

Pre-service Teachers' Mindfulness and Anxiety

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Abstract—Teaching has become a very strenuous profession and successful teachers are defined not only by their scientific and psycho-pedagogic abilities, but also by their ability to be aware of everything that is going on in their classroom and in their students' minds, hence, the necessity of metacognitive training (Henter, 2014) for the cognitive part, doubled by the development of personal abilities such as perseverance, receptivity, tolerance and acceptance that can be attained through mindful practices. Pre-service teachers face many anxiogenic situations as they do not have experience and are under continuous observation. One proven way to reduce anxiety is being mindful.

Mindfulness is defined as the ability to draw one's attention to the experiences occurring in the present moment without judging them and in an accepting way (Kabat-Zinn, 1990) and research has shown the possibility of training mindfulness skills, meaning that they can be taught and learned through specific methods.

Our hypothesis was that pre-service teachers with high levels of mindfulness skills are less anxious during their teaching activities and they feel greater well-being than those not practicing mindfulness. Students preparing to become teachers were given a mindfulness and an anxiety inventory. The findings are discussed in the present article.

Keywords—Mindfulness, pre-service teachers, anxiety

I. THEORETICAL BACKGROUND

Teaching has become a very strenuous profession and successful teachers are defined not only by their scientific and psycho-pedagogic abilities, but also by their ability to be aware of everything that is going on in their classroom and in their students' minds, hence, the necessity of metacognitive training (1) for the cognitive part, doubled by the development of personal abilities such as perseverance, receptivity, tolerance and acceptance that can be attained through mindful practices. Pre-service teachers do not have experience and are under continuous observation therefore they face many anxiogenic situations that can shape their professional persona. Anxiety is one of the main stress factors for any public related profession, putting more strain on novices. One proven way to reduce anxiety is being mindful.

Mindfulness can be defined as the ability to participate in a non-evaluative manner in one's own physical and mental processes during normal daily tasks. It can be seen both as a human trait that is present in all individuals, in varying proportions, and as a skill that can be learned through the practice of meditation (2-3).

Mindfulness meditation requires focusing only on the

present moment, on what is happening to us now or on our thoughts, and to observe all these events with some detachment - that is, to be aware of their existence, but not to judge them. Once we are aware of our experiences, they can no longer exert the same influence on us because, although we do not evaluate them as good or bad, pleasant or unpleasant, we analyse them and our reaction will be more appropriate, given that as a rule of thumb most of us act impulsively. Instead of reacting as usual, mindfulness helps us to stop and look at the situation, as well as the emotions and thoughts that it provokes, it prevents us from falling into the mesh of the old story we tell ourselves with regarding similar events (that we have experienced or imagined) and helps us identify a new scenario, a more adaptive one (4).

Mindfulness as an ability is conceptualized as the set of meditation techniques that can be learned by anyone (5). It can be practiced formally - making time daily to practice using perhaps guided meditations, performed by a specialist to guide you throughout the exercise - or informally - to allow these practices to penetrate into all the areas of life, in an unplanned and natural way, meaning becoming aware of everything that is in you and around you in all areas of life (6). Such skills were integrated in special programmes based on mindfulness, for alleviating suffering. Mindfulness-based interventions were effective in improving people's well-being, including lowering general stress, anxiety and depression symptoms (2). Mindfulness is associated with low levels of both depression and anxiety symptoms and has a potential for protection against the influence of stressful events on emotional well-being, acting as a buffer (2).

Preservice teachers are all the students preparing to become teachers and attending special teacher training courses which include teaching practicum. Therefore, they may feel more anxiety and stress related to teaching the mock-classes (as part of their assignments) and being in front of a class of pupils (a state) or it be part the student's personality (trait). Trait-anxiety is innate and manifests itself both through the predisposition to feel fear under the action of stimuli that for other people are less anxiogenic, or at least anxiogenic, and by the development of conditioned fears under the action of stimuli that are not anxiogenic (7). Some occasional anxious reactions caused by factors such as the presence of a real danger, an examination or the health problems are normal and may even play a protective role and inhibit the possible inappropriate actions of the subject. In general, anxiety manifests in the absence of a concrete and valid reason and is a major problem that clinicians are trying to evaluate, having to

rely on self-report questionnaires.

II. RESEARCH METHODOLOGY

A. Aims

We aimed to identify the relationship between mindfulness and anxiety and see whether with high levels of mindfulness skills are associated with less anxiety. Also, we thought that metacognitive awareness, which can be considered a special type of mindfulness (the ability to be present in your mind and identify the thoughts/strategies you use during a task), may also be linked to anxiety levels.

B. Participants

The present study is based on a survey on first year students from Transilvania University of Brasov, including 124 female and 35 male students. The mean age was of 22.2 years old. Only 30 students were attending distance education, the rest being full-time students and 108 were from humanistic faculties and 51 from engineering ones.

