

***Building Social-Emotional Competencies and Resilience in Preservice Teacher Education:
The Role of Yoga***

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Abstract

This study scrutinises the effects of a yoga programme on the social-emotional competencies and resilience of 124 student teachers at a university in Turkey and investigates the viewpoints of the participants about the integration of holistic yoga practices. A Hatha yoga programme was implemented in the experimental group for 6 weeks. Data were obtained via Social-Emotional Competencies Questionnaire (SEC-Q), Brief Resilience Scale (BRS) and online open-ended questions. Between-group analyses displayed that self-awareness, self-management and resilience scores increased significantly in the experimental group after the implementation of the treatment. Within-group differences showed meaningful improvements in all social-emotional competencies and resilience levels for the experimental group. Delayed post-tests indicated that participants were able to sustain their improved social and emotional competencies and resilience. Qualitative findings indicated that participants found the programme as a feasible medium for mind-body awareness, emotion and stress regulation, and quality of life.

Keywords: Social-Emotional Competencies, Resilience, Preservice Teacher Education, Yoga

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Introduction

The current global escalation of mass exodus from the teaching career catalyses marked concerns in the field of teacher education (Molyneux, 2021). Several reports indicate that the present-day teaching climates trigger extreme levels of stress and impair psychophysiological welfare of teachers, giving rise to severe depression and anxiety, scepticism, low self-efficacy, and a lessened professional commitment (Hadar et al., 2020). Teachers' escalated attrition, absenteeism and alienation to their professional identity are now regarded as alarming problems (Amitai & Van Houette, 2022). Thus, addressing the demand to reinforce teachers' social and emotional competencies (SECs) and resilience has gained prominence across the globe, as early as possible at preservice teacher education programmes (Hadar et al., 2020).

These attempts are akin to the focal points of positive psychology, which entails the scrutiny of positive emotions, human virtues, and constructive institutions (Seligman, 2002). Yoga discipline manifests itself as a way of cultivating aspects of positive psychology and shares several similarities with its underlying principles (Singleton, 2010). Both positive psychology and yoga practices entail transforming the individuals to higher states of consciousness and well-being (Butzer et al., 2016) and by doing so, they promote SECs, resilience, and mindfulness (Ivtzan & Papantoniou, 2014).

SEC in Preservice Teacher Education

SECs are milestones in recognising and managing emotions, strengthening empathy, and displaying responsible decision-making according to the framework of Collaborative for Academic, Social and Emotional Learning (CASEL, 2020). Five domains within this framework are: self-awareness, self-management, social awareness, relationship management, and responsible decision-making. These competencies are reported to be linked with higher self- and teacher efficacy levels, better coping mechanisms, well-being, and motivation (Aldrup et al., 2020). The attainment of SECs is considered as essential and teachable for student teachers (STs) (Tonga & Erden, 2020). When provided with chances to enhance their SECs, STs are more inclined to reconstruct (a) their own emotions and coping mechanisms; (b) their future students' emotions and behaviours; and (c) how to create an encouraging learning atmosphere in their classes (Dolzhenko, 2017).

However, several studies indicate that social-emotional competencies of teachers have been neglected in many teacher education programmes (Hadar et al., 2020). An experimental study conducted by Garner and Kaplan (2018) in the USA, for example, revealed that STs have hardship in regulating and understanding their own emotions and well-being. In their qualitative inquiry, Mairitsch et al. (2021) found that Austrian and British STs went through a myriad of personal and contextual challenges and juggled between their ST roles, which negatively affected their abilities to maintain their well-being. Another recent study conducted by Özüdoğru (2021) revealed that Turkish STs' social and emotional needs are mostly unmet in teacher education programmes and STs feel anxious and isolated.

Resilience in Preservice Teacher Education

Despite its complex definitions, resilience can be described as the personal qualities enabling people to develop themselves when facing hardship (Connor & Davidson, 2003). Resilience is viewed as a critical capability of teachers in being resourceful, displaying agency and

setting positive management strategies in their profession (Arnup & Bowles, 2016). Reciprocal relationships nurturing growth, empowerment, and a sense of confidence and competence are critical for the advancement of effective teacher resilience (Le Cornu, 2013). Enhancing teacher resilience is found to be positively correlated with teaching effectiveness, job satisfaction and better coping mechanisms to adjust to erratic changes in education (Howard & Johnson, 2004).

