

## Wellbeing of outdoor education teachers: the role of school management and organization

*El bienestar de los profesores de educación al aire libre: el papel de la gestión y la organización escolar*



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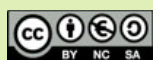
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**Resumen.** La siguiente investigación comienza con un aumento de la percepción de malestar dentro de las escuelas, como lo demuestra el aumento de los casos de estrés laboral y el síndrome de agotamiento entre los profesores. La pandemia de Covid-19 y las medidas de restricción redujeron las interacciones de las personas con sus entornos naturales, haciendo que las necesidades de contacto con la naturaleza sean aún más urgentes que antes. Los objetivos de la Agenda 2030 señalan la necesidad de reducir esta brecha, especialmente en relación con los Objetivos de Desarrollo Sostenible (UNESCO, 2017). La literatura científica atribuye un gran potencial a los entornos naturales en términos de bienestar y aprendizaje. Por ello, es fundamental que la escuela preste más atención al bienestar (físico, mental, emocional, social) para contrarrestar el frenesi de los ritmos de enseñanza-aprendizaje, el estatismo de las propuestas educativas y la inmovilidad social a la que se han visto expuestos niños y adultos durante los periodos de encierro. Con esto en mente, se optó por investigar la asociación entre la experiencia de Educación al Aire Libre, la percepción del clima y la organización escolar y los niveles de estrés, ansiedad y fatiga psicofísica de los docentes. Se utilizaron los siguientes instrumentos: Depression Anxiety Stress Scales - DASS 21 (Lovibond & Lovibond, 1995); Positivity - P-scale (Caprara et al., 2012); Need for Recovery - NFR (Van Veldhoven & Meijman, 1994) y, para la evaluación del contexto escolar, el Revised School Level Environment Questionnaire (Matteucci, Guglielmi & Lauer mann, 2017). El análisis de los datos parece excluir el efecto directo de la Educación al Aire Libre en la percepción del estrés, la ansiedad, la depresión y la fatiga relacionada con el trabajo. Por otro lado, emerge la importancia del clima escolar y las características organizativas. La práctica de la EO se asocia de forma estadísticamente significativa con mejores niveles de bienestar psicofísico de los docentes cuando su escuela se caracteriza por compartir responsabilidades, cohesión, apertura a la innovación y disponibilidad de recursos.

**Abstract.** The following research begins with an increase in the perception of malaise within schools, as evidenced by increased cases of work-related stress and burnout syndrome among teachers. The Covid-19 pandemic and restriction measures reduced people's interactions with their natural environments, making the needs of nature even more urgent than before. The 2030 Agenda objectives point to the need to reduce this gap, especially in relation to the Sustainable Development Goals (UNESCO, 2017). The scientific literature attributes great potential to natural environments in terms of well-being and learning. Therefore, it is fundamental that schools pay more attention to well-being (physical, mental, emotional, social) to counteract the frenzy of teaching-learning rhythms, the static nature of educational



proposals, and the social immobility to which children and adults have been exposed during lockdown periods. With this in mind, we chose to investigate the association between Outdoor Education experience, perception of school climate and organization, and teachers' levels of stress, anxiety, and psychophysical fatigue. The following instruments were used: Depression Anxiety Stress Scales - DASS 21 (Lovibond & Lovibond, 1995); Positivity - P-scale (Caprara et al., 2012); Need for Recovery - NFR (Van Veldhoven & Meijman, 1994) and, for school context assessment, the Revised School Level Environment Questionnaire (Matteucci, Guglielmi & Lauermaann, 2017). A convenience sample of 123 Italian teachers aged between 24 and 63, 96% of whom were females answered to the anonymous survey. The sample was composed of two different study groups: 74 outdoor teachers and 49 indoor teachers. The data analysis would seem to exclude the direct effect of Outdoor Education on the perception of stress, anxiety, depression, and work-related fatigue. On the other hand, the importance of school climate and organizational characteristics emerges. The practice of OE is statistically significantly associated with better levels of psychophysical well-being of teachers when their school is characterized by sharing responsibilities, cohesion, openness to innovation, and availability of resources.

