Reliability and validity of an equanimity questionnaire: The two-factor equanimity scale (EQUA-S) (#46519)

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Reliability and validity of an equanimity questionnaire: The two-factor equanimity scale (EQUA-S)

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Background. Many studies have revealed the positive impact of mindfulness training on mental health and proposed equanimity as a general outcome in contemplative research. Despite recent interest, relatively few studies have examined equanimity empirically and measurement instruments are still lacking. The main goal of this study was to develop an Equanimity Scale (the EQUA-S) in a Western population with or without meditation experience, based on equanimity definitions and to investigate its relationships with relevant psychological constructs and health outcomes. **Methods.** Adults from the general population (N = 265; M_{age} = 34.81) completed various measures: the EQUA-S, mindfulness, hyper-sensitivity, avoidance and fusion, impulsivity, personality, alexithymia, sensitivity to punishment and reward and frequency of problematics addictive behaviors. The dimensionality of the EQUA-S was examined using Factor Analyses. The convergent validity of this new scale was investigated using Pearson correlations. **Results.** Results of a factor analysis revealed two equanimity dimensions: an even-minded state of mind (E-MSM) and a hedonic independence (HI) component. While the E-MSM was positively related to emotional stability, adaptive emotional regulation, and several mindfulness-related abilities, HI was found to correlate negatively with addictive issues. **Discussion.** The relationships with personality constructs and possible related cognitive processes will be discussed.

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Abstract

Background. Many studies have revealed the positive impact of mindfulness training on mental health and proposed equanimity as a general outcome in contemplative research. Despite recent interest, relatively few studies have examined equanimity empirically and measurement instruments are still lacking. The main goal of this study was to develop an Equanimity Scale (the EQUA-S) in a Western population with or without meditation experience, based on equanimity definitions and to investigate its relationships with relevant psychological constructs and health outcomes.

Methods. Adults from the general population ($N = 265$; $M_{age} = 34.81$) completed various measures: the EQUA-S, mindfulness, hyper-sensitivity, avoidance and fusion, impulsivity, personality, alexithymia, sensitivity to punishment and reward and frequency of problematics addictive behaviors. The dimensionality of the EQUA-S was examined using Factor Analyses. The convergent validity of this new scale was investigated using Pearson correlations.

Results. Results of a factor analysis revealed two equanimity dimensions: an even-minded state of mind (E-MSM) and a hedonic independence (HI) component. While the E-MSM was positively related to emotional stability, adaptive emotional regulation, and several mindfulness-related abilities, HI was found to correlate negatively with addictive issues.

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Introduction

Mindfulness has been defined as a non-judgmental and non-reactive attention to the present moment. The practice of mindfulness based meditation has a robust effect on a variety of psychological outcomes, such as changes in emotionality, relationship issues, attention and health (Sedlmeier et al., 2012). Several psychological and neurological mechanisms underlying these effects have been identified (Gu et al., 2015). According to the Buddhist view, mindfulness meditation is a way to achieve an attentional, emotional, and cognitive balance of the mind (Ekman et al., 2005), which can be termed *equanimity*. Many authors have suggested using equanimity as a general outcome in contemplative research (Desbordes et al., 2015; Hadash et al., 2016).

In Buddhist texts, equanimity (*upekkha* in Pali) is defined differently depending on the context; as a feeling, as a quality or as a durable attitude. Indeed, according to the Theravada tradition of equanimity from the *Abhidhamma Sangaha* (Bodhi, 2012), the feeling of equanimity is a way to experience an object in a neutral way, the quality of equanimity is to have a balanced and impartial reaction to things (*tatramajjhattatā*) and, finally, the attitude of equanimity is one of the Four Immeasurables and is thus part of a complete and durable state of equanimity. The second of these, the quality of equanimity, is the definition used by in psychology (Desbordes et al., 2015), and is the one we will also focus on in this article. Indeed, equanimity as a quality can be developed by means of mindfulness-based meditation and has recently been theoretically introduced into Western psychology as a beneficial effect of this practice (Pagis, 2015) that is based on the Buddhist conceptualization (Dambrun & Ricard, 2011).