STs are faced with rapidly altering educational environments which are affected by politically driven mandates, community driven expectations and professional driven standards (Ledger, 2021). They are challenged at navigating the complexity of the classroom environments and often end up cognitively overloaded (Moos & Pitton, 2013). This situation, in turn, creates a negative impact on their awareness and emotional regulation (Zimmerman, 2018). On the other hand, STs with cultivated resilience levels are reported to be building on their own support systems and persevering with the demands of their profession (McCormack et al., 2006). Accordingly, resilience is crucial to attain as early as possible in the teaching profession since it promotes teaching effectiveness, extends career satisfaction, and prepares teachers to adapt to complex educational conditions (Gu & Day, 2007).

Yoga Practices

A holistic yoga practice is associated with cultivating a comprehensive involvement of self-regulation, mind-body awareness, and physical fitness capabilities with an experiential sense (Butzer et al., 2016). Particularly, Hatha yoga is one-type of a holistic exercise combining the three vital components of a yogic practice: asana, pranayama, and meditation (Crowley, 2002). Asanas are characterised as the combination of physical postures that target at stabilizing the bodily functions and are particularly effective in the regulation of emotions and stress (Kathapillai, 2019). Pranayama discipline is concerned with aligning the mind with the present moment by involving correct postures, meditations and breathing patterns (de Manincor, 2017). Finally, yogic meditation is portrayed as the mastery of remaining peaceful and reaching happiness through alleviating discomfort that anxiety and stress generate (Kim-Onnia, 2010). To attain the holistic essence of yoga, these three elements were combined and employed in the current study.

There has been a dearth in the literature of holistic yoga practices for both pre-service and in-service teacher education. The extant studies in the context of yoga, SEC, and resilience in in-service teacher education largely tend to be descriptive work, conference papers or studies that have not gone through a peer-reviewed process (Bhavanani, 2006; Francesconi, 2017). However, one experimental study by Chen and Pauwels (2014) reports integrating yoga-based activities in a teacher education program in the USA. The results of the study revealed that yoga-based activities cultivated the perceived gains in mental well-being, social well-being, physical well-being, and daily behavior for in-service teachers. In addition, enhanced levels of resilience were reported by the teachers when overcoming with teaching barriers. A further qualitative study by Francesconi (2017) evaluated the effectiveness of a yoga program offered to high school teachers in Italy. The study results indicated that teachers lacked overall physical fitness and had a lot of stress at work, and therefore wished to practice yoga in order to increase their self-awareness, emotion regulation and overall fitness levels. Also, the teachers were able to witness several benefits of yogic activities. Herein, it is crucial to note that although encouraging results were observed for the SECs and resilience, the abovementioned studies were conducted in the context of in-service teacher education. In relation to pre-service teacher education and holistic yoga program integration, no studies

have been conducted yet. The abiding research, however, points out the fact that similar affordances could be observed for pre-service teacher education contexts.

It is evident that the volatile, uncertain, complex, and ambiguous state of our global world affects teachers' SECs, and resilience adversely. Correspondingly, increased teacher attrition, resignation, and absenteeism along with alienation to the professional identity are alarming consequences of sudden global changes (United Nations, 2020). STs are expected to provide their future students with skills and attitudes to manage swift changes (Gustems-Carnicer et al., 2019). Yet, there is enough proof that STs themselves are not equipped with enough SECs and coping mechanisms to handle the growing body of expectations on their own in today's world (Hadar et al., 2020). When unattained, the impaired SECs and resilience are expected to debilitate their cognitive functioning, overall well-being, and abilities to model and foster SECs and resilience in their own class environments.

This study aims at contributing to the literature by trying to understand the impact of a yoga programme called APM (Asana, Pranayama, Meditation) on enhancing the SECs and resilience of first year STs and learn whether they are able to sustain their SECs and resilience scores. Additionally, the study aims to find out STs' perceptions on the implementation of APM. Although SECs and resilience of teachers were previously investigated on a number of occasions (Aldrup et al., 2020; Jennings et al., 2017), the effect of a holistic yoga programme on these constructs has never been probed in the context of STs either in Turkey or around the world. In addition, a holistic Hatha yoga programme has never been implemented in online delivery settings with STs.

