



Development and initial validation of the Adolescent and Adult Mindfulness Scale (AAMS)



Vita Droutman^{a,*}, Ilana Golub^b, Ani Oganessian^a, Stephen Read^a

^a University of Southern California, Los Angeles, CA, United States

^b University of California Los Angeles, Los Angeles, CA, United States

ARTICLE INFO

Keywords:

Mindfulness
Adolescents
Children
Teens
Assessment
Scale

ABSTRACT

This paper presents five studies describing the creation and validation of a Mindfulness scale that is developmentally appropriate for children 11 and older and also suitable for use with adults. The Adolescent and Adult Mindfulness Scale (AAMS) scale measures key components of mindfulness: (1) focus on the present moment, represented by paying attention to surroundings, thoughts, feelings and emotions, (2) being non-reactive, (3) being non-judgmental, and (4) self-accepting. Study 1 describes the original scale creation: item selection, initial validation and item reduction using exploratory factor analysis and initial validation using confirmatory factor analysis (CFA). This study also investigates the correlation of the AAMS with a previously validated mindfulness scale for children. Studies 2 and 3 validate the scale finalized in Study 1, on an early and mid-adolescent samples. Study 4 validates the scale on an adult sample. Study 5 evaluates scale sensitivity to change in mindfulness due to mindfulness training and examines its relationships with emotion regulation and self-compassion scales.

CFA demonstrated a good fit of the factor structure with both adolescents and adults. The AAMS is the only scale available that is validated on such a wide range of ages from early teens to adults.

1. Introduction

Mindfulness has been described as a non-elaborative, non-judgmental awareness of the present moment in which thoughts, feelings, and sensations that arise are acknowledged and accepted as they are (Bishop et al., 2004). Although mindfulness originated in Buddhist tradition, in the last several decades it has become widely accepted in the West as a secular practice. One of the first and most fundamental clinical applications was the *Mindfulness-Based Stress Reduction Program* (MBSR) developed by Jon Kabat-Zinn in 1982 to deal with chronic pain and which was later extended to alleviate the psychological hardship of chronic illnesses and to help treat emotional disorders. Rising interest in this technique inspired an increase in research on the effects of mindfulness practice, which resulted in a wide spectrum of outcomes from changes in physiological and immune systems (Davidson et al., 2003), to better response to medical treatment (Kabat-Zinn et al., 1998), to improvements in attention and cognitive inhibition in adults and adolescents with ADHD (Mitchell, Zylowska, & Kollins, 2015).

Along with intervention studies came the need to assess mindfulness. To our knowledge, eleven instruments have been developed over the years: the *Freiburg Mindfulness Inventory* (FMI; Buchheld,

Grossman, & Walach, 2001), the *Mindful Attention Awareness Scale* (MAAS; Brown & Ryan, 2003), the *Kentucky Inventory of Mindfulness Skills* (KIMS; Baer, Smith, & Allen, 2004), the *Cognitive and Affective Mindfulness Scale* (CAMS-R; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007), the *Toronto Mindfulness Scale* (TMS; Lau et al., 2006), the *Philadelphia Mindfulness Scale* (Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008), the *Southampton Mindfulness Questionnaire* (Chadwick et al., 2008), the *Five Facet Mindfulness Questionnaire* (FFMQ; Baer, Smith, Hopkins, Kreitemeyer, & Toney, 2006), the *Child and Adolescent Mindfulness Measure* (CAMP; Greco, Baer, & Smith, 2011), the *Comprehensive Inventory of Mindfulness Experiences beta* (CHIME-β, (Bergomi, Tschacher, & Kupper, 2013), and the *Mindfulness Process Questionnaire* (MPQ, Erisman & Roemer, 2012). All of the above scales assess one or several facets of mindfulness, each with its own benefits and short-comings (for a detailed analysis of the first five see Grossman, 2008).

A significant gap, however, still exists in the developmental research arena. Only one of the above mindfulness scales was developed specifically for children and adolescents: CAMP (Greco et al., 2011). MAAS was developed for adults and later validated on a sample of 14 to 18 year olds (Brown, West, Loverich, & Biegel, 2011), thus being

* Corresponding author at: Department of Psychology, University of Southern California, Los Angeles, CA 90089, United States.
E-mail address: droutman@usc.edu (V. Droutman).

developmentally appropriate for this age group, but not for younger adolescents and pre-teens. None of the other scales are developmentally appropriate due either to complicated language used, references to non-age appropriate activities (like driving), or both.

Both CAMM and MAAS, although very useful, especially due to concise and simple formats, still leave some issues to be addressed. In both scales all the items are reverse-scored which may lead to response bias. Further, since CAMM was specifically tailored to children (and refers to school), it is not appropriate for adults; thus it cannot be used in developmental studies that assess differences between children, adolescents, and adults. Also, both MAAS and CAMM have only one factor and may be too simplistic to capture the full set of underlying constructs. Most of the conceptualizations of mindfulness focus on the following main facets –attention and awareness, non-reactivity, non-judgmental orientation and acceptance (Bishop et al., 2004; Kabat-Zinn, 1990; Kabat-Zinn et al., 1998; Shapiro & Schwartz, 2000). However, MAAS only evaluates the attention and awareness component. Although, CAMM includes wider spectrum questions, they all load on a single factor. It is important to be able to separately measure the different components of mindfulness, especially when evaluating interventions and effects of mindfulness training. For example, when evaluating whether mindfulness training improves attention and executive functioning, we would hypothesize that the attention and awareness component would show the strongest effect; and to measure this effect such a subscale would be necessary. It is even more important when the relationship between constructs is less clear. For instance, a growing body of work indicates that mindfulness training improves emotion regulation (Ortner, Kilner, & Zelazo, 2007; Taylor et al., 2011). The mechanism for this effect is not fully understood, and several theories have been suggested. It is possible that improvement in emotional awareness allows an earlier engagement of the regulation technique, before the intensity of feeling is out of control; on the other hand, the non-judgmental focus could be the key (Teper, Segal, & Inzlicht, 2013). It is necessary to be able to measure the components of mindfulness and their relationship with other constructs in order to assess the efficacy of interventions for youth and to be able to identify putative mediators. This is even more important in clinical applications of mindfulness where careful customization is necessary. Understanding which facets of mindfulness have particularly strong relationship with the desired clinical improvement would allow one to design an intervention that focuses on advancing these facets, thus allowing for more effective interventions.