Equanimity has been studied and described by Buddhists because developing this quality towards objects, thoughts, feelings and living beings is thought to lead to a decrease of suffering (*duhkha* in Pali) and an increase of happiness (*sukha* in Pali). In this context, suffering refers not only to physical pain or sadness but also to a more all-encompassing sense of continuing dissatisfaction. These dissatisfactions are caused by a self-centered perspective, in which feelings, and thoughts repeatedly and automatically arise and are vividly perceived and interpreted as "real" and as part of a stable conception of self (Dambrun & Ricard, 2011). However, mindfulness meditations allow practitioners to focus their attention on each of the sensations that make up this stream (i.e., mental proliferation or rumination) and perceive them for what they are in the present moment; as mental events rather than as a fixed reality (Holzel et al., 2011). With practice, the conception of the self will change, the flow of these mental events will become less automatic, and habitual reactions will appear less frequently. Thus, happiness, in the Buddhist conception, which involves a "mental balance and insight into the nature of reality" (Ekman et al., 2005, p.60), can arise when one is free from these frustrations. Craving, for example, is one of the principal causes of frustration in Buddhist theories and is based on similar constructs to those involved in the definition provided by Western psychology. However, while the Buddhist conception of craving includes all afflictive attachments (e.g., striving to achieve a promotion, struggling to stop thinking about someone; Groves & Farmer, 1994), Western psychology defines craving more specifically as an intense desire directed toward objects or situations, resulting in addictive behaviors (Skinner & Aubin, 2010). Various studies have indeed consistently shown a decrease in addictive craving after mindfulness meditation (e.g., Lacaille et al., 2014). Thus, the development of the quality of equanimity could explain positive effects on addictive behaviors after mindfulness practices. In the current psychology

literature, we found two common approaches to equanimity developed, respectively, by Desbordes et al. (2015) and Hadash et al. (2016).

Equanimity can first be defined as a calm and stable attitude, free of tortuous emotional reactions. This definition echoes the approach adopted by Desbordes et al. (2015). These authors defined equanimity as "an even-minded mental state or dispositional tendency toward all experiences or objects, regardless of their affective valence (pleasant, unpleasant or neutral) or source" (p. 6). Other authors (Vago & David, 2012) have used Buddhaghosa's (1991; Ortner, Kilner, & Zelazo, 2007) definition of equanimity, which refers to "a balance of arousal without hyperexcitability or fatigue" (p. 2). According to this definition, equanimity involves less emotional interference (Ortner et al., 2007), greater emotional stability (Taylor et al., 2011), more inner peace (Dambrun et al., 2012), and reduced general stress (Grossman et al., 2004). When adopted in stressful situations, equanimity would make it possible to remain calm in a state in which both decisions and behaviors are weakly contaminated by stress and arousal.

Equanimity can also be considered in terms of a motivational approach (Hadash et al., 2016). These authors used Olendzki's (2006) definition of equanimity: "an intentional stance to neither hold on to pleasant experience nor push away unpleasant experience" (Hadash et al., 2016, p. 3). They proposed the *Decoupling Model of Equanimity,* which conceptually defines equanimity as the decoupling of desire (i.e., wanting or not wanting) from the hedonic tone of experience. Similarly, Vago and David (2012) described equanimity as "impartiality without bias or discrimination arising from a sense of detachment from the attraction or aversion to ongoing experience" (p. 2). Mindfulness has been found to decouple the relation between initial automatic approach/avoidance craving reactions and hedonic tone (e.g., alcohol; Ostafin, Bauer,

& Myxter, 2012), which could be explained, according to this definition of equanimity, by the fact that the approach/avoidance reaction decreases (Papies et al., 2012).

As suggested above, equanimity and mindfulness appear to be positively and significantly related to each other. According to Desbordes et al. (2015), equanimity implies non-judgment, non-reactivity, and less automatic behavior in general. This in turn implies the more specific hypothesis about the relationships between equanimity and the subcomponents of mindfulness developed by Baer et al. (2008; i.e., positive correlations with the nonreacting, nonjudging, and acting with awareness subscales of the Five Facet Mindfulness Questionnaire FFMQ).