The current study seeks to answer the succeeding questions:

- (1) Are there any significant differences between the yoga practice group and the nonyoga practice group STs in terms of their (a) self-awareness; (b) self-management and motivation; (c) social awareness and prosocial behaviour; and (d) decision-making?
- (2) Are there any significant differences between the yoga practice group and the nonyoga practice group STs with regard to resilience?
- (3) Does yoga practice lead to immediate and sustained improvements in SECs and resilience?
- (4) What are the viewpoints of STs about the efficacy of the APM yoga programme?

The Present Study

Participants

The participants were all first-year students enrolled at the Faculty of Education at a private university in Istanbul, Turkey. Sixty-four participants volunteered to partake in the yoga implementation programme. The experimental group involved participants who majored in Early Childhood Teaching ($n = 20$), Special Education Teaching ($n = 21$) and Primary Mathematics Teaching ($n = 23$) departments and the control group participants were STs from the same departments ($n = 60$).

Participants' age ranged from 18 to 26 ($M = 18.8$, $SD = 1.62$). Overall, there were 94 female and 30 male participants. Several participants from the control ($n = 3$) and the experimental group ($n = 4$) had some health issues such as Crohn's disease, bronchitis, and diabetes. Eight experimental and ten control group participants were exercising regularly. None of the participants were familiar with Hatha yoga.

Procedure

Prior to the implementation, participants were supplied with the aims and procedures of the programme. After gaining informed consents and forming the groups, experimental group participants were provided with a guidebook to inform them about yoga practices and highlight several cautions when performing yoga. The yoga practices were at beginner level since none of the participants were familiar with yoga before. Before the implementation process, demographic information was obtained, and all participants were given SEC-Q and BRS as pretest. Each yoga session took 60 minutes, with 10-minute reflection sessions on the experience.

During the practices, participants were asked to be comfortable when standing up and sitting down, maintain correct postures and follow the demonstration of the instructor. Since the programme was carried out online, participants were requested to turn on their cameras throughout the sessions. The sessions started off with beginner asana practices to improve strength and balance and establish mind-body connection prior to upcoming exercises. Static and dynamic asana postures were both practiced throughout the sessions. The exercises involved moves to develop flexibility, improve posture, and adjust spinal alignment. Upon the completion of asanas, participants were asked to sit down and relax while keeping their spine erected. They were asked to observe their breathing patterns. Tailored versions of pranayama cycles were used depending on the observations and the readiness of the participants. Pranayama exercises included the practice of Nadi Shodhana pranayama and Bhramari pranayama employed interchangeably over the course of the practices. In the last step, Vipassana meditation was practised. The practice consisted of observing the thoughts and emotions and accepting them as they are without criticizing the self. Each session, the yoga instructor jotted down notes and monitored the behaviours of participants during the implementation.

In week 6, all participants were once again given SEC-Q and BRS as posttest. In addition, the experimental group participants were given the open-ended questions. The SEC-Q and BRS were administered to experimental group participants 6 weeks later as delayed post-tests. The whole data collection process and the implementation was conducted online.

Data Collection Instruments

Social-Emotional Competencies Questionnaire (SEC-Q)

To evaluate the effect of yogic practices on the SECs, SEC-Q, developed by Zych et al. (2018), was applied to both groups as pretest and posttest. The experimental group received the same instrument as the delayed posttest. SEC-Q includes 16 items based upon a 5-point Likert scale evaluating the participants' perceptions from 1 (Strongly Disagree) to 5 (Strongly Agree) and aims at assessing four SECs: self-awareness, self-management and motivation, social awareness and prosocial behaviour, and decision-making. Higher scores indicated better developed SECs and the scale had Cronbach's alpha value of .82.

Brief Resilience Scale (BRS)

BRS was employed to assess the ability of participants' bouncing back from stress and was applied to both groups as pretest and posttest. The same scale was applied to the experimental group as delayed posttest. The scale developed by Smith et al. (2008) included six items in

the form of a unitary construct. In the current study, negatively coded items were reverse coded. BRS was designed in a 5-point Likert Scale evaluating the participants' perceptions from 1 (Strongly Disagree) to 5 (Strongly Agree). Higher scores meant better enhanced resilience and the Cronbach's alpha value of the original scale ranged from .80 to .91.