C. Instruments

The study used three self-report questionnaires to assess constructs of anxiety, mindfulness and metacognition. The Generalized anxiety disorder questionnaire (GAD-7) is a brief clinical measure for assessing the generalized anxiety disorder, developed by Robert L. Spitzer, Kurt Kroenke, Janet B. W. Williams, Bernd Lowe (8). It consists of 7 items, with a reported internal consistency of Cronbach alpha =.92, while for the present sample it was similar, Cronbach alpha =.903. The authors also report good criterion, construct, factorial, and procedural validity. The scale asks the respondents to say how often they had the presented symptoms during the last two weeks: not at all, on several days, more than half the days or nearly every day.

In order to assess the level of mindfulness, we used The Mindful Attention Awareness Scale (MAAS), a 15-item scale designed to assess mindfulness through its core concept a receptive state of mind in which attention, informed by a sensitive awareness of what is occurring in the present, simply observes what is taking place (9). MAAS respondents indicate how frequently they have the experience described in each statement using a 6-point Likert scale from 1 (almost always) to 6 (almost never), where high scores reflect more mindfulness. The Cronbach alpha for the entire scale is of .856.

A metacognitive report was added to gain more knowledge about the factors influencing anxiety. The Metacognitive Awareness Inventory (MAI), developed by Schraw and Dennison (10) was used. It has two main factors, the knowledge of cognition and regulation of cognition. The first factor has three components: declarative knowledge, procedural knowledge, and conditional knowledge, while the latter has five components: planning, information management, monitoring, debugging, and evaluation. The Cronbach alpha for the entire scale is of .949.

III. RESULTS

The data analysis started with calculating the Pearson correlation coefficients for the main variables involved in this research. The level of anxiety correlates negatively with all the other variables (Table 1). Thus, we can say that high levels of anxiety are associated with low levels of metacognitive awareness and mindfulness.

TABLE I. PEARSON CORRELATIONS BETWEEN ANXIETY, MINDFULNESS AND METACOGNITION

	Mindfulness	MC knowledge	MC regulation	MC total
Anxiety	-.332**	-.223**	-.157*	-.188*
Mindfulness		.144	.068	.100
MC knowledge			.848**	.937**
MC regulation				.980**

N=159, ** p<0.01, * p<0.05

We also found that age is strongly related to metacognition ($r=.187$, $p=0.05$) and its dimensions ($r=.220$, $p=0.01$ for metacognitive knowledge and $r=.158$, $p=0.05$ for metacognitive regulation), anxiety ($r=.330$, $p=0.01$) and mindfulness ($r=.268$, $p=0.01$).

As expected, GPS correlates only with the metacognitive skills: $r=.184$, $p=0.01$ for the general metacognition, $r=.181$, $p=0.01$ for metacognitive knowledge and $r=.175$, $p=0.01$ for metacognitive regulation as metacognition clearly supports academic achievement.

We also aimed at finding whether self-analysis and self-knowledge were specific only to students coming from faculties where introspection and self-awareness is valued (such as Psychology or Education majors). There were not identified any statistically significant differences between the results obtained by students from humanistic and engineering faculties: $t(157)=1.106$, $p=.270$ for mindfulness and $t(157)=.749$, $p=.455$ for anxiety. Thus, we can assume that mindfulness and anxiety are not dependant on the field of education, but they are trait dependant.

Also, there were not identified any statistically significant differences between the results obtained by male and female students: $t(157)=.654$, $p=.514$ for mindfulness and $t(157)=-1.797$, $p=.074$ for anxiety. Thus, we can assume that the levels of mindfulness and anxiety experienced by the boys and girls in our study are not statistically significant different, although female students tend to show more anxiety.

The relationship between anxiety and mindfulness was addressed in previous research with findings suggesting that facets of trait mindfulness moderated the relationship between social anxiety schemas and responses to a social anxiety stressor task (11) or that mindfulness could reduce psychological distress caused by social stressors, such as job

or school related ones (12-13) or by disease (4, 14). Also, mindfulness, at least partially, can have beneficial effects in reducing depression and anxiety through reducing stress (15).

IV. DISCUSSION

Students preparing to become teachers may feel more anxious when they are not sure of what is expected of them to do or whether are enough prepared to teach pupils. Mindfulness claims to help us stay in the present moment, without any judgement of what is happening – so we can give our full attention to pupil while teaching and not ruminate of what may happen if the unexpected drops in during teaching (which seems to be one of the greatest fears pre-service teachers have). Hence, in preparing students to become good teachers, there could be introduced self-management classes, starting from the principles of mindfulness and metacognition. When the future teacher is able to plan and monitor his cognitive enterprises, in order to find the best answer to give a pupil or find the alternative teaching strategy that is when he has a high level of metacognitive awareness, which in its turn is associated with low levels of anxiety, learning prevails. This can be a helpful for educational policies – teaching metacognitive skills may result in improving teaching and learning. We can also argue that the older the future teacher, the more mindful and less anxious he is. Although they were unexperienced in the educational field, it seems that skills based on self-knowledge develop in time. If we consider metacognition and mindfulness related, being mindful, receptive at every signal from the class may be just another description of the ideal teacher. In conclusion, the development of programmes that enhance mindfulness skills could be part of a larger curricula for future teachers.

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