The few existing equanimity scales are based on definitions of equanimity that share some similarities but also some differences. The first one, the Self-Other Four Immeasurables (SOFI; Kraus & Sears, 2008) are intended to capture participants' score for each of the Four Immeasurables (i.e., love-kindness, compassion, joy and equanimity). For the equanimity subscale, participants have to rate if they thoughts, felt or acted according to the word "accept" and its close enemies (i.e., indifference and apathetic). This scale appears to be more effective in measuring the other three Immeasurables (i.e. love-kindness, compassion, and joy) than in measuring equanimity and places greater emphasis on the distinction between positive and negative qualities related to oneself and others (see Kraus & Sears, 2008). Second, Hadash and colleagues (2016) suggested using two existing scales (i.e., anxiety sensitivity and cognitive reactivity to sadness) to assess reactivity in equanimity and adding acceptance scales for a complete equanimity assessment. This proposal measures equanimity toward an unpleasant hedonic tone as explained in the authors' discussion. Thus, it will be necessary to create a scale that also considers the responsiveness to pleasant hedonic tones. Third, the Holistic Well Being Scale (Chan et al., 2014) aims to measure affliction and equanimity in a eudemonic view of well-

being. It considers spiritual care and vitality and has only been tried and validated for the Chinese population. Considering slight differences in definitions of equanimity and cultural perspectives, only the non-attachment questions seems to be in line with our equanimity approa Finally, the Spanish subscale of Ecuanimidad (Moscoso & Merino Soto, 2017), which consists of 6 items (e.g., translation in English "I feel that I am a calm person, even in moments of stress and tension", "Stress situations emotionally disturb me" etc.), is based on the definition of Desbordes et al (2015). We there e add these six elements to our even-minded state of mind subscale. C sidering the existing work on equanimity, our scale aims to measure equanimity as a quality of response to external stimuli (valued in the Western population), with participants without meditation experience. We choose to focus on equanimity (a) as the quality of being emotionally calm and balanced, regardless of pleasant or unpleasant emotions and (b) equani y in emotional and motivational reactions towards pleasant stimuli. Many researchers have also focused on the emotional regulatory effect of mindfulness practice (Ostafin et al., 2015). Psychological traits linked to emotional difficulties such as neuroticism and alexithymia are less pronounced among people with high mindfulness scores (Baer, Smith, & Allen, 2004 ; Siegling & Petrides, 2014). Thus, equanimity - as a more balanced emotional reaction toward stimuli - would be negatively related to emotional re tivity. Moreover, a high degree of fusion with one's emotional state prevents flexibility and detachment with regard to such stimuli (Corman et al., 2018), both of which are prerequisites for equanimity. Detachment from one's emotional state would also reduce the frequency of impulse reactions, thus corresponding to the hedonic independence component of equanimity.

The main aim of the present study was to develop and validate a self-report scale of equanimity. We thus hypothesize the existence of two factors (i.e., even-minded state of mind

and hedonic independence components), which will be related to distinct psychological constructs. This study also aims to investigate possible relationships between equanimity and mental health (Desbordes et al., 2015). By reducing craving and increasing emotional regulation, equanimity, as a state of hedonic independence, can be a valuable mechanism for approaching addictive behaviors. We predicted that hedonic independence, which is closely related to a decrease in the approach reaction to pleasant experiences and an avoidance reaction to unpleasant ones, would be negatively and significantly related to addictive behaviors. Finally, Desbordes et al. (2015) have suggested that equanimity as an even-minded state would be associated with positive coping strategies (e.g., positive refocusing; see Jermann, Van der Linden, d'Acremont, & Zermatten, 2006). We hypothesized that equanimity as an even-minded state would be positively and significantly related to optimal emotional functioning and efficient coping strategies (i.e., positive correlations with acceptance, positive refocusing, positive reappraisal, putting into perspective and negative correlations with rumination, catastrophizing, and blaming others).