Online Open-Ended Questions

To explore the effectiveness of the yoga programme, three questions were asked to experimental group participants at the end of the study: *What do you think about the yoga programme? Have you noticed any changes in your social and emotional life during & after the programme? To what extent was the yoga programme effective for you?* Participants were asked to reflect on the programme atmosphere, perceived effects, and their overall experience with yoga practices in a written way.

Data Analysis

Preliminary examinations were done to determine the assumptions of normality, linearity, homogeneity of regression slopes, homogeneity of variance and homogeneity of sphericity. The mean differences between the groups were analysed through a one-way analysis of covariance (ANCOVA). The differences within the experimental group across three time points were calculated via a one-way repeated measures ANOVA. The qualitative data were analysed through a thematic analysis process. Open, axial, and selective coding were utilised. Transcriptions were done by the researchers. Member-checking process was carried out to ensure credibility.

Results

SECs Results

To examine whether SECs mean scores differed between the groups while controlling for pretest scores, ANCOVA was computed. All ANCOVA assumptions were met in the data set.

The results revealed that there were statistically significant differences on the scores of self-awareness [$F(1, 121) = 8.22, p = .005, \eta^2 = .06$] and self-management and motivation [$F(1, 121) = 5.82, p = .017, \eta^2 = .04$] between the experimental and control groups ($p < .05$). Estimated marginal means indicated that self-awareness scores of the experimental group ($M = 14.4, SE = 0.18$) outperformed the control group ($M = 13.6, SE = 0.19$) on the posttest condition. Similarly, self-management and motivation estimated marginal means demonstrated that the experimental group ($M = 11.6, SE = 0.19$) gained higher scores than the control group ($M = 10.9, SE = 0.20$) (see Table 1).

Variable	Experimental	Control	<i>F</i>	<i>p</i>	η^2
	<i>M</i> ± <i>SE</i>	<i>M</i> ± <i>SE</i>			
SA	14.4 ± .18	13.6 ± .19	8.22	.005	.064
SMM	11.6 ± .19	10.9 ± .20	5.82	.017	.046
SAPB	21.3 ± .23	20.8 ± .24	2.59	.110*	.021
DM	11.4 ± .17	11.0 ± .18	3.54	.062*	.028

Note. Pretest scores were used as covariates; SA = self-awareness; SMM = self-management and motivation; SAPB= social awareness and prosocial behaviour; DM = decision-making; SE = standard error

Table 1: ANCOVA results for SECs

To determine the differences in the mean scores of the experimental group's SECs across three different time points, ANOVA was executed. Since sphericity was violated in the data set ($p < .05$), Greenhouse-Geisser corrected results were reported.

A repeated-measures ANOVA with Greenhouse-Geisser correction displayed that there were statistically significant differences in the scores of self-awareness [$F(1.34, 84.21) = 62.6, p < .001, \eta^2 = .50$], self-management and motivation [$F(1.36, 85.41) = 72.1, p < .001, \eta^2 = .53$], social awareness and prosocial behaviour [$F(1.40, 88.55) = 103.5, p < .001, \eta^2 = .62$] and decision-making [$F(1.50, 94.56) = 77.0, p < .001, \eta^2 = .55$] across three different time points (see Table 2).

Variable	Time 1	Time 2	Time 3	<i>F</i>	<i>p</i>	η^2
	Pretest	Posttest	Delayed Test			
	<i>M</i> ± <i>SD</i>	<i>M</i> ± <i>SD</i>	<i>M</i> ± <i>SD</i>			
SA	12.2 ± 1.96	14.5 ± 1.96	14.3 ± 2.32	62.6	.001	.500
SMM	9.27 ± 1.94	11.6 ± 1.81	11.5 ± 2.15	72.1	.001	.534
SAPB	17.7 ± 2.67	21.3 ± 2.15	21.0 ± 2.57	103.5	.001	.622
DM	9.11 ± 1.65	11.4 ± 1.78	11.1 ± 2.07	77.0	.001	.550

Note. SA = self-awareness; SMM = self-management and motivation; SAPB= social awareness and prosocial behaviour; DM = decision-making

