The role of mindfulness in coping with stress: A study of Canadians studying medicine in Saint Vincent and the Grenadines

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Abstract

Background: Mindfulness has been identified as a trait that is positively correlated to beneficial coping styles and lower levels of perceived stress. The practice of mindfulness may be useful for tackling the stressors of medical school and developing healthy coping strategies.

Methods: A sample of 34 Canadian medical students (the target demographic) attending Saint James School of Medicine (SJSM), Saint Vincent and the Grenadines (SVG) campus, were surveyed using the Perceived Stress Scale (PSS), Coping Style Questionnaire (CSQ), and the Mindfulness Attention Awareness Scale (MAAS). The goal was to determine any correlations between the assessments.

Results: It was determined that males are more likely to have higher levels of mindfulness than females, that females are more likely to have higher levels of perceived stress than males, that higher mindfulness scores are correlated to lower levels of perceived stress, and that non-native Canadian students are more likely to score higher on the Perceived Stress Scale than native born Canadian students.

Impact of research: The results of this study may be useful in developing tools to aid students struggling with the rigors of medical school and the match process if they choose to do their residency in Canada.

Introduction

Mindfulness has been identified in various studies as a trait that is positively correlated to beneficial coping styles/strategies and lower levels of perceived stress (Bishop, 2002; Carmody & Baer, 2008; Chiesa & Serretti, 2009). Post secondary education itself, along with the auxiliary changes to lifestyle and other factors are well understood to be stressful (Durand-Bush et al., 2015). Also, there is a breadth of literature pertaining to the various stressors experienced by medical students and many proposed strategies for how to best aid students in overcoming challenges and coping with the rigors of the curriculum (Sapiro et al., 1998; Schreier & Abramovitch, 1996).

The goal of this research is to determine in what way Canadians studying medicine at Saint James School of Medicine (hereinafter referred to as SJSM), in Saint Vincent and the Grenadines (hereinafter referred to as SVG), cope with stress and how these coping strategies vary depending on the practice of mindfulness. Although mindfulness is a relatively new topic of interest, a working definition of the term can be defined as “an awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p.145). Using this definition, we sought to assess and discuss the ways in which Canadian nationals

studying medicine at SJSM, SVG practice mindfulness and how this corresponds to experienced stress and coping strategies.

The research question used in this study of Canadian medical student attending SJSM, SVG is based upon a similar study performed by researchers Angèle Palmer and Susan Rodger, entitled: *Mindfulness, Stress, and Coping Among University Students* (2009). Using this previous study as a template, the goal was to address a niche topic which involves the utilization of literature pertaining to both the role of mindfulness in stress management, and the stress experienced by medical students, particularly those studying abroad.

Methods

Participants

With the consent of SJSM, 34 Canadian students attending SJSM, SVG were surveyed over a period of 8 weeks, from the start of August to the end of September 2018. The time frame spanned two semesters so to include both the outgoing MD5 class, as well as the incoming MD1 class. The students were from all semesters (MD1-MD5). The survey package included; a demographic questionnaire, the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), the Coping Style Questionnaire (Roger et al., 1993), the Mindfulness Attention Awareness Scale (Brown & Ryan, 2003). Out of the 34 surveys handed out, 33 were returned which was sufficient for the statistical analysis performed.

Only Canadians were assessed in this study for two main reasons. First, to reduce the number of confounding variables which may influence the results of our analysis. Second, having a focused study such as this one, may be helpful in advising groups that have an interest in accommodating Canadian medical students that have been educated abroad. Organizations such as The Canadian Residency Matching Service (CaRMS), have a specific publication geared to Canadian medical students that are studying medicine abroad (Banner et al., 2010), and could find a study such as this, useful regarding the advice they provide to international medical students who are trying to match in their home country of Canada.

Instruments

General demographic questionnaire (Appendix 1)

A one paged survey designed to solicit information regarding the participants age range, gender, marital status, ethnicity, country of origin and any previous experience with mindfulness. The information provided from the demographic questionnaire was used for correlation analysis.

Perceived Stress Scale (PSS)

The 14-item PSS (Cohen et al., 1983), (Appendix 2) was used to determine what level of stress the participants were currently experiencing. The scale used was comprised of five options to determine the frequency of various thoughts, feelings and processes experienced by the participant in the preceding month; 0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often. The tabulation of scores involved a reversal of the scores for positive questions (questions: 4, 5, 6, 7, 9, 10, 13), and summing across all fourteen items as described in the user key of the questionnaire. High scores are indicative of a high level of perceived control over one's life and, lower levels of current stress, while low scores are indicative

of low levels of perceived control and higher levels of current stress. The scores were tabulated to determine the average score for each participant.

