humanity, seeking to achieve a sustainable, peaceful, prosperous and just life on Earth. This global strategy has three dimensions: environmental, economic and social. In relation to the latter, one of its areas lies in improving health in general (SDG 3, health and well-being) and mental health in particular (target 3.4, prevention and treatment of mental health and well-being). In this sense, some techniques such as yoga have proven to be effective in improving cognitive capacity and emotional regulation, key aspects that should be reinforced in children, and why not do so through PE. **Methodology:** Therefore, the aim of this research is to analyse changes in the psychological well-being of PE pupils. A total of 24 pupils in the 4th year of Primary Education (9.5 years old with a deviation of 1.2) participated in the study. The research is based on an experimental design where two randomised groups were established; a control group that followed the standard PE routine (n=12) and an experimental group (n=12) that underwent a yoga intervention. The intervention lasted two weeks spread over four sessions. The Levene test, with a reliability of 0.86, showed a non-parametric distribution of the sample. Due to the sample size, the data obtained were measured using the paired samples t-test. **Results:** The statistics showed significant differences, indicating a better result in the experimental group for the dimensions: external, internal and conscious attention, observing, describing, acting with awareness and accepting oneself without judgement after the yoga practice intervention. **Conclusions:** These results could indicate that bringing yoga and mindfulness into the classroom as an additional PE content could be beneficial for students' mental and physical well-being. These findings could contribute to raising awareness of the integration of sustainability through PE. **Keywords:** Social welfare, sustainable development, environmental education, education for sustainable development and yoga and mindfulness.

Introduction

Sustainable development (SD) is one of the most important words in our society today, which aims for a more just, balanced and sustainable life (UNESCO, 2017). But what does this movement really consist of? Numerous controversies have arisen when it comes to assigning a clear and precise definition to this term, since it was introduced in the early 1970s, but it was not until 1987 that the concept was approved: "Development that meets present needs without compromising options for future needs" (Brundtland Commission, 1987, p.1). SD does not only refer to environmental problems, but also encompasses economic aspects, social and environmental needs, thus contributing to the well-being of the population. To achieve this, one of the keys is to adopt actions in our daily lives that contribute to sustainability, which is why since 2000, the United Nations has established two main awareness campaigns:

- *Millennium Development Goals (MDGs)*: a campaign that emerged in 2000 and was dissolved in 2015. It focuses on eradicating poverty, as well as hunger, disease, illiteracy, environmental degradation and discrimination against women. To this end, they set eight goals: eradicate extreme poverty and hunger, reduce under-five mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, ensure environmental sustainability and promote a global threat to the environment. According to the 2013 Report, the proportion of people living in extreme poverty has been halved. At the same time, nutrition and the fight against disease have improved, with fewer people dying of malaria. However, the expected goals for children's schooling, infant and maternal mortality rates and environmental sustainability have not been achieved (United Nations, 2000).

- *Sustainable Development Goals (SDGs)*: This is the current campaign. It accounts for the challenges facing humanity and aims for a sustainable, peaceful, prosperous and just life, peaceful, prosperous and just life on earth in which we can all live together now and in the future. The SDGs are divided into 169 goals and comprise 17 targets. They cover not only the third world but also the first world. Moreover, they are time-bound for the year 2030, covering all three dimensions of SD, i.e. social, economic and environmental. Therefore, education systems must set the necessary learning objectives and content in such a way that both students and different institutions act in accordance with the SDGs. The latter is referred to as quality education, i.e. using education to achieve the SDGs (UNESCO, 2017). A sí mismo, otros ODS relacionados con lo social son: 4 (Educación de calidad) y el 5 (Igualdad de Género). "La educación de calidad" busca asegurar una educación inclusiva, equitativa y de calidad. Además, pretende que todos tenga la oportunidad de adquirir enseñanzas durante toda la vida. Por otro lado, el objetivo 5, es decir, el referido a la "Igualdad de género" pretende alcanzar la igualdad de los distintos géneros y empoderar a las mujeres y niñas en su globalidad (UNESCO, 2017).