Table 2: One-way repeated measures ANOVA for SECs

A post hoc pairwise comparison using the Bonferroni correction exhibited a significant increase between self-awareness pretest ($M = 12.2, SD = 1.96$) and posttest ($M = 14.5, SD = 1.96$), self-management and motivation pretest ($M = 9.27, SD = 1.94$) and posttest ($M = 11.6, SD = 1.81$), social awareness and prosocial behaviour pretest ($M = 17.7, SD = 2.67$) and posttest ($M = 21.3, SD = 2.15$) and decision-making pretest ($M = 9.11, SD = 1.65$) and posttest ($M = 11.4, SD = 1.78$) conditions ($p < .001$). Put differently, the experimental group participants experienced statistically meaningful changes between the pretest and posttest conditions for all SECs.

According to further post hoc tests with Bonferroni correction, self-awareness posttest ($M = 14.5, SD = 1.96$) and delayed posttest ($M = 14.3, SD = 2.32$) conditions did not have a statistically significant difference ($p = .817$). Self-management and motivation posttest ($M = 11.6, SD = 1.81$) and delayed posttest ($M = 11.5, SD = 2.15$) conditions did not possess a statistically significant difference ($p = .918$). Social awareness and prosocial behaviour posttest ($M = 21.3, SD = 2.15$) and delayed posttest ($M = 21.0, SD = 2.57$) conditions did not differ statistically ($p = .479$). For decision-making, posttest ($M = 11.4, SD = 1.78$) and delayed posttest ($M = 11.1, SD = 2.07$) conditions did not display a significant difference ($p =$

.362). Consequently, it was seen that the experimental group participants retained their posttest scores after 6 weeks of recess ($p > .05$).

Resilience Results

To analyse whether resilience scores differed between the groups while accounting for pretest scores, ANCOVA was run. None of the ANCOVA assumptions were violated.

A statistically significant difference was observed in resilience scores between the groups [$F(1, 121) = 5.21, p = .024$], with a small effect size, $\eta^2 = .04$ after controlling for pretest condition ($p < .05$). Estimated marginal means indicated that the experimental group ($M = 21.2, SE = 0.22$) outperformed the control group ($M = 20.4, SE = 0.24$) on the posttest condition ($p < .05$), (see Table 3).

Variable	Experimental	Control	<i>F</i>	<i>p</i>	η^2
	<i>M</i> ± <i>SE</i>	<i>M</i> ± <i>SE</i>			
Resilience	21.2 ± .22	20.4 ± .24	5.21	.024	.041

Note. Pretest was used as the covariate; SE = standard error

Table 3: ANCOVA results for resilience scores

In order to measure the mean scores of the experimental group across three different time points, ANOVA was executed. Sphericity assumption is violated in the data set ($p < .05$); therefore, Greenhouse-Geisser corrected results are reported.

A repeated-measures ANOVA with Greenhouse-Geisser correction displayed a statistically significant difference in the scores of resilience [$F(1.26, 79.86) = 58.4, p < .001, \eta^2 = .48$] across three different time points (see Table 4).

Variable	Time 1	Time 2	Time 3	<i>F</i>	<i>p</i>	η^2
	Pretest	Posttest	Delayed Test			
	<i>M</i> ± <i>SD</i>	<i>M</i> ± <i>SD</i>	<i>M</i> ± <i>SD</i>			
Resilience	18.6 ± 2.92	21.2 ± 2.14	21.1 ± 2.31	58.4	.001	.481

Table 4: One-way repeated measures ANOVA results for resilience

A post hoc pairwise comparison using the Bonferroni correction illustrated a significant increase between resilience pretest ($M = 18.6, SD = 2.92$) and posttest ($M = 21.2, SD = 2.14$) conditions ($p < .001$). Put differently, the experimental group participants experienced statistically meaningful changes between the pretest and posttest conditions. According to further post hoc tests with Bonferroni correction, resilience posttest ($M = 21.2, SD = 2.14$) and delayed posttest ($M = 21.1, SD = 2.31$) conditions did not have a statistically significant difference ($p = .782$). Consequently, it was seen that the experimental group participants retained their posttest scores after 6 weeks of delayed condition ($p > .05$).

