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**TORONTO**

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**Putting Your Mind at Ease:  
Findings from the Mindfulness Ambassador Council in Toronto Area Schools**

**EVALUATION REPORT**

**January 2013**

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**EXECUTIVE SUMMARY**

Emerging evidence indicates that the regular practice of mindfulness has numerous psychological, therapeutic and health benefits. Mindfulness training has recently expanded to the field of education in recognition that contemplative knowing is a missing albeit important link affecting student performance and character. This mixed methods study examined the impact of a mindfulness curriculum, the Mindfulness Ambassador Council (MAC) program, on students in grades 11 and 12 from the Toronto Catholic District School Board. The quantitative evaluation involved pre- and post-questionnaires of standardized scales: the Five Facet Mindfulness Questionnaire; the Academic Motivation Scale – High School Version; the Positive Youth Development student questionnaire; the Trait Meta-Mood Scale; and the Revised Child Anxiety and Depression Scale; and a program evaluation survey. The research questions posed were: (1) what skill sets are cultivated and acquired by participants through their participation in the program?; (2) how do participants apply the lessons of the program in their daily lives?; (3) does the program develop participants’ competencies in emotional awareness, listening and communication skills, self-awareness and social-awareness?; (4) does the program reduce stress levels, and if so, to what degree?; (5) does the program improve overall well-being, and if so, to what degree?; (6) are there significant improvements in participants’ empathy, perspective-taking, emotional control, and self-management?; and (7) does the program improve cognitive control and stress regulation?. The qualitative components employed a thematic analysis using data from focus groups with teachers and students participating in the MAC. The research questions for the qualitative component explored participants’ views of the MAC, the benefits and limitations of the program, and their experiences participating in the Council.

A sample of 80, predominantly female, students from grades 11 and 12 was garnered for the quantitative analysis. The program evaluation survey revealed that the top three MAC lessons participants indicated they were most likely to continue using in the future were: mindful listening, relationship skills and responsible decision-making. Lessons anticipated to be employed, although less frequently, included TUZA/mindful breathing, the body scan and mindful eating. At the end of the MAC program, just over half of the student sample indicated that they practice TUZA/mindful breathing twice daily as recommended. Within this majority however, only a small proportion of students responded that they ‘always’ practice it; many use it ‘most of the time’ and most students ‘sometimes use it’. Female

students indicated that they would continue to use it more often in the future than males. The areas in which participants reported they were currently employing the skills learned in the program include: to cope with challenges, to work with others, to improve their relationships with others, to manage stress or anxiety, and to be calm and relaxed. Females reported that they apply MAC skills to cope with sadness more often than their male counterparts. In terms of student learning, participants felt that they learned ‘a lot’ or ‘a great deal’ during the MAC program. Most participants indicated that at the conclusion of the program they were currently applying what they learned about mindfulness into their daily lives and almost three-quarters of the participants found the MAC program to be highly valuable.

All of the standardized scales employed, apart from the Academic Motivation Scale – High School Version, found statistically significant differences in students before and after MAC participation. The Five-Facet Mindfulness Questionnaire indicated improved scores for all five mindfulness facets, but achieved statistical significance in students’ observing skills (Baer et al., 2006). Statistically significant differences were also found on the Positive Youth Development Questionnaire in the areas of character and confidence (Lerner et al., 2008a), and the Trait Meta-Mood Scale showed statistically significant improvement in students’ emotional clarity in attention to feelings and clarity in discrimination of feelings (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Finally, the Revised Child Anxiety and Depression Scale revealed statistically significant differences in social phobia and generalized anxiety scores post MAC compared to baseline. Although not statistically significant, all other anxiety and depression disorders had declining trends. Clearly, MAC participation brought about positive experiences for many participants.