The mental problems of today's society and adolescents

Several recent studies confirm that due to the routine changes brought about by Covid-19 and the physical inactivity it entailed, the population, and more specifically university students, aggravated serious emotional well-being and mental health problems (Castañeda-Babarro et al., 2020; Díaz et al., 2019; Gallè et al., 2020; Gallo et al., 2020). In turn, Cao et al. (2020) after conducting research with a total of 7143 medical students at Changzhi Medical School, found that 24.9% of the students had experienced or suffered from anxiety, and of these 0.9% experienced severe anxiety and 21.3% experienced mild anxiety. However, the high levels of anxiety and depression are not only due to Covid-19, since, as a study carried out by the University of Valencia shows, children have high levels of stress due to the high pace of life they lead, and the heavy workload imposed on them by schools. Children's health is worsening, but especially their mental health, which is why psychologists are overwhelmed," says Cruz Díaz (2021), says Cruz Díaz (2021). At the same time, the remedy for this problem is the use of medication, which means that today the rate of hyperactive and autistic children is higher than ever (Fragoso et al., 2022).

Another major problem that shows the poor mental health of society is the high suicide rate. A systematic and meta-analytical review found that participants with a higher percentage of PA had a lower percentage of suicidal ideation (Vancampfort, et al., 2018). In the same context, it would not be enough to introduce PA in the daily life of students, but education should also contribute to it (Alonso-Sainz, 2021). And in relation to the aforementioned, given that pills do not solve this problem, why not solve it with PA?

This work is closely related to Education for Sustainable Development (ESD) in order to achieve the SDGs. ESD is a process of lifelong learning and an integral part of quality education that reinforces the cognitive, social and emotional, and behavioural dimensions of learning. it also refers to a holistic and transformative education, which encompasses content and outcomes related to learning, pedagogy and the learning environment itself. In this way, ESD is a way to achieve the SDGs and thus fulfil the ultimate goal of transforming society (UNESCO, 2020). Sustainable Education has been present in Spain since the publication of the report on Education for Sustainability by the Alternativas Foundation and the Spanish Network for Sustainable Development (Huertas, 2021). During its development, numerous changes have taken place, starting at the end of the 20th century with the MDGs until the current ESD was forged, which deals with different strategies and approaches to the environmental crisis, proposing different ways of tackling it. In turn, education, being one of the goals included in the SDGs, is essential to solve this environmental crisis and thus transform social reality (UNESCO, 2017). This type of education is called Environmental Education and the 2030 Agenda defines it as follows: "education that acts to broaden our knowledge and awareness of the impacts of human activity on the environment [...]. Environmental education aims to facilitate understanding of the complex interactions between societies and the environment. And this through a better knowledge of ecological, economic, social and cultural processes, that is, through a critical analysis of socio-environmental problems and their relationship with management models and human actions [...]" (1998, p74).

According to ESD, schools should be seen as institutions where discussions and debates are held involving different proposals to improve human behaviour with respect to the natural environment (Rieckman et al., 2017). In other words, it should be the institution in charge of raising awareness and taking into consideration social, economic and environmental principles, which means that such concepts should begin to be coined as early as the primary and infant school years (Cantú-Martínez, 2014). As far as the school curriculum is concerned, for decades, there has been a certain controversy in Spain regarding this issue, and, in the case of Primary School, the curriculum seeks to be the instrument that involves the different schools in the awareness and implementation of sustainable development. That said, it only alludes to environmental aspects, with the rest of the social, economic and cultural issues being neglected. However, in order to provide a good education based on sustainability, teachers need to know what the concept of sustainability is about, as well as different methodologies to include it in their teaching practice. Unfortunately, there are also obstacles with the latter, as a study carried out by the Catholic University of Costa Rica reports a lack of knowledge about ESD among

primary school teachers (UNESCO, 2014). To address teachers' lack of knowledge about sustainability-based education, Pérez (2021) proposes to start with teacher training in order to provide quality education.