### Palabras clave · Keywords

Educación al aire libre, bienestar, gestión escolar, clima relacional, docentes, fatiga laboral.  
Outdoor education, wellbeing, school management, relational climate, teachers, work-related fatigue.

## 1. Introduction

Outdoor Education is a topic that has often crossed the life of educational services and schools in the Italian context over the last ten years. We recognize this from the significant increase in scholarly publications on the topic and interest among teachers. It has led to an exponential increase in the demand for initial teacher training, which has allowed the emergence of specific university studies and in-service training courses. They have involved numerous educational services throughout the country. They have required the organization of multiple national and international conferences and seminars dedicated to the theme of Outdoor Education (OE), Outdoor Learning (OL) in a sustainable perspective. All this has facilitated the implementation of OE and teaching practices, made even more necessary and legitimate following the Covid-19 pandemic. In Italy, "Networks of educational services and schools"<sup>1</sup> have also been created that identify themselves around the theme of OE and ask for ongoing and contextualized training. It has prompted the Ministry of Education to launch guidelines to support and regulate the process (INDIRE, 2021). Although experiences are spreading throughout the country, few yet can be considered well-established and extensive. Often, outdoor practices are supported by teachers who are more sensitive and attentive to the body dimension, which is rarely considered a transversal approach in the traditional school curriculum. However, getting out of their classrooms.

Has allowed some adults and children to frequently visit school vegetable gardens and the surrounding area, fostering relationships with various professional figures. It activated very interesting processes of professional reflection that, in recent years, have been supported and monitored by empirical research (Bortolotti et al., 2020; Schenetti, Guerra, 2016; Schenetti, 2021). Many international and national research highlights the beneficial effects of children's and adults' assiduous presence in natural environments (Humberstone B. et al., 2016). Moving education outdoors provides numerous benefits, such as improved cognitive performance (Davdland, 2015; Wells, 2000) and health (Taylor & Kuo, 2010), with continued exposure to open spaces linked with fewer illness instances. Psychophysical benefits through improved mental health (Stigsdotter et al., 2017), motor development (Fjortoft, 2001), and positive attitudes towards the environment (Nawaz & Blackwell, 2014), all foster improvements in natural science skills (Eftec, 2011). Indeed, contact with nature and open spaces is essential to strengthening the ties children have with their environment (Barrable & Booth, 2020). In recent years, empirical evidence from the literature supports a significant relationship between place-based learning (Smith, 2002) and learning well-being for both children and adults. Furthermore, natural spaces contribute markedly to science learning (García-González & Schenetti, 2019). They offer numerous phenomena to explore, a diversity of unsolved questions, and mysteries to discover that have a strong scientific character (García-González & Schenetti, 2022).

Some of the research we conduct also shows that those who work outdoors with children express a state of physical and psychic well-being. There is a change in the sense of self that perceives smells, sounds, tactile and motor sensations in a profound dimension of unity with the environment and intimacy with one's

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<sup>1</sup> The Network was set up between schools to implement active outdoor education methodologies. Since its design and establishment, the University of Bologna has played a central role in research and teacher training. Founded in 2016 with 11 schools, in 2022 it will have more than 100. Each school must sign a protocol and participate in a process of 'teacher professional development Research' <https://scuoleallaperto.com/>

own experience. Empirical data show that the well-being the teachers speak of is linked to a first and foremost bodily perception. Autobiographical narratives collected as a result of experiences of immersion in nature of teachers involved in research-training on the topic testify how the outdoor experience can awaken attention to a global body dimension and put back at the center the value of reflection on the body in education (Schenetti & Guerra, 2018). In this sense, the educator who adopts an OE approach, to make this condition of well-being possible for themselves and others, must know and live that body and active exploration dimension that is often forgotten at school (du Mérac et al., 2022; Lucisano & du Mérac, 2015). When considered the bodies inhibition generated by the traditional organization of spaces (individual desks and chairs), the work rhythms (tight, pressed, often designed to reproduce rather than think and create), and the numerosity of classes (in the Italian context, a single teacher is generally entrusted with a class of 25-28 pupils, regardless of the level of school) (du Mérac, 2017, p. 71 and p. 212); it can be seen the split between the emotional self and the rational-cognitive self at school, of the emotional self and the professional self in the work environment. To analyse thoroughly, one must recall the typical tendency in social professions to silence one's emotional world when crossing the workplace threshold.