The focus group with teachers raised a number of important themes and areas in which the MAC program effectively promoted the personal growth and learning of participants. After participating in the MAC, a number of teachers discussed improvements in relation to: relationship building; communication skills (particularly in relation to actively listening to others); self-awareness; ability to achieve calmness and relaxation; stress reduction; and ability to cope in challenging situations. Similar themes emerged in the focus groups with students. Some students deemed the skills developed through the MAC program were effective tools in increasing relaxation and in stress reduction, in developing greater cohesion and connectedness among members, in cultivating self-regulation to identify and regulate emotions, and in augmenting social awareness and understanding of others. Communication and relationship skills learned in the MAC were described as relevant and applicable to students’ daily

lives. The program also had an impact on some students' learning or provided opportunities for self-discovery.

In terms of aspects of the program participants liked or favoured, responses from both teachers and students revealed that the circular format of the group was helpful. This arrangement was deemed to be inviting, promoting a sense of equality and unity among Council members. The use of the talking piece was seen to encourage respect and attention to the speaker, and as helping to focus the discussion. A number of teachers expressed that the facilitators were "top notch" and were well versed in the area of mindfulness practice. Descriptors of the facilitators included: authentic, trustworthy, energetic, roles models, built strong rapport and helped to create a safe space for discussion, in a non-judgmental and comfortable environment. The importance of practicing mindful listening particularly resonated with students, and helped to develop greater cohesion among classmates. Feedback from teachers indicated that the program was appropriate for students' social and emotional learning, and as providing important take-away tools and life skills for young adults. Students noted the MAC's use of creative and artistic media as beneficial to their learning, as well as the "active" components of the program that engaged them and offered something different from the traditional educational format. While a number of students noted how the community service projects could be more effective, some expressed that in engaging in this project they learned that their actions, no matter how small, are able to make a positive difference.

There were however uncomfortable experiences and areas for improvement of the MAC program. Some participants felt uncomfortable or pressured to share with the larger group. For others, the silence fostered in the Council was awkward. Some provided suggestions on how to better deliver the program to avoid being put on the spot to relate personal information (e.g., smaller group format). There was also some discussion about the need for more age appropriate interaction between some facilitators and the students. While a few students felt the MAC could be "more interesting", others enjoyed the creative aspects of the program, which could potentially be further developed. Some participants noted how poor or sporadic attendance adversely affected the group dynamic; not everyone in the group was invested, which was seen as affecting the level of connectivity created among members. At times, there was a lack of continuity or flow; some sessions were delayed and then were packed altogether at the end of the program. Some felt that there was not enough reflection time built into the program. The introduction of greater diversity of topics was discussed as a means to offset potential redundancy in the program.

Some suggested offering the MAC in a different format, perhaps shorter but more sessions. Other suggestions included restricting the program to students genuinely interested in participating, as a means to potentially enhance the dynamic. The use of the “pair and share” technique was suggested as a tool to allow more time for students to adequately reflect upon their experiences before sharing their thoughts with the group. Better use of journals and/or blogging was recommended as a way to foster built-in time and modeling of these activities within a MAC session. Greater use of small group discussions was also seen to be important to incorporate as participants thought it might be particularly beneficial for those who are uncomfortable speaking to the wider group. A thorough explanation of MAC objectives, expectations and activities at the start of the program was mentioned as a strategy that could be helpful. Moreover, feedback from students indicated that there was a lack of clarity pertaining to the community service project. Students were not held accountable for this component and were thus not motivated and/or engaged to participate. Conducting a group project with the assistance of the facilitators might help to increase the level of engagement in this aspect of the program.