Materials & Methods

Participants

We recruited 265 adults in France (N_{women} = 175), with ages ranging from 18 to 73 years (M = 34.81, SD = 15.17). Using GPower (version 3.0.10), we estimated the required sample size for sufficient correlations power (90%). On the basis of the correlation between the FFMQ and neuroticism reported by Siegling and Petrides; r = .47, Siegling & Petrides, 2014), the minimum required sample size was 30. The participants were recruited by 150 students from the University Clermont Auvergne. The students were asked to leave the questionnaire and consent form for 24 hours in the participants' homes so that the participants could complete them alone undisturbed. To prevent too long questionnaires, we decided to split participants in two samples. Both

samples answered the equanimity scale, the FFMQ and demographic questions but only sample A have to answer psychological constructs questionnaire while sample B had questions ab addictive behaviors (see Table 1 for the description of each sample). Ethical approval for the study was granted by the Clermont Auvergne University Ethical and Research Committee (ref IRB00011450-2018621) and all procedures performed were in accordance with the 1964 Helsinki declaration. All participants provided informed written consent to participate included in the study.

[Insert Table 1 here]

Scale Development

Based on the literature review, 42 candidate items were created to correspond to existing definitions. Some were inspired by the scale proposed by the "Ecuanimidad" subscale (Moscoso & Merino Soto, 2017). Three judges who were familiar with the concept of equanimity firstly individually evaluated all these items before discussed their choices together for finally considered 25 of them to be sufficiently rel nt. Of the 25 items, 12 were designed to assess the approach to equanimity proposed by Desbordes et al. (2015), which we labeled "even-minded state of mind". The remaining 13 items were inspired by the conceptualization of equanimity developed by Hadash et al. (2016), which we termed "hedonic independence". The participants had to answer using a 5-point Likert scale (1 = *never or very rarely* to 5 = *very often or always*).

Measures

Several constructs were measured in order to ensure the convergent validity of the equanimity scale (see Table 2). We used the available French version for each scale. We

assessed mindfulness (FFMQ; Heeren, Douilliez, Peschard, Debrauwere, & Philippot, 2011), hyper-sensitivity (HSC; Pluess et al., 2018), avoidance and fusion of internal events (AFS; Corman et al., 2018), impulsivity (BIS-10; Baylé et al., 2000), personality (BFI; Plaisant, Courtois, Réveillère, Mendelsohn, & John, 2010), alexithymia (TAS-20; Loas, Otmani, Verrier, Fremaux, & Marchand, 1996) and sensitivity to punishment and reward (SPSRQ; Lardi, Billieux, d'Acremont, & Linden, 2008). Finally, we measured the relationships between equanimity and various health outcomes by means of three scales: (1) the frequency of behaviors based on a list of 16 potential addictive or problematic behaviors (e.g., video games, tobacco, etc.); (2) the frequency of eating addictions (AIEQ; Décamps, Battaglia, & Idier, 2010) and, (3) emotional regulation strategies (CERQ; Jermann et al., 2006) and the suppression subscale of the ERQ (Christophe et al., 2009).

Results

Exploratory Factor Analysis and Item Selection

Using SPSS Statistic 24, the factor analysis with oblimin rotation of the 12 items selected to assess the even-minded state revealed a two-factor solution. The Kaiser measure of sampling adequacy (KMO) was .84. Based on the eigenvalue and the screen plot, a one-factor model appeared to provide the best fit for the data (EV = 4.28 for the first factor and 1.42 for the second). We ran another analysis by forcing a one-factor extraction. Three items failed to load sufficiently on the first factor (i.e., factor loading less than .50). A second analysis was computed with the remaining nine items. This analysis revealed a first factor solution with one item loading less than .50. Once this item had been withdrawn, a final analysis revealed a clear one-factor solution of eight items with a Kaiser measure of sampling adequacy of .85. All the items loaded appropriately on the single factor (factor loadings ranged from .55 to .72, see Table 3).

The 13 items selected to assess hedonic independence were entered in a factor analysis with oblimin rotation. The KMO was .77, with an eigenvalue at 3.6 for the first factor and 1.3 for the second. Based on the eigenvalue and the screen plo one-factor model appeared to provide the best fit for the data. Six items failed to load sufficiently on this factor (i.e., factor loading less than .50). A second analysis was computed with the remaining seven items and revealed a clear one-factor solution, with all the items loading appropriately on a single factor (factor loading ranged from .54 to .71, see Table 3) and a Kaiser measure of sampling adequacy of .80.