"We are increasingly asking ourselves whether what people learn is really relevant to their lives, whether what they learn helps to ensure the survival of our planet" (UNESCO, 2017, p1). From this perspective, UNESCO (2017a) argues that the inclusion of the SDGs in the education system should be oriented towards lifelong learning, and that it is therefore essential to offer quality, comprehensive and transformative education. However, for quality education to take place, there must be a quality educator. For this reason, universities occupy a privileged place in society and assume an unquestionable role in the creation and dissemination of knowledge (Chaleta et al., 2021). Unfortunately, teachers do not seem to understand the meaning of sustainable development, as well as its importance and the different proposals to carry it out (Washington, 2015). At the same time, we find hardly any specialists in the field of sustainability or curriculum designs to address it, as well as little motivation among teachers to make changes. ESD proposes the need for a three-pronged approach to teacher education that addresses learning content, pedagogy and teaching environments in order to bring about social transformation (UNESCO, 2014 b). According to UNESCO (2014c), to advance the SDGs, new learning spaces for future education professionals need to be designed in such a way that they aim to "inspire students to act in accordance with sustainability". In turn, faculties of education should offer different situations that give students the opportunity to think about environmental issues. Also, there needs to be a certain university-school relationship in order to provide student teachers with real experiences linked to the SDGs.

Physical activity as a way to improve sustainable development goals

According to the 2030 Agenda, sport is an important enabler of sustainable development, as well as promoting tolerance and respect for others and the environment around us. At the most, through sport, the goals related to health, education and the inclusion of society are achieved, with the role of women and young people being valued. There is a close relationship between health and physical activity. In view of the strong link between sport and sustainability, UNESCO (2017) developed the Kazan Action Plan (MINEPS VI, 2017). The ultimate aim is to exploit the benefits of sport leading to SD that serve as a bridge to achieving the SDGs. The SD and 2030 Agenda goals most directly related to sport are the following: Health and well-being (3.4.), gender equality (5.1. and 5.5.), decent work and economic growth (8.1. and 8.6.), reducing inequalities (10.2.), sustainable cities and communities (11.7.), responsible consumption and production (12.6. and 12.8.), climate action (13.1.) and peace, justice and strong institutions (16.6.) (Baena et. al, 2022). As a consequence of the above, a key concept to consider is Quality Physical Education (QPE), which provides various opportunities to acquire skills characteristic of self-confident and socially responsible citizens" (UNESCO, 2015). Quality physical education (QPE) is the development of motor skills that lead to an improvement in the physical, mental, social and emotional condition of students. Thus, when a learner engages in QPE they become physically literate and have the skills, confidence and understanding to continue to perform PA. The latter answers the question why PE has to be considered as a fundamental and long-lasting pillar of inclusive civic participation.

The regular practice of physical activity is linked to a wide range of health benefits throughout life (WHO, 2010). Through sport, there is evidence of improved self-concept and social competences that contribute to a healthy lifestyle. However, psychological well-being is key to health. Fortunately, physical activity is an activity capable of providing great benefits to psychological health. According to Thompson et al. (2011) psychological well-being is defined as the result of the personal perception that life is being lived well and adequately, and the awareness of the appropriate development of potential. Citing the National Association for Sport and Physical Education (NASPE, 2004), promoting PA and providing opportunities for it is only one of the many goals that PE entails, as it also encompasses learning a variety of motor skills designed to enhance the physical, mental, social and emotional development of each child. At most, one study demonstrated higher levels of psychological well-being among people who engage in PA compared to inactive people (Stephoe, Demakakos, Oliveira, & Wardle, 2012). Thus, we can conclude that psychological well-being is closely related to physical activity. Therefore, because of this relationship, the school has been recognised as the institution that has to promote PA and healthy lifestyles, through compulsory curricular programmes and at recess, as well as in extracurricular activities (Sallis & McKenzie, 1991). But it is not only the school that is fundamental for the aforementioned aspects to be favoured, but also the teaching staff is a determining factor in this process, as they are the conditioning factor for their pupils to lead a healthy life throughout their lives. Therefore, the type of classes they conduct and the methodology they use will be key to satisfying the subjects (Faison Hodge & Porretta, 2004; Trost, Pate, Freedson, Sallis & Taylor, 2000). Focusing on the SDGs, all of the above refers to Goal 3 entitled "Health and well-being". It aims to ensure healthy lives and promote well-being for all at all ages" (UNESCO 2014). In turn, numerous studies (Dishman, 1986; Morgan and Goldston, 1987) on the psychological benefits of PA in both the long and short term have been reported (Dishman, 1986; Morgan and Goldston, 1987). The results obtained were that doing PA produces a positive causal effect on self-esteem in the case of adults. And the explanation for these results was the feeling of control and mastery of the skills to be performed, the evasion of day-to-day life and the stimuli it produces reduces anxiety levels (Márquez, 1995). According to Villegas and Pujol (2018) in their book *Diccionario del Yoga: Historia, práctica, filosofía y mantras*, "yoga is a physical, mental and spiritual discipline [...] whose ultimate goal is the realisation of the