Another theme about childcare services and schools in Italy over the last ten years is burnout, which involves an increasing number of teachers.

According to the new definition of the World Health Organization (WHO), burnout is not considered a disease or medical condition but rather a factor that affects a person's health status (WHO, 2019). The International Labour Organization (ILO) has highlighted an alarming picture: 1 in every 10 workers suffers from chronic stress, anxiety, and burnout (Puertas-Molero et al., 2018; ILO, 2016). These levels tend to increase during an event like Covid-19 (ILO, 2020). Additionally, the risk of emotional exhaustion, which can cause burnout, increases with the distance mode of teaching (Matteucci et al., 2020). As early as 2006, Capel (1992) argued that distress factors (job stressors) were numerous and likely to increase attributable to the teacher's job. Among the most common factors are: student behaviour, classroom management; decision making; relationships with colleagues; role ambiguity; student appreciation, work overload, lack of esteem from colleagues; time constraints; and managing multiple different situations. These and other factors can expose one to what is known as burnout, defined as a syndrome of emotional exhaustion that "can occur in individuals who, by profession, deal with people" (Maslach, 1991, p. 20).

Burnout syndrome consists of three main factors: (1) emotional exhaustion which understood as a dysfunctional adaptive response before the excessive demands due to contact with people, in which the individual feels overwhelmed, worn out, exhausted and can no longer recharge emotionally; (2) depersonalization which is characterized by attitudes of rejection towards the people who come to the operator, by a cold indifference to the needs and feelings of the users and to work itself, and they try to protect themselves; (2) a reduced personal achievement which is referred to a decreased motivation to succeed and a decrease in their ability to cope with the conditions of work fatigue, a sense of inadequacy, job dissatisfaction. Problems arise when there is a lack of social support to help the individual cope and manage the stressful situation. However, the phenomenon results from personal and environmental dimensions, such as socio-demographic factors, personality variables, and organizational factors (thus referring to the workplace). Everyone responds and reacts differently to stimuli and stressful situations in relation to personality traits, lifestyles previously acquired, their role in the workplace and the overload that can be typical of the so-called helping profession, among which we also find teachers. It is impossible to trace the syndrome's triggering to univocal causes. However, a set of concomitant and contemporary factors (personal and environmental) that move on multiple dimensions that have both subjective and organizational characteristics and, given the multifaceted nature of the factors that can affect work-related stress and burnout of the teacher, calls for the need to identify diversified prevention strategies.

Stress is generated when environmental demands exceed the individual's ability to respond, causing a malfunction of the organism on several levels. Whatever the context of the emergence of stress, the external but, above all, the internal circumstances that led us to experience stress must be considered.

It is necessary to follow a path that allows the person under stress to "improve self-esteem and promote positive thinking, act on the mind to remove dysfunctional thoughts, improve communication through assertiveness, act on the body through relaxation exercises, overcome negative emotions through the practice of mindfulness, develop a healthy and balanced lifestyle, improve time management and learn strategies for the management of the school system" (Monticone, 2015, p. 29). Each in its way, we all learn to defend ourselves and cope with stressful situations through various strategies (Lazarus & Folkamn, 1984): Exposing nature can be considered as one. It has positive effects both at the level of physiological activation and on the state of cognitive fatigue and can be an effective strategy for preserving psychophysical well-being and recovery from the state of stress. To provide valid arguments supporting the regenerative potential of natural environments, there are two theories: the Stress Recovery Theory (SRT) and the

Attention Restoration Theory (ART). According to the first SRT, "Stress Reduction Theory" (Ulrich, 1979), the interaction with nature helps decrease the level of stress through the ability of the individual to activate a series of positive changes in emotional states, decreasing negative emotions such as anger or sadness. The second is the Attention Restoration Theory (ART) developed by Kaplan & Kaplan (1989) and Kaplan (1995). The theory highlights how places in nature contribute to well-being (restoration) as characterized by the following qualities: fascination, being away, extent, and compatibility. These characteristics of nature capture our attention without any effort, allow us to temporarily escape from usual activities, and make us experiment with a sense of connection with the 'whole' and at the same time with ourselves.