[Insert Table 2 and 3 here]

Are Even-Minded State of Mind and Hedonic Independence Distinct Constructs?

To answer this question, we performed a new factor analysis using all the items from the two scales. Kaiser's measure of sampling adequacy was .80. Based on the eigenvalues and an examination of the screen plot, this analysis revealed two factors, with the first factor accounting for 26.2 % of the explained variance and comprising all the items that assess Even-Minded State of Mind. The second factor accounted for 17.5 % of explained variance and comprised items that assess Hedonic Independence. Consequently, even-minded state of mind and hedonic independence are two distinct constructs. Although the two scales correlated significantly (r = .174, p = .004), the size of the correlation was small (d = .35).

The internal consistency of the two subscales was examined using Cronbach's alpha. For the even-minded state of mind, Cronbach's alpha was equal to 0.81. With regard to hedonic independence, it was 0.74. Thus, the two subscales of the EQUA-S had a satisfactory internal consistency (see Table 2).

Convergent validity with relevant psychological constructs

In order to assess convergent validity while controlling for each subscale of equanimity (e.g., even-minded state while controlling for hedonic independence and vice versa), we calculated the partial correlation between the two subscales of equanimity and relevant psychological constructs (see Table 4). In the case of the FFMQ, the even-minded state was related to nonreacting, to nonjudging, and to acting with awareness. We also found partial negative correlations between the even-minded state of mind and the hyper-sensitivity score, one subscale of alexithymia (i.e., identifying emotions) and the avoidance and fusion scale. We found a very strong negative correlation between the even-minded state of mind component and neuroticism (β = -.74, p = .000). In order to test the robustness of the above findings, we replicated our analyses by controlling for neuroticism, age and sex. The correlation between the even-minded state of mind and nonreacting still remained significant (β = .38, p = .000) and the correlation was still marginally significant in the case of the avoidance and fusion questionnaire (β = -.23, p = .054). At the same time, the correlations between the even-minded state of mind and the other components of the FFMQ (i.e., nonjudging, acting with awareness), as well as the alexithymia identifying emotions subscale and hyper-sensitivity, failed to reach significance. Thus, our even-minded state subscale was most related to nonreacting

When even-minded state of mind was controlled for, hedonic independence was robustly and positively related to the acting with awareness component of the FFMQ. Hedonic independence was also related significantly and negatively to hyper-sensitivity, to the avoidance and fusion scale, to motor impulsivity, and to sensitivity to reward and punishment. In addition, hedonic independence was positively and significantly related to conscientiousness. When age and sex were controlled for, we found similar results, except in the case of the sensitivity to

298 punishment and the conscientiousness subscale, which failed to reach significance. Analyses
299 with cognitive and non-planned impulsivity were not interpreted due to their low internal
300 reliability (see Table 2).
301
302 [Insert Table 4 here]
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304 **Relationships with health outcomes**
305 Partial correlations (see Table 4) show that among the emotional regulation strategies
306 assessed by the CERQ and the ERQ, even-minded state of mind was positively and significantly
307 correlated with adaptive regulation strategies (i.e., positive reappraisal, refocus on planning,
308 putting into perspective, and acceptance), and negatively related to inadequate strategies (i.e.,
309 rumination, catastrophizing). When we controlled for age, sex and neuroticism, the same results
310 were found, except in the case of refocus on planning and rumination.
311 Hedonic independence was significantly correlated with positive refocusing, refocus on
312 planning, and rumination. When age and sex were controlled for, similar results were found,
313 except in the case of rumination.
314 Finally, hedonic independence was significantly and negatively related to addictive
315 behaviors and to problematic eating behaviors (i.e., AIEQ). We found similar results when we
316 controlled for age and sex.
317 **Correlation with socio-demographic variables**
318 We combined the two samples (A and B) into a single data set in order to measure
319 correlations with the demographic variables. The results of a t-test showed a significant
320 difference between men and women on the even-minded state of mind. Women have a slightly

lower score (M = 2.81, SD = .75) than men (M = 3.28, SD = .68), t (262) = -4.93, p = .001, d = .63. We found no significant difference on the hedonic independence subscale.