maximum potential of the human being". In turn, it is a technique developed thousands of years ago whose main function was to be used as a mind-body medicine due to its breathing practices such as pranayama, body postures or asanas and meditation or mindfulness (Galantino et al., 2008). In this way and due to the rise of yoga in recent years, such techniques are the ones that have been addressed with children and adolescents (Butzer et al., 2015). In this way, it is argued that there is a clear relationship between yoga and SD, due to the fact that the United Nations, creators of the 2030 Agenda, in the web section referring to SD, defines yoga as "a practice that seeks harmony of body and mind", "yoga for health", "the approach to health and wellbeing through this discipline can help to move towards lifestyles in harmony with nature" (United Nations, 2017).

Thus, it has been decided to approach a study focusing on SDG 3 through PE. Therefore, since PE practice can be seen to improve psychological well-being, we believe that, by using a yoga PE unit, positive results could be found in the mental well-being of students. In this way, we hope to improve the mental health of students and reinforce their beliefs about what it means to lead a healthy life. Furthermore, according to a study carried out by the University of Illinois (2020), yoga practitioners are the athletes with the greatest cognitive capacity and emotional regulation. It should be said that, traditionally, Physical Education has been viewed from two philosophies, one focused solely on body development and the other on the vision of the whole person, i.e. body, mind, spirit and wellbeing (Lynch, 2019), the study will focus on the latter.

Materials & Methods

Research objectives

The main objective of the research is to analyse the changes on the introspection of PE students through a yoga DU. On the other hand, other secondary objectives to be found are to develop an individual's dispositional capacity to be attentive and aware of the experience of the present moment in everyday life (Greco et al., 2011) and to evaluate students' mindfulness (León, 2008).

Design

The study design respects the characteristics of experimental research. It is based on the measurement of two pre-post interventions in two groups, control and experimental. The participants in the present study were randomly assigned to the different groups (control and experimental). The control group continued with the daily PE sessions, while the experimental group did a DU of yoga and mindfulness.

With regard to the object of study, it is based on introspection of our thoughts, developing the dispositional capacity of an individual to be attentive and aware of the experience of the present moment in everyday life (Greco et al., 2011) and assessing the students' mindfulness (León, 2008). In addition, the aim is also for the subjects to develop mental well-being and thus avoid episodes of anxiety and psychological discomfort.

Participants

The sample consisted of a total of 21 pupils in the 4th year of primary school at the Liceo Español Cervantes school in Rome. The average age of the pupils in this year is 9.5 years with a deviation of 1.2. The experimental group is made up of a total of 12 students, 6 boys and 6 girls. Similarly, the control group, which is made up of the same number of participants, consists of 7 girls and 5 boys.

Procedure

The classroom intervention lasted two teaching weeks, which means a total of four sessions (two weeks) which took place in the second term of the academic year 2021/2022. The week before the start of the intervention, the pre-test evaluation was carried out and the session following the end date the post-test was conducted. Regarding the intervention itself, it consists of a yoga UD of four sessions in which students are introduced to basic yoga postures, balance and relaxation exercises, but always based on breathing and awareness of both the physical and mental aspect of the here and now.