Coping Style Questionnaire (CSQ)

The 43-item CSQ (Roger et al., 1993), (Appendix 3) was used to determine how the participants handle stress in their lives. The survey options were: always, often, sometimes, never. Points were attributed based on the answer given; Always = 4, often = 3, sometimes = 2, never =1. The scores were tabulated to determine the overall score for each participant and were used to compare to the other participants, so to access if any correlations existed.

Mindfulness Attention Awareness Scale (MAAS)

The 15-item MAAS scale (Brown & Ryan, 2003), (Appendix 4) was designed to assess the participants practice of mindfulness in their lives. The responses given for each of the 15 items were tallied to determine an overall score of mindfulness. The choices for each question ranged from 1 to 6, with 1 = almost always, 2 = very frequently, 3 = somewhat frequently, 4 = somewhat infrequently, 5 = very infrequently, 6 = almost never. A higher score indicates a higher level of mindfulness and a lower score indicates a lower level of mindfulness. Average scores were calculated for each participant.

Statistical Analysis

Statistical Package for the Social Sciences (SPSS) was used to perform statistical analysis. Pearson correlations were performed.

Results

Various questions were assessed via correlation analysis on an individual basis. The results for these minor findings can be found in the results appendix (Appendix 5). A concise tabulation of significant findings can be seen in table 1 below.

Table 1: Significant correlations present in the data set

Relationship	**Significance (p)**	**Pearson Correlation (r)**	**Strength of correlation**
Males have greater mindfulness	0.045	-0.351	Moderate
Females have higher perceived stress	0.035	0.374	Moderate
Participants with greater mindfulness have lower perceived stress	0.000	-0.601	Strong
Participants that are not native to Canada have higher perceived stress	0.042	0.362	Moderate

Table 2: Interpretation of correlation coefficient used in this study

Score	Strength of Correlation
0.00-0.30	Weak
>0.30-0.60	Moderate
>0.60	Strong

The results of this study show that there is a moderate negative correlation between gender and mindfulness (p=0.045, r= -0.351) with men having higher mindfulness scores than women. The reason for the correlation coefficient being negative is that gender was converted to a rank (1= male, 2 = female) for statistical analysis. The results are shown as they were calculated, but the correlation between mindfulness and being male is positive (0.351) (Figure 1).

The results indicate that there is a moderate positive correlation between being female and having higher levels of perceived stress (p=0.035, r=0.374) (Figure 2).

There is also a strong negative correlation between high mindfulness scores and levels of perceived stress (p=0.000, r=-0.601) indicating that those with high scores for mindfulness have low scores for perceived stress.

The final finding of significance is that being a Canadian that was not born in Canada is correlated to higher levels of perceived stress (p=0.042, r=0.362) (Figure 3).