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**BACKGROUND**

There is a growing body of evidence that the regular practice of mindful awareness, or contemplative practice, has myriad psychological, therapeutic and health benefits. The practice has also been shown to improve performance in a host of activities, including advanced professional achievement. Studies on mindfulness training suggest that mindfulness, in conjunction with pharmacotherapy, may generate prophylactic effects on recurrence of major depression (Teasdale, Segal & Williams, 1995; Teasdale et al., 2000), may prove effective as a coping strategy for dealing with chronic pain (Kabat-Zinn, 1982), may be used in the treatment of generalized anxiety disorder and panic (Kabat-Zinn et al., 1992) and is useful for stress reduction and relaxation (Kabat-Zinn, 1990). The practice may also have far reaching effects on bolstering the body's immune system and on levels of happiness (Riskin, 2004). Moreover, the exercise of mindfulness has been adopted to develop self-understanding (helping to clarify one's own motivations and goals), understanding of others and feelings of empathy and compassion (Riskin, 2004); key competencies that contribute to emotional intelligence (Goleman, 1995).

More recently, contemplative practice has spread to the field of education, recognizing that contemplative knowing is a missing albeit important link affecting student performance and character (Hart, 2004). Indeed, a burgeoning movement is promoting inner well-being and social-emotional learning through contemplative practice among children and youth (Duerr, Zajonc, & Dana, 2003; Greenberg & Harris, 2011; Holland, 2004; Jennings, 2008). This emphasis is particularly important as mental health issues are on the rise in the lives of children and youth (Canadian Mental Health Association, 2012), a possible reflection of the intensity and growing number of socio-cultural, familial and peer-related psychosocial stressors young people face in a rapidly changing social environment (Broderick & Metz, 2009; Meiklejohn et al., 2012). Schools today are increasingly called upon to assist students with a wide range of emotional and social problems; issues that weigh heavily on their academic performance and motivation (Broderick & Metz, 2009). The classroom is thus an opportune setting in which to provide interventions that promote healthy psychological functioning, interpersonal development and positive behaviours among young people (Broderick & Metz, 2009; Meiklejohn et al., 2012). Moreover, providing instruction to augment students' socio-emotional learning through

contemplative practice aligns with the goals of improved communication, interpersonal relations, conflict management and approaches to well-being outlined in secondary school curricula (Government of Ontario, 2006).

The Mindfulness Ambassador Council (MAC or “the Council”) program offers high school students the opportunity to meet and learn about mindfulness and mindful communication as tools for constructively addressing personal, social and community challenges. The program consists of twelve themed-based lessons that cultivate mindfulness and its application to social, emotional and leadership skills development; skills that will enable youth to interact positively in a complex and interdependent world. In the program, Council participants, or members, are equipped with tools to strengthen their ability to be mindful, to think critically, and to act in thoughtful and compassionate ways. Participants are encouraged to ask questions to discover their fullest potential and explore possibilities that lead to a culture of mutual respect, support and ethical concern for each other and the world.

Although the Council does not explicitly teach values, it exposes students to a mindfulness-based group process through which values are developed. Students acquire mindfulness-based skills that help them note and manage emotions, appreciate multiple perspectives, develop relational trust and practice kindness. One of the primary goals of the MAC is to encourage youth to see themselves as vital contributors to personal and social change. Accordingly, the program engages youth in service-learning projects aimed at improving some aspect of their community. The Council encourages youth to see the world as a global community, in which they can take initiative and be responsible, in even a small way, for the state of their world. Through developing and implementing a 15-hour volunteer project, MAC members put into action the mindfulness skills, values and beliefs that have been developed in the Council (Mindfulness Without Borders, 2011).

The MAC program is not limited for use with a particular population or geographic location. To date, the program has been delivered to youth in schools in Rwanda, Nigeria, Canada (Toronto) and in the United States (San Francisco). The MAC program was developed by Mindfulness Without Borders, a non-profit organization whose purpose is: (1) “To seed conversations that inspire individuals to build the inner resources they need to counter the trend of growing stress and violence; (2) To equip youth, educators and professionals with life and leadership skills to address the challenges that affect them—social, economic and environmental” (Mindfulness Without Borders, 2011). While particularly

interested in promoting social and emotional learning to youth, Mindfulness Without Borders has offered training on mindfulness in the workplace, to healthcare providers, teachers and educators, and professionals in the corporate environment. According to the Rwanda Education NGO Coordination Platform website (2010), “Mindfulness Without Borders has worked with over 1300 educators and 800 students across Rwanda, Nigeria, Toronto and San Francisco Bay Area.”