Mindfulness was present in each of the sessions, as the return to calm was always about meditation, but approached in different ways in each of the sessions, i.e. through progressive relaxation, guided relaxation with a visualisation exercise, guided meditation and total and free relaxation. At most, self-reinforcement techniques and thought awareness activities were introduced (see annexes 1, 2 and 3). In the last session, everything learned in the previous sessions was put into practice, and to introduce ICT in this study and make the session more attractive for the students, a Tik Tok was performed in which the students performed a yoga sequence, which had been practised during the whole session.

In order to carry out the intervention in the school, the permission of the Physical Education teacher was required. In addition, all participants were informed of the objectives of the study and signed an informed consent form for the transfer of data for scientific use. For the design of the study, I respected the ethical aspects presented in the Declaration of Helsinki.

This research was approved by the ethics committee of the University of Alicante with code UA-2022-03-17. With this, all parents or legal guardians of the students gave their consent for the student to participate in the study (see appendix 4). One of the points which was largely specified was that the study would be completely anonymous, so that the names of the different participants would not appear in any document or report.

Instrument

The instrument used to carry out the assessment was the CAMM scale (Child and Adolescent Mindfulness Measure) in its Transcultural adaptation version (Turizo, 2013). This scale focuses its study objective on the variables of stress and anxiety. On the other hand, the EAP Scale (Mindfulness Attention Scale) has been used, which measures levels of mindfulness in the school environment. Another scale introduced as an assessment instrument is the KIM (Kentucky Inventory of Mindfulness Skills), a scale designed to measure body and mind awareness of oneself (see annexes 5, 6, 7 and 8).

CAMM (Child and Adolescent Mindfulness Measure)

This self-report scale is the first specifically designed to measure aspects of mindfulness in children and adolescents. It consists of 10 items on a Likert scale in which each item is rated from 1 to 5. The scale assesses the dispositional ability to be attentive and aware of the experience of the present moment and, simultaneously, to have the ability to accept thoughts and feelings that may arise in the present moment without judgement (Greco et al., 2011). The subject has to indicate the degree to which he or she identifies with each item. To obtain the total score of the scale, the scores are inverted and to obtain the final results, the sum of the total score of the inverted items must be made, therefore, the total score will be 40 points. Since this is a Likert-type scale, the higher the score obtained, the higher the level of the item measured. In addition, it should be noted that, in the present study, it has been linguistically adapted for the participants. It is worth mentioning that when the CAMM authors went on to analyse their samples, they found no significant differences according to the sociodemographic variables.

Significant differences according to sociodemographic variables, such as gender, age, ethnic background and level of schooling (Greco et al., 2011). Psychometric studies conducted on the present scale show that the CAMM is identified as a unidimensional model with good psychometric properties, which can be used to assess and/or measure mindfulness traits in clinical, educational and research fields with both children and adolescents aged between 9 and 18 years (Gustin, 2019). The test-retest reliability for the entire test according to the test authors is $\alpha=0.88$.

EAP (Mindfulness in School Environment Scale)

The scale of mindfulness in the school environment (EAP; León del Barco et al., 2008) is the first measure in Spanish to assess adolescents between 12 and 16 years of age. The following is a self-report measure consisting of 12 items with Likert-type response levels segmented into up to five response points: 1=" Never", 2=" Almost never", 3=" Often", 4=" Almost always", 5=" Always". The purpose of this scale is to assess the relationship between students' academic performance and mindfulness. Studies carried out on this scale show that it has a three-dimensional structure, i.e. it measures three factors, which are as follows:

- External attention: ability to pay attention to the relationship between movements and motor actions.
- Inner attention: ability to pay attention to one's own thoughts, emotions and feelings.
- Attention to self-observation: ability to focus attention on the present moment and on the here and now.

All in all, the EAP scale presents adequate internal aspects to assess the above-mentioned levels. However, according to Calvete and Royuela Colomer (2017), further complementary studies are needed to carry out a more accurate assessment of its psychometric properties. The internal consistency is acceptable $\alpha=0.84$ and the test-retest stability is 0.78.