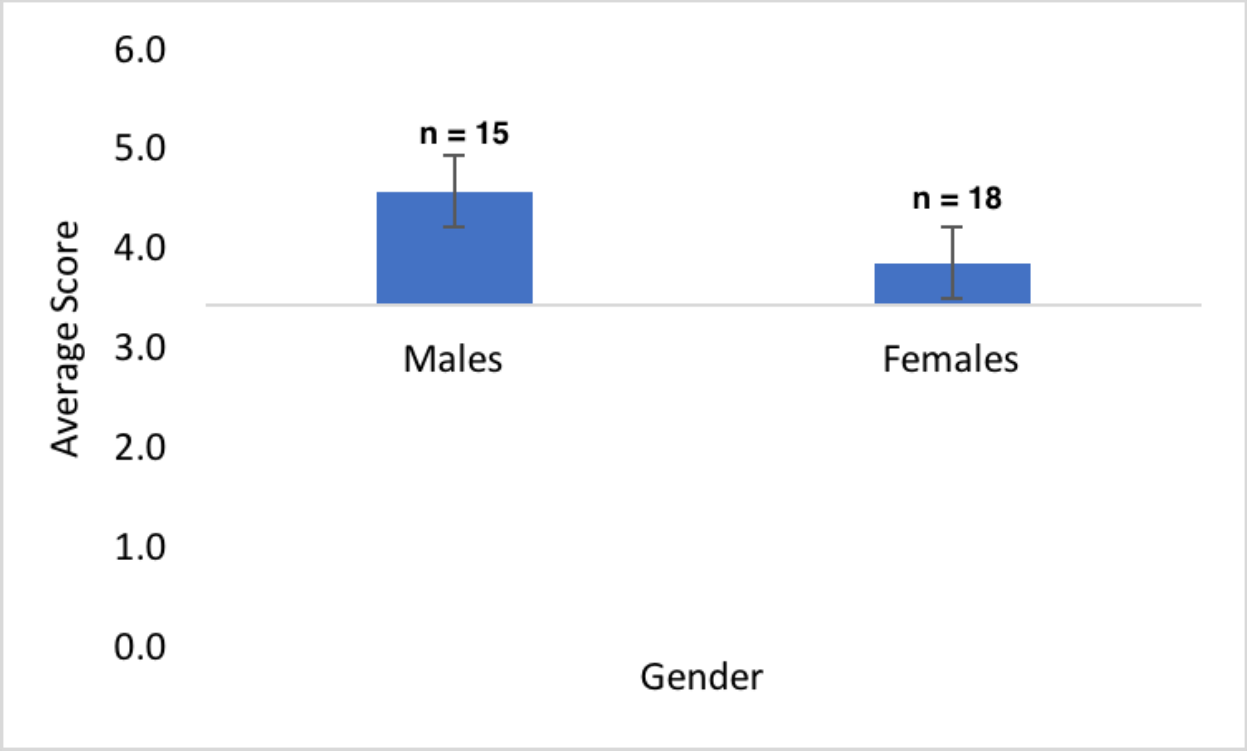

Figure 1: Average score by gender on the Mindfulness Attention Awareness Scale

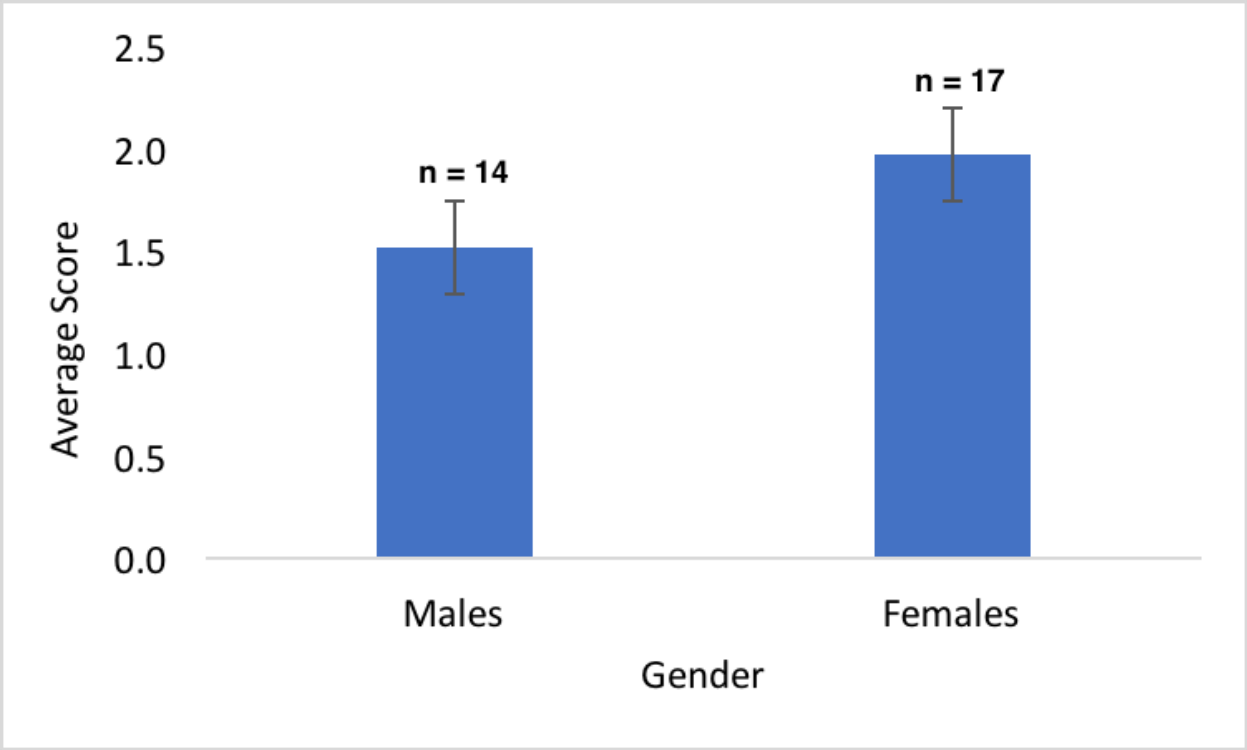

Figure 2: Average score by gender on the Perceived Stress Scale (PSS)