The purpose of this study was to examine the MAC program offered within a secondary school environment. In this endeavour, MAC processes were explored (i.e., group dialogue, deep listening, developing relational trust) in order to better understand their effects on student social-emotional learning and academic motivation. Given the relative paucity of studies evaluating mindfulness within school-based settings, the aim of the study is to make a significant contribution to build the evidence base on contemplative practice.

## **METHODS**

To evaluate the MAC program a mixed-method design was adopted using qualitative data gathered from focus groups, quantitative data from pre- and post- questionnaires of standardized scales, and a program evaluation survey. The research questions in the quantitative analysis were as follows: (1) what skill sets are cultivated and acquired by participants through their participation in the program?; (2) how do participants apply the lessons of the program in their daily lives (i.e., does the program foster the adoption of a regular mindfulness practice)?; (3) does the program develop participants’ competencies in emotional awareness, listening and communication skills, self-awareness and social-awareness?; (4) does the program reduce stress levels, and if so, to what degree?; (5) does the program improve overall well-being, and if so, to what degree?; (6) are there significant improvements in participants’ empathy, perspective-taking, emotional control and self-management?; and (7) does the program improve cognitive control and stress regulation? The research questions for the qualitative study explored participants’ views about the MAC, the benefits and limitations of the program, and their experiences participating in the Council.

Study participants included teachers and students in grades 11 and 12 from five classes in four Toronto Catholic District School Board (TCDSB) high schools participating in the MAC program. Established in 2007, the primary focus of Mindfulness Without Borders’ primary is to educate individuals on vital social-emotional skills and mindful awareness practices to help youth realize their



full potential. In the spring of 2011 Mindfulness Without Borders provided a daylong mindfulness training session for TCDSB educators. At that session, teachers indicated whether they were interested in having Mindfulness Without Borders deliver the MAC to their respective classes in the fall of 2011. Teachers interested in bringing the MAC program to their class were identified as “Teacher Ambassadors”, and Mindfulness Without Borders delivered the program to the classes of these Ambassadors. The program was offered to students during a Religion, Physical Education or Leadership class, as determined by each teacher. Prior to the launch of the program, a research assistant from the Factor-Inwentash Faculty of Social Work (FIFSW), University of Toronto recruited study participants at an Information Session provided by Mindfulness Without Borders. During that session, the research assistant was given time to review the research information and informed consent letter with students. Students were then asked to take the letter home for their parent/guardian to review and sign if they consented to have their child participate in the study. Participants were asked to return the signed (by both student and parent/guardian) informed consent and assent letter to the research assistant at the school. At that time, the research assistant administered the pre- questionnaire. Students were not required to participate in the research study to join the MAC program; participation in the research was completely voluntary and participants were informed that they had the option to withdraw at any time. After the Council concluded, students involved in the study were asked to participate in a focus group.

The Teacher Ambassadors identified in the mindfulness training session in the spring of 2011 were recruited to participate alongside their students. The FIFSW research assistant obtained the contact information of the Teacher Ambassadors from Mindfulness Without Borders and contacted each teacher individually to recruit them into the research study. The research assistant called teachers to review the research information and informed consent letter with them, and obtained their verbal consent to participate. Consenting teachers were asked to provide their email address in order for the research assistant to email them the informed consent letter, and requested that the teacher email or fax the letter to the research team. In the letter, teachers were asked to participate in a one-hour focus group at the conclusion of the program. Teachers were informed that they could refuse to answer any question and could withdraw from the study at any time without explanation and without consequence.