A correlation analysis revealed a significant relation between the hedonic independence subscale and age (r = .29, p = .001), but no relation with age and even-minded state of mind. A t-test showed a significant difference, at the level of hedonic independence, between participants indicating that they had a religion (M = 3.98, SD = .55) and participants indicating that they did not (M = 3.82, SD = .64), t (262) = 2.05, p = .042, d = -.27. We found no correlation between profession and language with either the even-minded state of mind or the hedonic independence state.

Discussion

In this study, we aimed to validate a scale measuring equanimity in a population of non-meditators. Based on Buddhist and Western psychological theories, we proposed two related but distinct components of equanimity: (1) even-minded state of mind and (2) hedonic independence. As predicted, a two-factor model fitted well with the data. These two factors were positively correlated with each other but also shared a small amount of variance. This finding was confirmed by many distinct correlations with other measures as well as by a factor analysis. In addition, these two components of equanimity had adequate internal consistency.

The first component refers to equanimity as an even-minded state of mind, which means staying calm and feeling less stress, irrespective of the emotional evaluation of the situation or the stimuli. However, we found, first, that the even-minded state of mind shared a large amount of variance with neuroticism, which has been described as the opposite of emotional stability (e.g., Gosling, Rentfrow & Swann, 2003). However, we found a robust relationship between this component of equanimity and adaptive emotional regulation strategies. This result confirms that

equanimity is a quality involved in emotional regulation. We also found a robust relationship with nonreacting, which is a central component of mindfulness. This facet of mindfulness is defined as letting thoughts and feelings pass without getting caught up in them (Baer et al., 2008). Equanimity – as an observation of one's responses to emotional stimuli – will prevent useless and unhelpful reactions. As expected, we also found a significant relationship between the even-minded state of mind and the avoidance and fusion questionnaire. Indeed, a weaker fusion with one's thoughts and feelings has been found to be related to both greater mindfulness (Corman et al., 2018) and greater psychological flexibility (Hayes et al., 2006), thus suggesting that an even-minded state of mind could be a protective health factor.

We termed the second component "hedonic independence" because it refers to the absence of actions or reactions oriented by the hedonic valence of stimuli or situations. This component was also found to correlate significantly and negatively with the avoidance and fusion questionnaire. Thus, the decentering point of view seems to be strongly related to the concept of equanimity (Desbordes et al., 2015). The hedonic independence component was more significantly related to addictive measures than the even-minded state of mind was. Hedonic independence was also associated with a lower sensitivity to reward, which is a risk factor for addictions (Dissabandara et al., 2014; Eichen et al., 2016). As proposed by Buddhist theories, developing equanimity can be an efficient way of reducing general craving.

Limitations and future directions

Some limitations should also be acknowledged. This study was conducted with a population of non-meditato Thus, future research is needed to compare meditators with non-meditators in order to investigate the influence of meditation practice on equanimity. Moreover, the strong link between the even-minded state of mind subscale and neuroticism needs further explanations. It is

possible that this relationship comes from the dimension of emotional stability that is assessed by both the even-minded state of mind and neuroticism. If this is the case, this relationship should disappear when a scale that measures more directly emotional stability is statistically controlled. We will explore this hypothesis in future research. We also need to develop cognitive tools to assess the cognitively based processes of equanimity. Indeed, as defined in Buddhist theories, equanimity could moderate the cognitive evaluation of emotional stimuli by promoting a more neutral evaluation. It is also possible that it leads to a decoupling between the evaluation and the reaction to a stimulus. Nonetheless, the EQUA-S represents a useful tool for researchers who wish to study equanimity. We hope this new instrument will help to stimulate research in this promising area.

Conclusions

The objective of this study was to develop a scale specifically measuring the quality of equanimity. Tested on the general population, exploratory factor analyses confirmed two dimensions: an even-minded state of mind (EMSM) and a hedonic independence (HI) dimension. This scale have a good convergent validity and its components are related to health outcomes. We hope that this scale will be used for further validation studies and will allow the initiation of new studies on equanimity, a promising quality that could be developed through mindfulness practices.