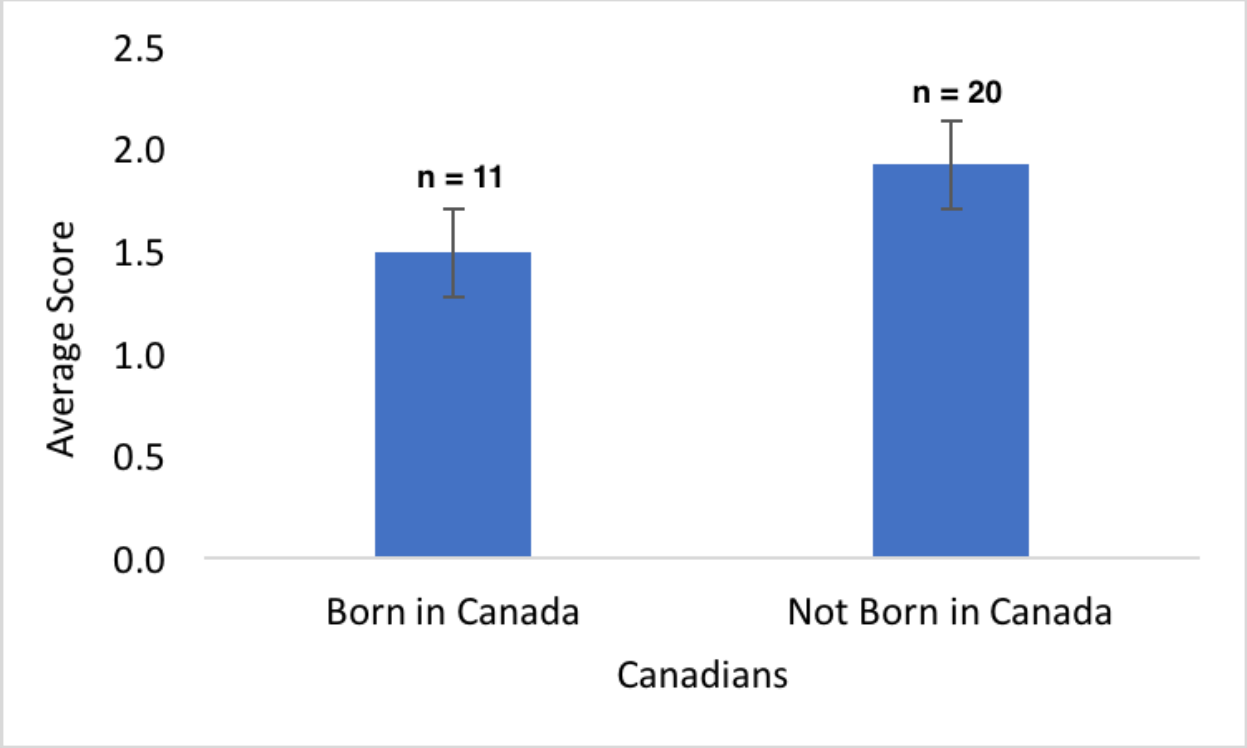

Figure 3: Average score by birthplace (born in Canada or outside of Canada) on the Perceived Stress Scale (PSS)

Discussion

Direct support in the literature pertaining to the higher mindfulness scores found in the male participants was not found. A cursory search of a related concept called emotional hardiness was done. The literature indicates that there is no significant difference between the levels of cognitive hardiness found in male and female mature students (Beasley et al. 2003). Furthermore, in a study assessing the relationship between hardiness, coping strategies and perceived stress, no gender differences were observed (Soderstrom et al. 2000).

The moderate correlation found between the female gender and higher levels of perceived stress is well supported in the literature assessed on the topic. A systematic review regarding the indicators of psychological distress in U.S. and Canadian medical students found that female medical students consistently report higher levels of perceived stress, anxiety and depressed mood than their male counterparts (Dyrbye et al., 2006). These findings are in line with trends found within the general population (Carmen et al., 2011), suggesting that females are more prone to anxiety and depression in general and that the stressors of medical school are not uniquely culpable for the results of this study.

The results indicate that there is a strong correlation between the practice of mindfulness and lower levels of perceived stress. These results are in concordance with what was found in previous research (Palmer & Roger 2009), indicating that there may be a causal link between living in an intentionally mindful way and lower levels of perceived stress (Brown & Ryan 2003). The correlation between mindfulness and perceived stress may also support the assertions of Palmer and Roger (2009) that low mindfulness may be a risk factor for higher levels of perceived stress.

Finally, using the demographics questionnaire it was determined that there is a moderate positive correlation between being a Canadian that was born elsewhere and higher levels of perceived stress. No other studies were found which addressed this concern, but literature does support the hypothesis that non-Native Canadian medical students may potentially carry an extra stress burden beyond that of their fellow native born Canadian classmates (Mehta et al., 2011). This stress burden may present as a lack of social and financial support, lower academic satisfaction and a lower propensity to use active coping strategies during stressful times (Mehta et al., 2011). Though clearly not a homogenous group, the literature suggests that first-generation students may not be as well equipped for post-secondary education, potentially due to the increased likelihood that they are the first in their family to go to university. As such, their parents may not be able to guide them or help educate them on what to expect from the university experience or help them with academic challenges (Dennis et al., 2005). Another potential concern is the emphasis on familial interdependence which is a common feature in some cultural backgrounds. This can burden already academically stressed students as they are expected to succeed academically as well as fulfill family obligations (Dennis et al., 2005).