As the benefits of mindfulness practice become more and more apparent (Davidson & McEwen, 2012; Luders et al., 2012; Zeidan et al., 2011, etc.), programs and workshops for kids and adolescents are being developed and adopted by schools. Mindfulness programs have been implemented in many schools around the US, from Baltimore, MD (Holmes, 2013) to Richmond and Los Angeles, CA (Kuznia, 2013; Schwartz, 2014). Following are a sample of larger scale programs currently operating (Semple, Droutman, & Reid, 2017): Mindful School trained over 7000 educators who are reaching over 200,000 children, Inner Explorer teaches mindfulness in over 250 schools in ten states, the Resilient Kids program is taught in 71 classrooms in Rhode Island schools, and the Wellness and Resilience program has been operating in Vermont schools for eight years.

In spite of such wide implementation, the research on mindfulness effectiveness for youth is still in its infancy and thus the availability of age appropriate measure of mindfulness that reflects the full nature of the construct is imperative. The scale offered here measures key components of mindfulness: (1) focus on the present moment, represented by paying attention to surroundings, thoughts, feelings and emotions, (2) being non-reactive, (3) being non-judgmental, and (4) being self-accepting. The language used in the scale is developmentally appropriate across different age groups (from 11 years old to adult).

This paper presents five studies describing the development and validation of the Adolescent and Adult Mindfulness Scale (AAMS).

Adolescence is defined as a period that begins with the onset of puberty and ends when adult cognition is developed and adult identity and behavior is accepted (Canadian Pediatrics Society, 2003). This period used to be considered to roughly correspond to an age range between 11 and 19, in agreement with the World Health Organization definition (World Health Organization, 1986). Recent advances in developmental neuroscience have found overwhelming evidence that brain development is not complete by the age 19, but continues well into the twenties (Casey, Giedd, & Thomas, 2000; Durston et al., 2001; Shaw et al., 2008). In conjunction with these finding it was proposed to increase the upper boundary of adolescence to 25 (Curtis, 2015; Steinberg, 2014). The National Institutes of Health extended the age range for research on adolescence to participants up to 25 years old (NIDA, 2015). In this paper we use the term adolescent in reference to ages 11 to 25, with the following sub-groups: early adolescent 11–14 (middle school students), mid adolescent 14–18 (high school students), and older adolescent 18–25 (starting with high school graduation).

Study 1 describes development of the scale as well as its validation using confirmatory factor analysis (CFA) techniques on a large sample of older adolescents ($N = 589$). This study also investigates the correlation of AAMS with CAMM. Study 2 validates the scale finalized in Study 2 on an early and mid-adolescent sample ($N = 413$) and examines relationships with related constructs. Study 3 validates the scale on an early adolescent sample ($N = 339$). Study 4 validates the scale on an adult sample ($N = 215$). Study 5 verifies that the scale captured the increase in mindfulness in adolescents following an 8-week MBSR-based training, verifies its temporal stability and explores AAMS's relationship with related constructs such as emotion regulation and self-compassion. All studies were approved by our institutional review board.

2. Study 1

The purpose of Study 1 was to develop the item list for the scale, perform a series of exploratory factor analyses (EFA) to identify possible scale structure, and then validate the models identified by EFA with confirmatory factor analyses (CFA). In order to accomplish both EFA and CFA in this study we randomly assigned our participants into two groups (Sample A and Sample B). We performed EFAs on data collected from Sample A and CFAs on data collected from Sample B.

2.1. Method

2.1.1. Developing the item list

In developing this scale we relied heavily on the operational definition proposed by Bishop et al. (2004). They define mindfulness as a focus on present experience achieved by self-regulating attention and a non-judgment orientation characterized by openness, curiosity and acceptance. Defining it further in terms of experiences and behavior, the authors identified the following skills and traits necessary to achieve mindfulness that can be grouped in four categories. The ability to focus and sustain attention, and being aware of surroundings, thoughts, feelings, and sensations constitute the attention and awareness category. The ability to restrain from evaluating one's own thoughts, opinions and feelings, but observing them, represents the non-judgmental category. Not suppressing thoughts, feelings, and emotions but acknowledging and accepting them, and the ability to inhibit secondary elaborative processing of the thoughts, feelings, and sensations, such as rumination, form the non-reactivity category. Accepting self without criticism represents the non-self-critical or acceptance category. Our goal in creating the scale was to measure these skills and traits, and thus they served as our guidelines in creating the initial set of questions. We examined the existing mindfulness measures discussed above to incorporate items that could be adopted for adolescents and then added new items, resulting in a 29-item scale that covered aspects such as attention regulation, and awareness of body, emotions, thoughts, and surroundings, as well as being non-reactive

Download English Version:

<https://daneshyari.com/en/article/7249184>

Download Persian Version:

<https://daneshyari.com/article/7249184>

[Daneshyari.com](https://daneshyari.com)