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Table 1(on next page)

Sample characteristics

1

Characteristics	Sample	
	A	B
N	134	131
Age range (years)	18-73	18-70
Age mean (years)	35.1	34.5
Female (%)	60.4	72.3
Religious adherence (%)	45.6	45.5
Meditation practice (%)	17.9	10.8

2

Table 2(on next page)

List of scales and subscales from samples A and B

1

Scale	Subscale	Cronbach	Mean (SD)
	Sample A		
EQUA-S	Even-minded state of mind	.85	3.10 (.81)
	Hedonic Independence	.75	3.87 (.63)
BFI	Extraversion (E)	.82	3.15 (.84)
	Agreeableness (A)	.72	3.90 (.57)
	Concientiousness (C)	.78	3.59 (.72)
	Neuroticism (N)	.84	3.00 (.93)
	Openness (O)	.73	3.53 (.63)
HSC		.70	5.01 (.82)
FFMQ	Observing	.80	3.26 (.81)
	Describing	.89	3.11 (.90)
	Nonreacting	.77	3.00 (.72)
	Acting with awareness	.86	3.35 (.81)
	Nonjudging	.84	3.17 (.83)
TAS		.74	51.46 (11.90)
CERQ and ERQ	Self-blame	.77	2.49 (.89)
	Acceptance	.66	3.46 (.90)
	Rumination	.71	2.99 (.91)
	Positive refocusing	.83	2.93 (1.04)
	Positive reappraisal	.79	3.63 (.94)
	Refocus on planning	.78	3.53 (.89)
	Putting into perspective	.78	3.70 (.95)
	Catastrophizing	.76	2.03 (.96)
	Blaming others	.77	1.95 (.77)
	Suppression	.82	2.68 (.85)
AFS		.82	2.30 (.50)
SPSRQ	Punishment	.88	2.10 (.58)
	Reward	.83	2.16 (.60)
BIS-10	Motor	.76	20.64 (5.35)
	Cognitive	.37	25.23 (3.92)
	Non planning	.52	25.44 (4.48)
	Sample B		
EQUA-S	Even-minded state of mind	.73	2.85 (.67)
	Hedonic Independence	.73	3.88 (.62)
HSC		.67	5.13 (.73)
FFMQ	Observing	.76	3.15 (.78)
	Describing	.77	2.99 (.68)
	Nonreacting	.63	2.66 (.56)
	Acting with awareness	.86	3.33 (.79)
	Nonjudging	.86	3.01 (.85)
AIEQ		.90	

Frequency of addictive behaviours	N.A	50.38 (8.25)

2

Table 3(on next page)

Factor loadings (F), means (M), standard deviation (SD) and item-total correlations (IT) for the 14-item

1

Items	F1	F2	F3	M	SD	IT
Even-minded state of mind (E-MSM)						
1. Whatever happens I remain serene *Quoi qu'il arrive, je reste serein*	.72			2.90	1.08	0.17
2. I am not easily disturbed by something unexpected *Je ne suis pas facilement perturbé par un imprévu*	.55			2.88	1.13	0.22
3. I can't hardly tolerate uncomfortable emotions *J'ai du mal à tolérer les émotions inconfortables*	-.56		.42	3.11	1.11	0.34
4. I can easily get carried away by an annoyance *Je peux facilement me laisser emporter par une contrariété*	-.66			3.17	1.2	0.39
5. I feel that I am a calm person, even in moments of stress and tension *Je ressens que je suis une personne calme, même dans des moments de stress et tension*	.72		.35	2.99	1.25	0.12
6. Stress situations emotionally disturb me *Les situations de stress me perturbent émotionnellement.*	-.65	.37	.34	3.35	1.18	0.36
7. It's hard for me to be serene during the difficult moments of everyday life *Il est difficile pour moi d'être serein(e) pendant les moments difficiles de la vie quotidienne.*	-.66			3.20	1.12	0.37
8. I feel that the problems in my life are temporary and that they have solutions *Je ressens que les problèmes dans ma vie sont temporaires et qu'il existe des solutions.*	.59			3.78	1.03	0.21
Full sub-scale				3.18	1.30	
Hedonic Independence (HI)						
1. When I look forward to doing something pleasant, I can only think about it *Lorsque j'anticipe de faire quelque chose de plaisant, je ne pense qu'à ça.*	.71			3.84	.85	.56
2. When I anticipate a situation or something that I like, I get very excited *Lorsque j'anticipe quelque chose ou une situation que j'aime, je suis très excité(e).*	.66			3.88	.88	.51
3. When I desire an object, I feel a strong attraction to get it quickly *Lorsque je suis attiré par un objet qui me fait envie, je ressens une forte attraction pour l'obtenir rapidement*	.60			3.35	1.16	.45
4. I am very excited when I am given something pleasant (like a good surprise or a gift) or when something pleasant happens to me. *Je suis très excité(e) lorsqu'il m'arrive ou que l'on me donne quelque chose de plaisant (comme une bonne surprise ou un cadeau)*	.54		-.52	3.94	.90	.37
5. I often wish to prolong the moments when I feel a strong pleasure *Je souhaite souvent prolonger les moments où je ressens un fort plaisir*	.60			4.32	.86	.47
6. I can't stop doing something I like *J'ai du mal à m'arrêter lorsque je fais quelque chose que j'aime*	.55		.35	3.97	.92	.44