The qualitative study involved focus groups with teachers and students, conducted separately, at the conclusion of the program. Analysis of the data was organized into themes using the constant comparison method (Strauss & Corbin, 1998). A program evaluation survey as well as the post-

questionnaire were distributed to students at the end of the program. The pre- and post- questionnaires included the following instruments: the Five Facet Mindfulness Questionnaire; the Academic Motivation Scale – High School Version; the Positive Youth Development student questionnaire; the Trait Meta-Mood Scale; and the Revised Child Anxiety and Depression Scale.

The first instrument included in the pre- and post- questionnaire package was the Five Facet Mindfulness Questionnaire (FFMQ), an extension of the Kentucky Inventory of Mindfulness Skills (KIMS) (Baer, 2006) created by Baer, Smith and Allen (2004). The KIMS is a well-validated multidimensional questionnaire measuring dimensions of mindfulness on four scales: observing, describing, acting with awareness and accepting without judgment (Baum et al., 2010). The FFMQ (Baer et al., 2006; Baer et al., 2008) adds a fifth construct to these dimensions, non-judging of inner experience. The construct for *observing* includes awareness of or attending to internal and external stimuli, such as sensations, emotions and cognitions. *Describing* refers to attaching labels or words to observed experiences. *Acting with awareness* includes attending to the activities of the present rather than acting on automatic pilot or behaving mechanically, with a lack of awareness regarding one's actions. *Accepting with judgment* refers to a non-evaluative stance towards emotions and cognitions. The fifth additional construct, *non-judging of inner experience*, discusses the ability to allow thoughts and feelings to come and go, without getting carried away by them (Baer, Walsh, & Lykins, 2009).

The second scale in the questionnaire was the Academic Motivation Scale – High School Version (Vallerand et al., 1992), originally the Echelle de Motivation en Education (EME). The EME is premised on self-determination theory and is composed of 28 items subdivided into seven sub-scales assessing three types of intrinsic motivation (IM) (*IM to know* - performing an activity for the pleasure and satisfaction of learning, exploring or trying to understand something new; *IM to accomplish things* - engaging in an activity for the pleasure and satisfaction of attempting to accomplish or create something; and *IM to experience stimulation* - engaging in an activity in order to experience stimulating sensations (e.g., sensory pleasure, aesthetic experiences, fun and excitement) and three types of extrinsic motivation (*external regulation* – behavior regulated through external means such as rewards and constraints; *introjected regulation* – behavior based on internalized reasons limited to past external contingencies; and *identification* – behavior chosen by the individual because it is judged as valuable and important for that individual) and amotivation – behavior perceived to be out of one's control lacking in both intrinsic or extrinsic motivation (Vallerand et al., 1992).

The third instrument administered, the Positive Youth Development (PYD) student questionnaire, is a widely used and well-respected scale that seeks to identify the ecological bases of healthy, positive development among adolescents. Within the PYD survey, Lerner and colleagues (2005) tap into five positive youth development domains (the five C's), which include (a) *Competence* referring to a young person's view of their social, academic, cognitive, and vocational capabilities; (b) *Confidence* or one's internal sense of self worth or self efficacy; (c) *Connection* denoting an individual's bonds to other people and institutions; (d) *Character* referring to respect for cultural and societal rules and standards for morality, and acting with integrity; and (e) *Caring* and *Compassion* or a sense of sympathy or empathy for others (Lerner et al., 2008a).

The fourth instrument intended to capture participants' emotional intelligence. Salovey and Mayer (1990) first coined "emotional intelligence", claiming that this variant of intelligence consists of three categories of adaptive abilities: understanding and expression of emotion, regulation of emotion and the use of emotions in problem solving. Accordingly, people have differing capabilities in understanding, articulating and regulating their affective states. The Trait Meta-Mood Scale is a viable mechanism to operationalize aspects of emotional intelligence (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Salovey & Mayer, 1990). The 30-item questionnaire developed by Salovey and colleagues (1995) examines three domains of emotional intelligence: attention to feelings, clarity in discrimination of feelings and mood repair.