KIMS (Kentucky Inventory of Mindfulness Skills)

The Kentucky Inventory of Mindfulness Skills (KIMS) is a self-report developed at the University of Kentucky (Baer et al., 2004). It is composed of 39 items that primarily seek to assess mindfulness. In addition, its psychometric characteristics and whether it is related to other constructs have been evaluated. That said, the KIMS has a multidimensional structure, as it measures more than one aspect. Each of the dimensions to be assessed is related to mindfulness: (1) observation, (2) description, (3) acting with awareness and (4) acceptance without judgement. With all this in mind, a scale was designed to measure each of the aforementioned skills. The results obtained showed acceptable internal consistency, as well as good test-retest reliability, and the structure in which the factors are evidenced has proved to be clear. At the same time, studies have shown that these mindfulness skills are closely related to other aspects such as personality and mental health. Neuroticism, psychological symptoms, emotional intelligence, alexithymia, experiential avoidance, dissociation and absorption are also alluded to (Baer, 2004). KIMS encourages participants to perform the scale from a perspective of curiosity, interest, and acceptance of all phenomena dictated by the scale, avoiding at all times during its performance evaluation, self-criticism, or attempts to change the phenomena one feels or observes (Segal et al., 2002). The alpha coefficients for Observing, Describing, Acting with awareness and Accepting without judgement are .91, .84, .83 and .87, respectively.

Statistical analysis

All continuous variables in the data set were subjected to a normality test (Kolmogorov-Smirnov). The data were further subjected to chi-square analysis and univariate statistical analysis for non-parametric samples. Due to the small sample size, a paired samples t-test was chosen to evaluate the differences between the groups to evaluate the differences between the groups (EXP vs. CON) on two occasions: pre- and post-intervention. The significance level was set at $p < 0.05$ in all cases. The statistical programs Statistics Product and Service

Solutions (IBM ® SPSS ® Statistics Version 24.0.0.0) (International Business Machines Corp., Madrid, Spain) and Microsoft Excel ® in its 2016 version (Microsoft Corp., Redmond, WD, USA).

Results

Descriptive analysis of the results

Table 1 shows the mean and standard deviation of the items measured by means of the CAMM (Children and Adolescent Mindfulness Measures), EAP (Mindfulness Attention Scale) and KIMS (Kentucky Inventory of Mindfulness Skills) questionnaires for both the control and experimental groups.

Table 1. Descriptive analysis for the Levene and t-tests

ITEMS	Control		Experimental	
	Pre	Post	Pre	Post
<i>CAMM (Child and Adolescent Mindfulness Measure)</i>	2,29 (0,64)	1,86 (0,53)	0,87 (0,63)	0,75 (0,57)
<i>External care</i>	3,90 (0,79)	1,98 (0,76)	1,35 (1,01)	1,39 (0,7)
<i>Internal attention</i>	4,13 (1,19)	1,86 (0,8)	1,44 (1,14)	2,03 (1,03)
<i>Conscious attention</i>	3,5 (1,12)	1,79 (0,89)	1,32 (1,28)	1,79 (0,85)
<i>Observe</i>	3,34 (0,85)	2,04 (0,57)	1,01 (0,95)	1,15 (0,59)
<i>Describe</i>	2,98 (0,54)	2,05 (0,48)	0,60 (1,02)	1,05 (0,32)
<i>Acting with awareness</i>	2,69 (0,48)	2,08 (0,61)	0,71 (0,63)	0,82 (0,61)
<i>Accepting oneself without judgement</i>	2,66 (0,61)	1,78 (0,45)	0,85 (0,96)	1,04 (0,6)

Comparative statistics

As shown in Table 2, each of the measurements is divided into two different sets (pre and post). As can be seen, the bilateral significance of each of the sets is less than 0.5, except for factor 1 (CAMM) which equals it in the post.

Table 2. Paired sample statistics

ITEMS	Pre	Pre Sig. (bilateral)	Post	Post Sig. (bilateral)
Factor 1. CAMM	0,12	0,11	1,55	0,05
Factor 2. EAP				
External care	0,09	≤0,001	0,96	0,002
Internal care	0,07	0,002	1,58	0,002
Attention aware	0,22	0,01	0,001	0,001
Factor 3. KIMS				
Observe	0,001	0,001	0,03	≤0,001
Describe	4,73	0,04	0,89	≤0,001
Acting with awareness	0,35	0,004	0,03	≤0,001
Accepting oneself without judgement	1,55	0,05	1,67	≤0,001

As shown in Table 3, the paired difference statistics for such a paired t-test statistic are reported. It can be generally seen that a higher significance was obtained for factor 1 (CAMM) and internal attention. However, the significance of "acting with awareness" has worsened in the experimental group and the item "accepting oneself without judging oneself" is not the same in both groups.