Qualitative Results

Out of 64 experimental group participants, 45 replied to open-ended questions. The questions targeted exploring the viewpoints on the efficiency of the programme, general practice atmosphere and probable changes observed in participants' social and emotional life. Participants' answers were all provided in English. The qualitative data were analysed

through a thematic analysis process and three themes emerged: a) increased mind-body awareness, b) emotion and stress regulation, c) quality of life.

Increased Mind-Body Awareness

The first and the second open-ended questions asked the respondents to share their overall comments on the programme and any witnessed changes. One ST reported that “focusing on university courses” were better after the programme because her mind “does not drift away that much” anymore. Another stated, “The programme was useful because it helped me develop a better awareness and a better connection to myself”. For participants, this observed change included focusing on the moment, developing a keen awareness and connection with their body, ruminating less, and gathering their attention at their academic and daily life activities. Specifically, one ST stated feeling “apprehensive before the beginning of the programme due to the pandemic outbreak and online education”, and not feeling connected to her “mental and physical being”. However, the participant began to notice changes with regards to the psychophysiological being after the programme, stating “I am feeling more aware of my senses and more connected to my school”. Another participant commented on “losing attention in classes and feeling worried before”. After being introduced to yoga practices, the participant “felt peaceful”. Overall, no contradictory statements were stated.

Emotion and Stress Regulation

The second salient theme was enhanced stress management capabilities of the practitioners. Participants explicitly reported that their coping abilities with stress and positive attitudes towards anxiety-provoking environments changed as they engaged in holistic yoga activities. Specifically, one ST stated, “I noticed that I could go back to normal very quickly after having hard times. I feel like meditation has helped me a lot in handling my anxiety”. Another participant added “I am very panicked about anything in my school. The exams and heavy course-loads really upset me, but I feel less stressed out because now I can control myself better”. Participants particularly commented on the efficacy of pranayama and meditation observed on self-stress management. One participant mentioned that it was hard for him to “recover from stressful events” before. However, now he felt “less anxious” because “breathing techniques were especially helpful”. Some participants mentioned using pranayama and meditation when they were under “heavy course-load and examination” settings.

Quality of Life

The last theme was the perceived change in the quality of life in general. Participants were asked to describe their routines and observing any changes after yoga. Respondents particularly commented on these changes by comparing them to their previous physical and emotional conditions, as in the following quote: “My posture is a lot better. I had a stooped posture before”. Another commented on seeing yoga as “unnecessary” before. However, after indulging in the practices, the participant witnessed “positive changes” in his “energy levels”. One ST mentioned “sleeping better” because of employing “pranayama and meditation techniques”.

Overall, online open-ended questions indicated that the participants benefited from the programme as a useful and feasible medium for mind-body awareness, emotion and stress regulation, and quality of life.

Discussion and Conclusion

The goal of this study was to examine the effect of holistic yoga practices on SECs and resilience of STs and to explore their viewpoints regarding the implementation of holistic yoga practices. The results indicated that STs' SECs and resilience were improved after the programme; however, learners' social awareness and decision-making process did not differ between groups despite the observed rise in the mean scores of the experimental group. It was observed that the impact of yoga practice on SECs and resilience was sustained after 6 weeks of recess.

The differences in the levels of self-awareness, self-management and motivation after holistic yoga implementation could be attributed to increased mind-body awareness, and emotion and stress regulation. As previously stated, yoga as a positive psychology exercise is particularly utilitarian in orienting its practitioners to remain at the present moment and direct attention at their psychophysical being (Morgan, 2011). Higher levels of mind-body awareness, and emotion and stress regulation are linked to enriched SECs (Sahdra et al., 2011). In return, reinforced SECs are connected to a better mental welfare. Similar results regarding the effect of yoga on self-awareness, self-management and motivation are present in the study by Schussler et al. (2020), illustrating the increased levels of greater self-awareness, self-regulation, physical, and emotional health. Despite the setting, participants and applications of both studies differed from the present one, all indicating a positive impact of yoga through the meditation of mind-body awareness and self-regulation. Therefore, the current study findings are aligned with the evidence of yoga entailing the transformation of individuals to a higher consciousness and well-being (Butzer et al., 2016) and promoting self-management and self-awareness.