Full sub-scale	3.59	1.00

2

Table 4(on next page)

Correlations and partial correlations between Even-minded State of Mind, Hedonic Independence and various dependent variables

1

	Sample	E-MSM		HI	
		r	Partial *r*	*r*	Partial *r*
- *FFMQ*					
Observing	A & B	.016	.035	-.103	-.108
Describing	A & B	.096	.104	-.035	-.053
Acting with awareness	A & B	.223***	.193*	.210**	.179**
Nonjudging of inner experience	A & B	.296***	.279***	.136*	.090
Nonreacting to inner experience	A & B	.540***	.526***	.164**	.084
- *HSC*	A & B	-.416***	-.392***	-.23**	-.180**
- *TAS*	A	-.102	-.085	-.105	-.088
Identifying emotions	A	-.203*	-.181*	-.150	-.117
Describing emotions	A	-.028	-.038	.050	.056
Externally oriented thinking	A	.026	.050	-.126	-.133
- *AFS*	A	-.435***	-.405***	-.314***	-.264**
- *SPSRQ*					
Sensitivity to punishment	A	-.405***	-.375***	-.272**	-.221*
Sensitivity to reward	A	-.013	-.076	-.438***	-.443***
- *CERQ*					
Self-blame	A	-.143	-.124	-.116	-.092
Acceptance	A	.327***	.317***	.092	.035
Rumination	A	-.310***	-.277**	-.254**	-.211*
Positive refocusing	A	.151	.187	-.166	-.199*
Positive reappraisal	A	.287**	.313***	-.107	-.169
Refocus on planning	A	.276**	.330***	-.222*	-.288**
Putting into perspective	A	.339***	.351***	-.034	-.104
Catastrophizing	A	-.365***	-.345***	-.171*	-.114
Blaming others	A	-.136	-.122	-.095	-.072
- *ERQ Suppression*	A	.052	.065	-.064	-.075
- *BFI*					
E (Extraversion)	A	.016	.040	-.13	-.136
A (Agreeableness)	A	.127	.101	.156	.136
C (Concientiousness)	A	.117	.079	.225**	.208*
N (Neuroticism)	A	-.739***	-.730***	-.181*	-.070
O (Openness)	A	.061	.070	.044	-.056
- *AIEQ*	B	-.118	-.072	-.304***	-.299**
- *Frequency of addictive behaviors*	B	-.125	-.087	-.251**	-.243**
- *BIS-10*					
Motor	A	-.109	-.051	-.339***	-.327***
Attentional	A	-.185*	-.142	-.279**	-.254**
Non-planning	A	.267**	.260**	.066	.018

2

3 *Note*: *** $p < .001$, ** $p < .01$; * $p < .05$. Partial *r* provides correlations, with the other factor of equanimity
4 controlled for (i.e., E-MSM controlling for hedonic independence and HI controlling for E-MSM).