Table 3. Paired t-test

ITEMS	Control			Experimental		
	t	gl	Sig. bilateral	t	gl	Sig. bilateral
Factor 1. CAMM	1,68	11	0,12	1,85	3,27	0,75
Factor 2. EAP						
External care pre-post	4,9	11	=0,001	-2,1	11	0,05
Internal care pre-post	5,44	11	=0,001	-1,27	11	0,22
Conscious attention pre-post	4,47	11	0,001	-1,68	11	0,12
Factor 3. KIMS						
Observe pre-post	4,41	11	0,001	-4,01	11	0,002
Describe pre-post	5,39	11	=0,001	-3,11	11	0,01
Acting with awareness pre-post	2,93	11	0,01	-5,78	11	=0,001
Accepting without judgement pre-post	3,57	11	0,004	-3,57	11	0,004

Discussion

The aim of this research was to analyse the changes in the psychological well-being of PE students through a yoga and mindfulness UD in order to improve students' sustainability awareness. Previous studies have shown that those who engage in PA have higher levels of psychological well-being compared to those who do not (Steptoe, Demakakos, Oliveira, & Wardle, 2012). Therefore, a yoga UD approach could be very beneficial in order to obtain positive results in the mental well-being of the students. After obtaining data through the pre-test and post-test, it was seen that there was a general improvement in the experimental group, since after the evaluation of the averages obtained in the statistics, a certain increase in the value of The experimental group showed a certain increase in value in each of the variables to be measured, with the exception of the item "acting with awareness". Also, in the item "accepting oneself without judging oneself" no alterations were observed in the result, so that the experimental group did not obtain improvements in this item. However, as far as the control group is concerned, there are no significant differences between the two moments, as no treatment of any kind has been applied to them. Therefore, the intervention has managed to improve most of the variables studied in the control group.

The explanation for such results could be justified by two arguments: on the one hand, the yoga UD was prepared by means of several sources, i.e., on the one hand, the help of an expert yoga instructor in the field was sought, who works with children and emphasised that any sporting discipline must be adapted to the age of the child, otherwise negative results would be obtained. On the other hand, an intensive search for methodologies, techniques and material was carried out, because getting children with an average age of 9.5 years to be relaxed and calm is a difficult objective to achieve, so the techniques to be used were very important in the sessions. In this case, we used the technique of expressing involuntary and extraneous thoughts by means of a sheet of paper. In this way, the students did not need to speak because they were already doing so by writing on the paper. At the most, the vast majority of the students already had some knowledge of yoga before starting with the UD, as one of the extracurricular activities offered by the school was yoga, so this factor was a determining factor when it came to finding improvements, as most of the students were already familiar with it.

PA in young people promotes a better lifestyle and physical and mental wellbeing, but introducing yoga sessions in the subject of PE achieves benefits related to external, internal and conscious attention, observation and description of oneself, knowing how to act with awareness and to accept ourselves without judging ourselves (WHO, 2010). As mentioned in the previous paragraph, numerous studies have promoted an improvement in psychological well-being through the introduction of yoga content in PE classes, which is why this study has been carried out to corroborate this claim. Once the DU was approached, the data determined that the development of a yoga DU with students in 4th grade of primary school did produce improvements in their mental wellbeing.

In turn, the practice of yoga in children can be considered a relevant field for research, because in the same way that children have to learn to acquire different skills, it is desirable that they are also able to learn emotional regulation strategies, which will be of vital importance when in the future they are forced to make difficult decisions, deal with conflictive situations or even face stages of change. As has been seen, such an object of study is not something innovative within the field of research, as yoga in children is a very recurrent topic as a test. Yoga is an option within the school curriculum to address the lack of concentration and aggressive behaviour among students. As Lucía Inés Lahoza, (2021) states, through yoga, physical and psychological self-control is achieved.