Starting from these premises, the questions that have guided our study are related to the effect of a continued and intentional OE practice on well-being and job satisfaction, and the use of natural environments in school activities may decrease the level of teachers' distress and increase their sense of effectiveness, influencing the educational and teaching practices.

This article will focus on analyzing stressors, anxiety and depression, and perceptions of work-induced fatigue and difficulty recovering. We will compare this data with their relative perceptions of the school climate and organization and indoor or outdoor practice.

## 2. Tools and Method

As anticipated, the main objective of this research is to explore perceptions of well-being and distress in preschool and elementary school teachers in relation to their work environment, verifying the impact that Outdoor Education can have on psychophysical and socio-emotional levels in this profession.

The following assessment instruments were utilized to measure levels of job satisfaction, stress and anxiety, happiness and confidence in the future: Satisfaction with Life Scale - SWLS (Diener et al., 1985); Interdependent Happiness Scale - IHS (Hitokoto & Uchida, 2015); Subjective Happiness Scale - SHS (Lyubomirsky & Lepper, 1999); Depression Anxiety Stress Scales - DASS 21 (Lovibond & Lovibond, 1995); Need for Recovery - NFR (Van Veldhoven & Meijman, 1994). Additionally, the following instruments were used: Perceived Restorativeness Scale - PRS-11 (Hartig et al., 1991; Pasini et al., 2014) to compare perceptions of the two work environments and the Affective Qualities of Places Rating Scale (Perugini, Bonnes, Aiello & Ercolani, 2002) to assess affective qualities of places, and finally, the Revised School Level Environment Questionnaire (Matteucci, Guglielmi & Lauer mann, 2017) for assessment of the school context. These are already validated scales adapted to the Italian context that enjoy a good internal consistency.

All these tools were combined in the questionnaire administered anonymously and digitally to a convenience sample of 123 teachers aged between 24 and 63, 96% of whom were females. The sample was composed of two different study groups: 74 outdoor teachers from the National Network of Outdoor Schools and the Marymount Institute in Rome; 49 indoor teachers from various schools in the province of Rome. Background questions on outdoor education were included in the questionnaire to ensure greater reliability in the subdivision of the samples.

Therefore, only teachers who reported engaging in outdoor activities frequently or daily; going outside with the class predominantly during regular activity or in a balanced manner for either free moments or regular activity; and going outside during regular activity for either preemptive exploration or content consolidation, or both, became part of the outdoor group.

The project has received approval from the ethics committee of the Department of Psychology of Developmental and Socialization Processes.

Next comes the presentation of three tools, among those mentioned, which are essential for understanding the considerations that emerged from the subsequent analysis of the data.

The first is the Italian version of the Depression Anxiety Stress Scales-21 - DASS-21 (Lovibond & Lovibond, 1995), a self-assessment questionnaire with 21 items able to measure depression, anxiety, and stress factors through a Likert scale from 0 = "It never happened to me" to 3 = "It happened to me almost always". The rating scale indicates the frequency with which the situation described in each item has occurred in the last seven days, for example: "I couldn't seem to experience any positive feeling at all", "I felt that I had nothing to look forward to" or "I felt I was rather touchy". Specifically, the depression factor assesses lack of motivation, low self-esteem, and dysphoria. The anxiety factor analyses the frequency with which various somatic symptoms arise, and the stress factor considers levels of irritability, impatience, tension, and persistent arousal, i.e., a state of psychophysical arousal. As emerges from the data, Cronbach's Alpha is good in the first two scales, being between 0.80 and 0.88, and excellent in the last one with a value of 0.92.

The second is the Need for Recovery Scale - NFR (Van Veldhoven & Meijman, 1994), which assesses work-induced fatigue and the quality of time it takes workers to recover energy. "Need for recovery" is a one-factor scale and an indicator of job stress which manifests through irritability, social withdrawal, lack of energy, or reduced performance levels (Van Veldhoven & Broersen, 2003). The NFR includes a total of 11 items such as "I find it difficult to relax at the end of my working day" or "Generally, I need more than an hour before I feel completely recuperated after work", which are rated using a Likert scale from 0 = It has never happened to me to 3 = It has happened to me most of the time. As with the Italian version of the instrument called Need For Recovery (NFR), also in our case, it was decided to exclude item #4 ("After the evening meal, I generally feel fit") since it lowered the internal consistency of the scale. Excluding this item raises Cronbach's Alpha from 0.81 to 0.85.