Strengths of the study

The strengths of this research are its niche applicability to the experiences of Canadian medical students studying abroad in the Caribbean. No other research was found that was specific to this group. The results of this study can be used for comparison purposes, and to make the body of literature on the subject more robust. The questionnaires used in this study are the same as those used by Palmer and Roger (2009). As such, this study can be easily compared to past studies as well as any future research on the topic of mindfulness and coping styles that utilize the same standardized questionnaires.

Limitations of the study

Due to the small number of Canadian students available to participate, the power of the statistical analysis used was lower compared to what could be achieved with a larger sample size. In retrospect, we could have extended the survey to our sister campus in Anguilla to increase our sample size. The logistics of handing out paper copies to each student in person could have been overcome by using an online survey system. Doing so would have also prompted students to completely fill out the questionnaire, which would have prevented some surveys from being unusable in the compiled data due to missing data points.

Future research recommendations

As stated above, a larger sample size would be beneficial. This could be achieved by including students from other medical schools in the Caribbean. Another issue that arose in the data collection phase of this study is that having a common working definition for the term mindfulness would have been useful in reducing confusion about the meaning of the word and what the questionnaires were trying to assess. Future researchers should consider adding a descriptive preamble to their questionnaire booklet to avoid any misunderstandings.

Another technique that may provide more nuanced results would be to track cohorts over time to see how their mindfulness results change/remain the same over time. This could be useful to highlight the adjustments that are made over the course of their medical education.

Use of this study

Females and non-Native Canadians (those not born in Canada) exhibited higher levels of perceived stress. Knowing this could be used at an administrative level to highlight to students and staff the importance of mental wellbeing and the importance of seeking counselling if desired.

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Appendix 1

Demographic Survey of Canadian Students at SJSM

1. What is your age group?
   □ 20 and under □ 21-30 □ 31-40 □ 41-50 □ 51-60 □ Over 60

2. What is your gender? □ Male □ Female

3. What is your marital status? □ Single □ In a relationship □ Married □ Widowed
   □ Divorced

4. What is your ethnicity? □ White □ South Asian □ Chinese □ Black □ Filipino
   □ Latin American □ Arab □ Southeast Asian □ West Asian (Iranian, Afghan, etc.)
   □ Korean □ Japanese □ First Nation
   □ Other – please specify _____

5. Born in Canada □ Yes □ No

6. Previous experience with mindfulness? □ Yes □ No

The Perceived Stress Scale (14 items) - Cohen et al, 1983

Recommended by The NIH Centers for Population Health and Health Disparities (CPHHD)-Measures and Methods Work Group (MMWG)
CPHHD Taxonomy- Health and Mental Health [Well-being]-stress & hypervigilance-Perceived Stress

Also recommended by MacArthur Foundation (see http://www.macses.ucsf.edu/research/psychosocial/stress.php#perceived)

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control important things in your life?
3. In the last month, how often have you felt nervous and "stressed"?
4. In the last month, how often have you dealt successfully with irritating life hassles?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things that you had to do?
9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
13. In the last month, how often have you been able to control the way you spend your time?
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

    [0=never; 1=almost never; 2=sometimes; 3=fairly often; 4=very often]

    Note: Items 4, 5, 6, 7, 9, 10, and 13 are scored in reverse direction.

COPING STYLES QUESTIONNAIRE (CSQ)

Instructions: although people may react in different ways to different situations, we all tend to have a characteristic way of dealing with things which upset us. How would you describe the way you typically react to stress? Circle Always (A), Often (O), Sometimes (S), or Never (N) for **each** item below:

1.	Feel overpowered and at the mercy of the situation.	A	O	S	N
2.	Work out a plan for dealing with what has happened.	A	O	S	N
3.	See the situation for what it actually is and nothing more.	A	O	S	N
4.	See the problem as something separate from myself so I can deal with it.	A	O	S	N
5.	Become miserable or depressed.	A	O	S	N
6.	Feel that no-one understands.	A	O	S	N
7.	Stop doing hobbies or interests.	A	O	S	N
8.	Do not see the problem or situation as a threat.	A	O	S	N
9.	Try to find the positive side to the situation.	A	O	S	N
10.	Become lonely or isolated.	A	O	S	N
11.	Daydream about times in the past when things were better.	A	O	S	N
12.	Take action to change things.	A	O	S	N
13.	Have presence of mind when dealing with the problem or circumstances.	A	O	S	N
14.	Avoid family or friends in general.	A	O	S	N
15.	Feel helpless – there's nothing you can do about it.	A	O	S	N
16.	Try to find out more information to help make a decision about things.	A	O	S	N
17.	Keep things to myself and not let others know how bad things are for me.	A	O	S	N
18.	Think about how someone I respect would handle the situation and try to do the same.	A	O	S	N
19.	Feel independent of the circumstances.	A	O	S	N
20.	Sit tight and hope it all goes away.	A	O	S	N
21.	Take my frustrations out on the people closest to me.	A	O	S	N
22.	'Distance' myself so I don't have to make any decision about the situation.	A	O	S	N
23.	Resolve the issue by not becoming identified with it.	A	O	S	N
24.	Assess myself or the problem without getting emotional.	A	O	S	N
25.	Cry, or feel like crying.	A	O	S	N
26.	Try to see things from the other person's point of view.	A	O	S	N
27.	Respond neutrally to the problem.	A	O	S	N
28.	Pretend there's nothing the matter, even if people ask what's bothering me.	A	O	S	N
29.	Get things into proportion – nothing is really that important.	A	O	S	N
30.	Keep reminding myself about the good things about myself.	A	O	S	N
31.	Feel that time will sort things out.	A	O	S	N
32.	Feel completely clear-headed about the whole thing.	A	O	S	N
33.	Try to keep a sense of humour – laugh at myself or the situation.	A	O	S	N
34.	Keep thinking it over in the hope that it will go away.	A	O	S	N
35.	Believe that I can cope with most things with the minimum of fuss.	A	O	S	N
36.	Try not to let my heart rule my head.	A	O	S	N
37.	Eat more (or less) than usual.	A	O	S	N
38.	Daydream about things getting better in future.	A	O	S	N
39.	Try to find a logical way of explaining the problem.	A	O	S	N
40.	Decide it's useless to get upset and just get on with things.	A	O	S	N
41.	Feel worthless and unimportant.	A	O	S	N
42.	Trust in fate – that things have a way of working out for the best.	A	O	S	N
43.	Use my past experience to try deal with the situation.	A	O	S	N

Day-to-Day Experiences

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what *really reflects* your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1	2	3	4	5	6
Almost Always	Very Frequently	Somewhat Frequently	Somewhat Infrequently	Very Infrequently	Almost Never

I could be experiencing some emotion and not be conscious of it until some time later.	1	2	3	4	5	6
I break or spill things because of carelessness, not paying attention, or thinking of something else.	1	2	3	4	5	6
I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5	6
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	1	2	3	4	5	6
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	1	2	3	4	5	6
I forget a person's name almost as soon as I've been told it for the first time.	1	2	3	4	5	6
It seems I am "running on automatic," without much awareness of what I'm doing.	1	2	3	4	5	6
I rush through activities without being really attentive to them.	1	2	3	4	5	6
I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.	1	2	3	4	5	6
I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5	6
I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5	6

1 Almost Always	2 Very Frequently	3 Somewhat Frequently	4 Somewhat Infrequently	5 Very Infrequently	6 Almost Never

I drive places on 'automatic pilot' and then wonder why I went there.	1	2	3	4	5	6
I find myself preoccupied with the future or the past.	1	2	3	4	5	6
I find myself doing things without paying attention.	1	2	3	4	5	6
I snack without being aware that I'm eating.	1	2	3	4	5	6

MAAS Scoring

To score the scale, simply compute a mean of the 15 items. Higher scores reflect higher levels of dispositional mindfulness.

Correlations

		Age	Gender	Marital Status	Ethnicity
Age	Pearson Correlation	1	-.302	.328	-.039
	Sig. (2-tailed)		.087	.062	.830
	N	33	33	33	33
Gender	Pearson Correlation	-.302	1	.015	-.239
	Sig. (2-tailed)	.087		.934	.180
	N	33	33	33	33
Marital Status	Pearson Correlation	.328	.015	1	.200
	Sig. (2-tailed)	.062	.934		.264
	N	33	33	33	33
Ethnicity	Pearson Correlation	-.039	-.239	.200	1
	Sig. (2-tailed)	.830	.180	.264	
	N	33	33	33	33
Born	Pearson Correlation	-.100	.011	.258	.205
	Sig. (2-tailed)	.579	.950	.147	.251
	N	33	33	33	33
Mindfulness Q1	Pearson Correlation	.002	-.201	-.218	-.065
	Sig. (2-tailed)	.989	.261	.223	.719
	N	33	33	33	33
Mindfulness Average Score/Participant	Pearson Correlation	.284	-.351*	-.192	.064
	Sig. (2-tailed)	.110	.045	.284	.725
	N	33	33	33	33
Coping Styles Average/Score	Pearson Correlation	-.149	.139	-.076	.064
	Sig. (2-tailed)	.407	.439	.673	.723
	N	33	33	33	33
Perceived Stress Scale Average/Participant	Pearson Correlation	-.194	.374*	.177	.255
	Sig. (2-tailed)	.287	.035	.333	.158
	N	32	32	32	32