The study focused on conducting research on the benefits of yoga through PE classes in primary school. A positive improvement in internal, external and conscious attention was observed. In addition to other variables such as observation, description, acting with awareness and self-acceptance without judgement. Through the application of one of the questionnaires to be used, more specifically in CAMM, an improvement was seen in those aspects related to stress and anxiety, so it is concluded that there has been an increase in the well-being of the students. The improvement of self-knowledge not only improves the relationship with oneself in different situations and challenges, but also contributes to more satisfactory interpersonal relationships among peers (Mecias et al, 2019). In addition, the evolution of the students has been observable during the development of the sessions, since the final part of the session always involved a relaxation exercise, in which most of the students were unable to keep their eyes closed and not move on the first day. On the other hand, in the last session, they did not need to be told to close their eyes. This may show how agitated a child is by the heavy workload they receive from an increasingly early age. It is important to note that, having acquired the above skills, the subject may be able to cope effectively with any emotional situation (Bishop et al., 2004).

As has been seen in the research carried out, there are no discrepancies between the research carried out in this dissertation and other studies. On the other hand, differences that have been observed are that, in the present intervention, more emphasis has been placed on improving aspects related to self-control, attention, observation of the world around us, acting according to one's own will and acceptance of oneself without judgement. On the contrary, it has been seen that other studies have focused more on developing self-esteem and self-concept to a large extent or how to improve students' behaviour through yoga.

Concluding this section and evaluating in perspective all that has been done and obtained with this study, it can be seen that the intervention has achieved positive results, as an improvement has been seen in the experimental group in each of the variables with respect to the control group. However, the timing of the DU could not include the total number of sessions that were intended to be carried out, since six sessions were planned from the outset, but due to scheduling problems with the tutor, only four sessions could be given. Such a number of sessions is scarce for primary school pupils to acquire a concept in a meaningful way, so that everything that has been transmitted to pupils through this DU is not likely to last over time. On the other hand, one aspect that should be emphasised is that the students found the proposal very attractive from the very beginning, because the vast majority of the students wanted to take part in the study. This effect shows that yoga can be an attractive content for students and that they are highly motivated to start practising it.

Conclusion

In recent decades, SD has already been integrated into education in a large part of the subjects that make up the school curriculum. More specifically, PE is a great tool to improve the health and well-being dimension of SD. This being said, the implementation of a yoga UD within a school classroom could contribute to developing the goals of SDO 3.4. In this way, it is expected to improve the mental health of students and reinforce their beliefs about what it means to lead a healthy life. Through the implementation of the yoga DU, it seems that there has been an improvement in the dimension related to health and psychological well-being in the experimental group of the 4th grade primary school class. Referring to the statistical results obtained, a greater improvement has been achieved in the dimension related to mindfulness. If we bring to the classroom methodologies that make students aware of taking actions that make us happier and thus make us live better now and in the future, education would take its true value, that is, teaching students to live in society. Once the study was completed, it was concluded that carrying out yoga sessions with primary school pupils is a complicated task, as the characteristics and tastes of this age group are games that involve movement.

Therefore, if the pupils have never practised yoga, at least one session should be invested in explaining what it consists of, the values it promotes, the objectives it aims to achieve, etc., but it would be advisable for such a session to be carried out by a professional in the field who manages to transmit to the pupils their passion for yoga. On the other hand, it should be noted that the study would have been more complex to carry out if the sample had been larger, i.e. if the total student ratio had been higher than twenty, the probability of achieving the expected results would have been low. In this way, it is necessary to carry out research in this field, since the results obtained reflect great benefits for the students, therefore, it is advisable to bring practical yoga sessions to the classroom. In conclusion, if the aim is to improve the sustainability of the planet, it is essential to begin by taking care of the well-being and health of each person, since, as Laurette Gagnon (2021) said, "Well-being encompasses a healthy body, a healthy mind and a calm spirit. Enjoy the journey while working on your wellbeing".

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