Both instruments, therefore, have variables that can measure psychosomatic symptoms strongly related to Burnout Syndrome, which assumes a chronic and prolonged condition of stress with physical, cognitive, and behavioural effects on the person. The core elements of Burnout (Maslach & Jackson, 1981) are physical and emotional exhaustion, a dysfunctional adaptive response due to feeling worn down and overwhelmed by excessive demands, depersonalization (also called "job disaffection") to indicate attitudes of rejection and indifference towards the recipients of one's work activity, reduced personal achievement referred to a sense of inadequacy, incompetence, and job dissatisfaction. Monitoring the state of stress-anxiety-depression and the need to recover one's energy provides information about the levels of distress perceived by the teacher: the trigger mechanism for both work-related stress and burnout. Therefore, the DASS-21 and NFR scales are indicated in assessing the risk of developing the multidimensional Burnout syndrome.

Finally, the third is the Revised School Level Environment Questionnaire-Revised SLEQ (Johnson, Stevens & Zvoch, 2007), which allows for information on teacher perceptions of school climate. The Revised SLEQ includes only 21 items divided among five factors: 1. Collaboration with six items (e.g., "Teachers set curriculum together") that investigate levels of collaboration among colleagues; 2. Decision Making with three items (e.g., "I have no say in the management of the school") that assess the teacher's decision-making and participatory process within the school; 3. Instructional Innovation with four items (e.g., "New courses or curricular materials are being developed," "I have no say in the management of the school") that assess the teacher's decision-making and participatory process within the school; and 3. "New courses or curricular materials are rarely implemented") on the innovative level of the work environment; 4. Student Relations with four items (e.g., "Most students are well behaved or respectful of school personnel") provide insight into the relational quality with students and female students; 5. School Resources with four items (e.g., "Video equipment, tapes, and films are conveniently available") investigate whether effective school resources are made available. All five dimensions are rated through a Likert scale of 1-5, where 1 = Disagree completely and 5 = Agree completely. The Cronbach's Alphas of the scales are mostly acceptable and some good, with values ranging from 0.62 to 0.87.

The research questions for our article were as follows: Does the practice of Outdoor Education prevent states of stress, anxiety, mood disorders, and mental and physical fatigue? Do certain characteristics of the school climate and organization influence these same states?

The hypotheses investigated and presented in the article are H1) outdoors improving teacher stress and anxiety levels; H2) OE is associated in the school with greater student collaboration, collegiality, shared responsibility, openness to innovation, and availability of useful resources; H3) the organization and climate in which the teacher works affects his or her psychophysical state.

### 3. Results

The results presented in this article were obtained through two types of analyses carried out with the IBM SPSS v27 program: the calculation of Univariate Anova and Bivariate Correlations.

The one-way analyses of variance aimed to identify, first, whether the outdoor and indoor settings of the job could lead to different effects in terms of teacher stress, anxiety, and depressive symptoms. Secondly, this analysis was used to observe the extent to which the stimuli received from the indoor and outdoor contexts allowed the teacher to recover and rejuvenate, and, finally, it allowed us to verify whether there were significant differences on average between the two groups for some characteristics of the school: the mode of interaction, co-participation, accountability of the teaching staff, as well as the availability of resources and openness to novelty.

Table 1 shows no significant differences between the two samples regarding the results of the DASS-21 instrument. The indoor/outdoor variable does not explain any differences in teacher management of stress, anxiety, and mood.



However, it is logical not to encounter differences between the two groups, given that all our research subjects obtain very low scores on the three dimensions. It is good news for the psychological state of our teachers but does not allow us to observe differences and, therefore, to analyse possible causes of differences. Their results correspond to those obtained by "normal" subjects. The DASS-21 conventional severity labels are Normal, Mild, Moderate, Severe, and Extremely Severe. Multiplying by two the results of each subject, all correspond to normal levels, i.e. they are lower than 9 for depression ( $5.71 \pm 0.00$ ), 7 for anxiety ( $5.14 \pm 0.00$ ), and 14 for stress ( $6.00 \pm 0.00$ ).