The statistically insignificant changes in social awareness and prosocial behaviour and decision-making competencies between groups after the implementation might be attributed to the duration and the setting of the study. Although yoga practices are associated with well-constructed prosocial behaviours and responsible decision-making, reconstruction of these two phenomena might be challenging in cross-sectional study designs. Previously, yoga practice time was reported to be significantly and positively correlated with the number of positive outcomes (Carmody & Baer, 2008). Additionally, many yoga-based programmes finding significant changes on social awareness and responsible decision-making tend to last longer than 6 weeks (Balkrishna et al., 2019). A further reason could also be linked to the complex nature of cultivating social awareness and behaviours since doing so requires being aware of one's own self, other parties in interaction and several other situational factors (Mueller-Hanson et al., 2007).

The refinement of resilience after the programme could be rooted in promoting self-regulation through emotion and stress regulation, and self-efficacy. Previously, resilience was reported to be correlated with constructs such as coping abilities, agency, positive management strategies, being resourceful and self-regulation (Mansfield & Beltman, 2019). On many occasions, mindfulness-based practices were reported to impact on the ways people withstand difficulties and control their stress levels (Zhou et al., 2017). Although quite divergent from the APM programme, Cultivating Awareness and Resilience in Education programme by Jennings et al. (2013) displayed that the programme helped supporting teachers by catering for their self-efficacy, stress management and well-being. Recent studies on the psychological beneficence of yoga practices revealed that physiological mechanisms calm the nervous system by regulating allostatic load and optimal homeostasis (Schmalzl et

al., 2015). Likewise, the increased levels of self-management and self-awareness competencies of the experimental group participants could be interpreted as mediators of resilience. Additionally, the present study results conform with the findings of other studies displaying that resilience and interrelated competencies could be developed during preservice teacher education (Peixoto et al., 2018).

The qualitative findings revealed that participants observed changes in their mind-body awareness, emotion and stress regulation, and overall quality of life. These changes could be attributed to ameliorated living standards and adaptive stress responses after yoga. Holistic yoga programmes are transformative at an intrinsic level and provide a bottom-up impetus for participants' well-being (Butzer et al., 2016). Prior studies unravelled that after yoga interventions, participants go through positive health behaviour changes almost spontaneously without the absence of external instruction and imposition of the specialists (Ross et al., 2012). In a study by Bryan et al. (2012), engaging in yoga practices in less than two months period of time enabled fundamental changes in regular exercise, self-efficacy, and mind-body awareness. In this study, participants were observed to practise yoga for enjoyment and personal choice in and outside the programme and wished to continue their practices when the programme ended. This bottom-up motivational mechanism and engagement are regarded as the core elements enabling the transformation of the mind and body, self-regulation, and overall quality of life. Additional nontarget findings such as sleep regulation, posture refinement and overall increase in energy levels might also suggest that yoga exceeds the expectations in SECs and resilience of teachers and provide a sustainable base to continue practices freely and willingly.

Ultimately, the results demonstrated that by centring the attention on mind-body connection, self-regulating themselves and improving strength psychophysically, STs could ameliorate and refine their SECs and resilience. The study also revealed that the effects of yoga practice on SECs and resilience could be sustained even after the end of implementation. Constituting central interests in positive psychology, constructs such as well-being and optimal self-actualization functions were fostered.

Implications

The present study contributes to the literature by unravelling the impact of yoga on ameliorating SECs and resilience of STs. Holistic yoga was found to be linked to mind-body connection, self-regulation, and psychophysiological strength; therefore, when the goal is to exploit its potential benefits, yoga should not be viewed as a discontinuous discipline. Those inclined to explore the benefits of yoga must appreciate the discipline's holistic essence, recognise their own capacities and boundaries, and consult professionals prior to any implementations.

Since there are no studies in the literature, yoga in student teacher education should be practised with caution. Individual researchers or institutions are recommended to seek professional guidance and feedback prior to, during and after implementing yoga. In this study, one of the researchers was an instructor in the Faculty of Education and a professional yoga practitioner, which facilitated the implementation process. However, future studies need to consider that the integration of yoga into student teachers' professional development requires a substantial amount of preparation time. In addition, collecting data such as the overall health condition and demographic information is essential to track down learners' progress and tailor the programme.

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