The fifth and final instrument was the Revised Child Anxiety and Depression Scale (RCADS; Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000; Chorpita, Moffitt, & Gray, 2005), a reliable and valid self-report questionnaire measuring symptoms of the most prevalent anxiety disorders and major depression disorder as defined in the Diagnostic Statistical Manual – IV (DSM-IV) (American Psychiatric Association, 1994). An adaptation of Spence's Child Anxiety Scale (SCAS; Spence, 1997), the RCADS extends the measure to tap into depression, recognizing the important relationship between depression and anxiety (Chorpita et al., 2000). The RCADS contains subscales measuring: separation anxiety disorder, social phobia, generalized anxiety disorder, panic disorder, obsessive compulsive disorder and major depressive disorder (Weiss & Chorpita, 2011). The RCADS has been adopted for referred, clinical samples (Chorpita et al., 2005) and for the general non-clinical population (Roelofs, Meesters, Huurne, Bamelis, & Muris, 2006).

The qualitative study employed a thematic analysis using data from focus groups with teachers and students participating in the MAC. A number of important themes surfaced in this evaluation about the usefulness and applicability of the MAC skills within participants’ personal, professional and academic lives.

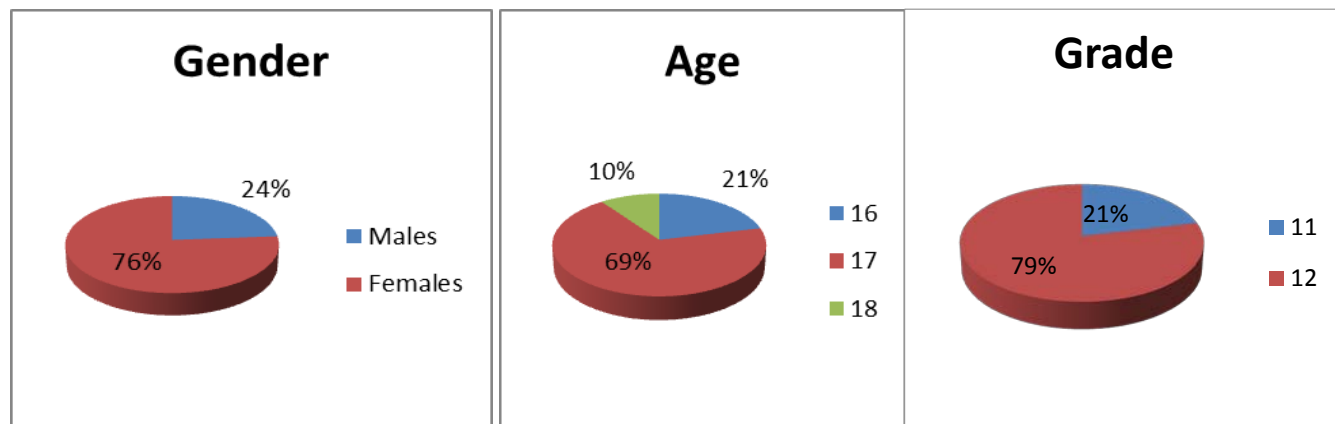
**QUANTITATIVE ANALYSIS**

*Demographics*

The program evaluation was completed by 80 students in grades 11 and 12 (ages 16 to 18). Three-quarters of the sample was female and a quarter was male. The majority of participants were age 17 (69 percent), with 21 percent 16 years, and 10 percent 18 years at the time of the study. The majority of the sample was in grade 12, with some in grade 11.