**Table 1**  
*Comparison of in/ outdoor data in the DASS instrument.*

DASS-21	Indoor		Outdoor		ANOVA sig.
	M	D. S.	M.	D. S.	
depression	0,56	0,55	0,55	0,58	0,44
anxiety	0,46	0,45	0,43	0,53	0,17
stress	1,19	0,73	1,11	0,82	0,47

Similarly, the teacher's Outdoor vs. Indoor mode of work does not lead to significant differences regarding the teachers' need for recovery.

**Table 2**  
*In/Outdoor Data Comparison in the NFR Instrument*

NFR	Indoor		Outdoor		ANOVA sig.
	M.	D. S.	M.	D. S.	
	1,52	0,48	1,47	0,55	0,47

However, a significant difference emerges between the two samples in how teachers describe the characteristics of their school. Concerning the R-SLEQ scales - related to the quality of relationships among students, the resources made available to the teachers, the possibility to participate in decision-making, and the ability to interact with a workplace culture open to sharing and innovation - outdoor teachers were significantly more positive ( $p < .05$ ).

Arguably, returning to our data, the mere fact that these teachers chose to try their hand at outdoor experiences, testing their professional expertise in places new to them, is already indicative of openness. However, we cannot argue that teacher collaboration in the school is associated with a teacher's use of outdoor education as the difference is not significant ( $p > .05$ ). However, all other measured dimensions of school climate are associated with outdoor practice by at least one teacher in the school.

**Table 3**  
*In/Outdoor Data Comparison in the R-SLEQ Instrument*

R-SLEQ	Indoor		Outdoor		ANOVA sig.
	M.	D. S.	M.	D. S.	
collaboration	3,62	0,79	3,79	0,82	0,09
student relations	3,30	0,89	<b>3,74</b>	0,72	<b>0,05</b>
school resources	2,83	0,97	<b>3,20</b>	0,95	<b>0,02</b>
decision making	2,94	0,85	<b>3,28</b>	0,91	<b>0,03</b>
instruction innovations	3,42	0,79	<b>3,64</b>	0,85	<b>0,04</b>

The analysis of associations between school characteristics on the organizational, managerial, and relational levels (dimensions of the R-SLEQ) with the psychophysical dimensions of the DASS-21 and NFR is significant only for the sample of outdoor teachers. In other words, teachers who implement outdoor approaches work in schools where the mindset is more open, more willing to share, give autonomy, and allocate useful resources. It is these aspects that are essential to establishing a good psycho-emotional balance. In non-outdoor schools, where leadership is more centralized - and consequently, so are decisions, responsibilities, and resources - the effect of these contextual variables on teachers' stress, anxiety, and mood is not apparent (there are no significant correlations between DASS-21, NFR, and R-SLEQ dimensions).

We know how essential these workplace characteristics are for managing stress and anxiety and preventing depression and burnout, and we get more evidence of that from our data.

**Table 4**  
*Correlations between school organization dimensions (SLEQ), DASS-21, and NFR for the OUTDOOR sample*

R-SLEQ	Depression	Anxiety	Stress	NFR
Collaboration	<b>-,33**</b>	-0,17	-,25*	<b>-,30**</b>
Stud. relationships	-0,21	-0,21	<b>-,36**</b>	<b>-,33**</b>
Decision making	<b>-,31**</b>	-0,21	-0,15	-0,19
Instru. innovations	-0,20	-0,11	-0,13	-0,24
Sch. resources	-0,15	-0,11	<b>-,31**</b>	-,25*

#### 4. Discussion

The main objective of the research was to investigate the perception of well-being and distress of preschool and elementary school teachers in relation to the work context to evaluate the role of Outdoor Education in the perception of stress, anxiety, mood disorders, and psychophysical fatigue.

With respect to the four starting hypotheses, it was found that:

H1) The amount of teaching done outdoors is not directly associated with decreased teacher stress, anxiety, and depression, partly because all our research subjects showed normal stress, anxiety, and depression levels. Logically, there are also no significant differences between the indoor and outdoor groups for psychophysical recovery, reasonably for the same reasons, given the significative correlations between the dimensions of the DASS-21 and those of the NFR ( $.65 < r > .47$ ;  $p < .01$ ).