Correlations

		Born	Mindfulness Q1	Mindfulness Average Score/Participant
Age	Pearson Correlation	-.100	.002	.284
	Sig. (2-tailed)	.579	.989	.110
	N	33	33	33
Gender	Pearson Correlation	.011	-.201	-.351
	Sig. (2-tailed)	.950	.261	.045
	N	33	33	33
Marital Status	Pearson Correlation	.258	-.218	-.192

	Sig. (2-tailed)	.147	.223	.284
	N	33	33	33
	Pearson Correlation	.205	-.065	.064
Ethnicity	Sig. (2-tailed)	.251	.719	.725
	N	33	33	33
	Pearson Correlation	1	-.061	.028
Born	Sig. (2-tailed)		.737	.876
	N	33	33	33
	Pearson Correlation	-.061	1	.082
Mindfulness Q1	Sig. (2-tailed)	.737		.651
	N	33	33	33
	Pearson Correlation	.028	.082*	1
Mindfulness Average Score/Participant	Sig. (2-tailed)	.876	.651	
	N	33	33	33
	Pearson Correlation	.096	-.009	-.402
Coping Styles Average/Score	Sig. (2-tailed)	.595	.960	.020
	N	33	33	33
	Pearson Correlation	.362	-.122*	-.601
Perceived Stress Scale Average/Participant	Sig. (2-tailed)	.042	.508	.000
	N	32	32	32

Correlations

		Coping Styles Average/Score	Perceived Stress Scale Average/Participant
	Pearson Correlation	-.149	-.194
Age	Sig. (2-tailed)	.407	.287
	N	33	32
	Pearson Correlation	.139	.374
Gender	Sig. (2-tailed)	.439	.035
	N	33	32
	Pearson Correlation	-.076	.177
Marital Status	Sig. (2-tailed)	.673	.333
	N	33	32
	Pearson Correlation	.064	.255
Ethnicity	Sig. (2-tailed)	.723	.158
	N	33	32
	Pearson Correlation	.096	.362
Born	Sig. (2-tailed)	.595	.042
	N	33	32
	Pearson Correlation	-.009	-.122
Mindfulness Q1	Sig. (2-tailed)	.960	.508
	N	33	32

Mindfulness Average Score/Participant	Pearson Correlation	-.402	-.601*
	Sig. (2-tailed)	.020	.000
	N	33	32
Coping Styles Average/Score	Pearson Correlation	1	.127
	Sig. (2-tailed)		.488
	N	33	32
Perceived Stress Scale Average/Participant	Pearson Correlation	.127	1*
	Sig. (2-tailed)	.488	
	N	32	32

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

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Correlations

			Age	Gender
Spearman's rho	Age	Correlation Coefficient	1.000	-.346*
		Sig. (2-tailed)	.	.049
		N	33	33
	Gender	Correlation Coefficient	-.346*	1.000
		Sig. (2-tailed)	.049	.
		N	33	33
	Marital Status	Correlation Coefficient	.445**	.004
		Sig. (2-tailed)	.009	.984
		N	33	33
	Ethnicity	Correlation Coefficient	.114	-.196
		Sig. (2-tailed)	.527	.273
		N	33	33
	Born	Correlation Coefficient	.026	.011
		Sig. (2-tailed)	.885	.950
		N	33	33
	Mindfulness Q1	Correlation Coefficient	.142	-.201
		Sig. (2-tailed)	.431	.261
		N	33	33
	Mindfulness Average Score/Participant	Correlation Coefficient	.182	-.391*
		Sig. (2-tailed)	.311	.025
		N	33	33
	Coping Styles Average/Score	Correlation Coefficient	-.182	.125
		Sig. (2-tailed)	.312	.489

	Perceived Stress Scale Average/Participant	N	33	33
		Correlation Coefficient	-.051	.380*
		Sig. (2-tailed)	.782	.032
		N	32	32

Correlations

			Marital Status	Ethnicity
Spearman's rho	Age	Correlation Coefficient	.445	.114*
		Sig. (2-tailed)	.009	.527
		N	33	33
	Gender	Correlation Coefficient	.004*	-.196
		Sig. (2-tailed)	.984	.273
		N	33	33
	Marital Status	Correlation Coefficient	1.000**	.193
		Sig. (2-tailed)	.	.282
		N	33	33
	Ethnicity	Correlation Coefficient	.193	1.000
		Sig. (2-tailed)	.282	.
		N	33	33
	Born	Correlation Coefficient	.269	.233
		Sig. (2-tailed)	.130	.191
		N	33	33
	Mindfulness Q1	Correlation Coefficient	-.266	.000
		Sig. (2-tailed)	.135	1.000
		N	33	33
	Mindfulness Average Score/Participant	Correlation Coefficient	-.231	.013*
		Sig. (2-tailed)	.197	.943
		N	33	33
	Coping Styles Average/Score	Correlation Coefficient	-.034	.083
		Sig. (2-tailed)	.852	.644
		N	33	33
	Perceived Stress Scale Average/Participant	Correlation Coefficient	.142	.275*
		Sig. (2-tailed)	.440	.127
		N	32	32