H2) OE is associated with greater student collaboration, shared responsibility, openness to innovation, and availability of useful resources within the school. Teacher collaboration is not significantly higher in the outdoor sample. However, all the other positive characteristics of the school management and climate measured are met to a greater extent in the OE sample. In this regard, Ingman (2021) had noted how the cultural flexibility of the institution was necessary to meet the necessary support to begin an unfamiliar experience of OL.

H3) The organization and climate in which a teacher works affects his or her psychophysical state. Indeed, decreases in teacher depression states are associated with collaboration among colleagues and school leaders adopting a participative leadership style. Decreased stress levels are associated with a positive relationship with students. These elements were also emphasized by Baroni and Berto (2013) in their study of occupational stress.

What is the most relevant aspect of these findings? Outdoor Education does not have a direct and automatic effect on managing anxiety and stress or on the teacher's ability to regenerate their energy and strength. It is explained by the fact that we did not measure the effect of OE as a school project, shared by the teachers and supported by the leadership, but rather we measured the effect of outdoor practice carried out by the individual teacher.

What does this difference imply? The teacher may experience considerable discomfort in implementing an outdoor project on his or her own, without support from colleagues, and especially from the school leader.

On the international level, several studies reflect on the key competencies needed to promote OE experiences (Kida, 2019; Miles & Priest, 1990), highlighting the need for them to be configured as direct, active experiences, open to the relationship with different places (Gibson, 1986) and oriented to the dimension of respect for nature, always changing, in the relationship with oneself and with others. The teacher working in OE is required to plan experiences that deliberately include an element of risk. For this reason, other international studies suggest how natural settings can be promoters of change in teachers' practices (Mygind, 2009) and how the characteristics of places can also positively influence their instructional design (Mannion et al., 2011). So, the OE practice requires new instructional strategies and design and - when made possible by the Institute's policy and administration - results in changes in practices with students and among all staff within the school. On the other hand, if the Institute restrains or hinders the realization of these changes, the teacher's fatigue and discomfort may become more important than if he or she would never venture to propose new ways of working.

We know from research training on the topic (Schenetti, 2021; Capperucci et al., 2022) that promoting intentional and continuous practices of outdoor education and teaching involves fatigue: the fatigue of questioning routine and consolidated practices, the fatigue of going against the current, the fatigue of slowing down from the usual tight rhythms, the fatigue of reading learning and knowledge in experiences that are not rigidly programmed for children, the fatigue of designing active ways of doing school. To these are added all those practical and psychological difficulties that can hinder the performance of one's work when one goes against the grain with respect to the usual collegial tendencies, the practices valued by the school management, the guidelines contained in institutional documents, and recognized by the board of teachers.

Therefore, contrary to what one might expect, the practice of Outdoor Education can imply a level of stress significant if not fully included in the planning of the school and associated with professional training courses and if the teacher does not feel adequately prepared, supported, helped, and valued by the school and colleagues.

So, what do the data from our research teach us? They show that it is not enough to increase OE and OL experiences to perceive a state of well-being and personal satisfaction; that an outdoor school prevents work-related stress or the onset of burnout only if it has positive feedback at the level of collaboration among colleagues, relationships with students, the supply of resources and openness to innovative proposals.

It is essential that the school system cooperates within a structured and, above all, shared project. What is needed above all is participatory leadership that fosters the construction of a serene working climate. In this way, teachers will learn to work in an active and dynamic educational environment and be able to dialogue, experiment, and question. Outdoor teaching undoubtedly stimulates greater interaction with the territory, with other professionals who can contribute to enriching the school system; however, carrying out a teaching approach in total autonomy and without any form of support or any means of expression will cause discouragement. In these moments of isolation, accompanied by a sense of ineffectiveness, states of anxiety and stress build-up, and damage the teacher's well-being.

In the teaching profession, Outdoor Education would prove to be beneficial on an individual and collective level, allowing both individuals and groups to benefit from the positive effects of nature-based intervention (NBI) forms on human health (Kaplan, 1995; Kuo et al., 2019; Jones et al., 2021; Shanahan et al., 2019) only if the collegiality of the school is safeguarded through training, cooperation, discussion and openness to innovation.

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