Correlations

			Born	Mindfulness Q1
Spearman's rho	Age	Correlation Coefficient	.026	.142*
		Sig. (2-tailed)	.885	.431

		N	33	33
		Correlation Coefficient	.011*	-.201
	Gender	Sig. (2-tailed)	.950	.261
		N	33	33
		Correlation Coefficient	.269**	-.266
	Marital Status	Sig. (2-tailed)	.130	.135
		N	33	33
		Correlation Coefficient	.233	.000
	Ethnicity	Sig. (2-tailed)	.191	1.000
		N	33	33
		Correlation Coefficient	1.000	-.061
	Born	Sig. (2-tailed)	.	.737
		N	33	33
		Correlation Coefficient	-.061	1.000
	Mindfulness Q1	Sig. (2-tailed)	.737	.
		N	33	33
		Correlation Coefficient	-.075	.119*
	Mindfulness Average Score/Participant	Sig. (2-tailed)	.678	.508
		N	33	33
		Correlation Coefficient	.121	-.052
	Coping Styles Average/Score	Sig. (2-tailed)	.504	.776
		N	33	33
		Correlation Coefficient	.336	-.075*
	Perceived Stress Scale Average/Participant	Sig. (2-tailed)	.060	.683
		N	32	32

Correlations

			Mindfulness Average Score/Participant
		Correlation Coefficient	.182
	Age	Sig. (2-tailed)	.311
		N	33
		Correlation Coefficient	-.391*
Spearman's rho	Gender	Sig. (2-tailed)	.025
		N	33
		Correlation Coefficient	-.231**
	Marital Status	Sig. (2-tailed)	.197
		N	33

	Ethnicity	Correlation Coefficient	.013
		Sig. (2-tailed)	.943
		N	33
	Born	Correlation Coefficient	-.075
		Sig. (2-tailed)	.678
		N	33
	Mindfulness Q1	Correlation Coefficient	.119
		Sig. (2-tailed)	.508
		N	33
	Mindfulness Average Score/Participant	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	33
	Coping Styles Average/Score	Correlation Coefficient	-.329
		Sig. (2-tailed)	.062
		N	33
	Perceived Stress Scale Average/Participant	Correlation Coefficient	-.704
		Sig. (2-tailed)	.000
		N	32

Correlations

			Coping Styles Average/Score
Spearman's rho	Age	Correlation Coefficient	-.182
		Sig. (2-tailed)	.312
		N	33
	Gender	Correlation Coefficient	.125*
		Sig. (2-tailed)	.489
		N	33
	Marital Status	Correlation Coefficient	-.034**
		Sig. (2-tailed)	.852
		N	33
	Ethnicity	Correlation Coefficient	.083
		Sig. (2-tailed)	.644
		N	33
	Born	Correlation Coefficient	.121
		Sig. (2-tailed)	.504
		N	33
	Mindfulness Q1	Correlation Coefficient	-.052
		Sig. (2-tailed)	.776

	Mindfulness Average Score/Participant	N	33
		Correlation Coefficient	-.329
		Sig. (2-tailed)	.062
		N	33
	Coping Styles Average/Score	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	33
	Perceived Stress Scale Average/Participant	Correlation Coefficient	.134
		Sig. (2-tailed)	.464
		N	32

Correlations

			Perceived Stress Scale Average/Participant
Spearman's rho	Age	Correlation Coefficient	-.051
		Sig. (2-tailed)	.782
		N	32
	Gender	Correlation Coefficient	.380*
		Sig. (2-tailed)	.032
		N	32
	Marital Status	Correlation Coefficient	.142**
		Sig. (2-tailed)	.440
		N	32
	Ethnicity	Correlation Coefficient	.275
		Sig. (2-tailed)	.127
		N	32
	Born	Correlation Coefficient	.336
		Sig. (2-tailed)	.060
		N	32
	Mindfulness Q1	Correlation Coefficient	-.075
		Sig. (2-tailed)	.683
		N	32
	Mindfulness Average Score/Participant	Correlation Coefficient	-.704
		Sig. (2-tailed)	.000
		N	32
	Coping Styles Average/Score	Correlation Coefficient	.134
		Sig. (2-tailed)	.464

	Perceived Stress Scale Average/Participant	N	32
		Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	32

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).