**Demographic Characteristics of Respondents (n=80)**

Variable	Respondents - % (n)
<b>Gender</b>	
Male	23.8 (19)
Female	76.3 (61)
<b>Age</b>	
16	21.3 (17)
17	68.8 (55)
18	10 (8)
<b>Grade</b>	
11	21.3 (17)
12	78.8 (63)



## Program Evaluation

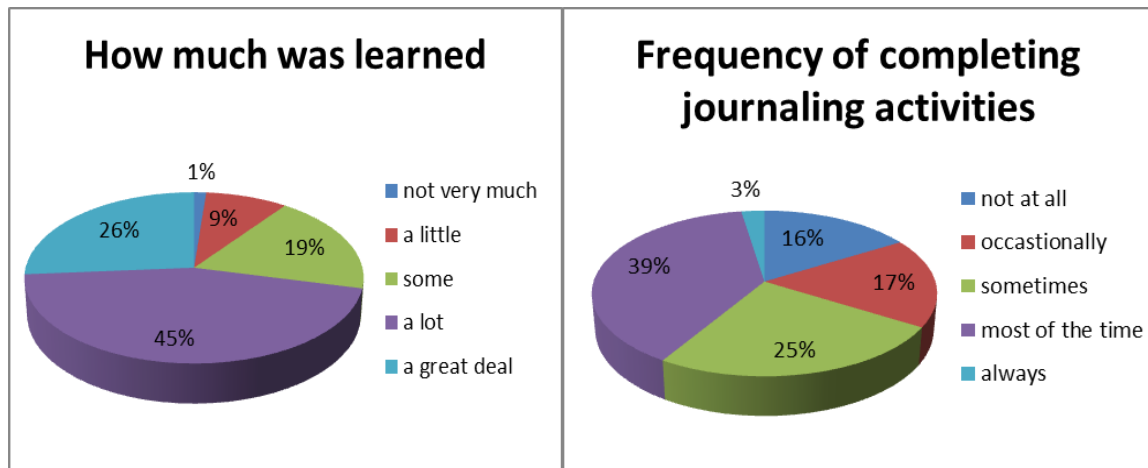
The following data were collected from the program evaluation survey at the conclusion of the Council and report on the overall learning of participants, the frequency of completing assignments, participation in community service projects and the application of MAC lessons to participants' daily lives.

### Understanding and Applying Mindfulness (n=80)

Variable	Mean (SD)	Median	Range
How much was learned about mindfulness during the MAC <sup>1</sup>	3.86 (0.95)	4	1-5
Frequency of completing MAC homework journal assignments <sup>2</sup>	2.94 (1.15)	4	1-5

<sup>1</sup> based on a scale of 1-5, where 1=not very much, 5=a great deal

<sup>2</sup> based on a scale of 1-5, where 1=not at all, 5=always



The majority of the participants (n=57) reported learning either “a lot” or “a great deal” about mindfulness during the MAC program. More than two-thirds of participants (n=53) actively completed the journaling activities as required either sometimes, most of the time or always.

Variable	Respondents % (n)
<b>Participation in community service project</b>	
Yes	63.8 (51)
No	36.3 (29)
<b>Application of mindfulness to everyday life</b>	
Yes	81.3 (65)
No	18.8 (15)

The majority of participants participated in a volunteer community service project during the MAC program. Most participants (81 percent) reported that they were currently, after the conclusion of the program, applying what they had learned about mindfulness to their everyday lives.

The following table reports on the areas of everyday life to which participants were applying the skills they had learned in the program.

**Areas of everyday life where currently applying MAC skills most frequently (n=80)**

<b>Lesson</b>	<b>Mean (SD)</b>	<b>Median</b>	<b>Range</b>
To improve awareness and focus	6.88 (2.00)	7	1-10
To cope with challenges	7.13 (2.02)	7.5	1-10
To resolve conflict	6.95 (2.23)	8	1-10
To work with others	7.23 (2.00)	8	2-10
To manage stress/anxiety	7.15 (2.17)	7.5	1-10
To be calm and relaxed	7.22 (2.13)	7	1-10
To concentrate at school	6.72 (2.01)	8	1-10
To help with sleep	6.42 (2.66)	7	1-10
To cope with feeling sad	6.42 (2.59)	7	1-10
To deal with anger and aggression	6.59 (2.43)	7	1-10
To feel more connected with the community	6.05 (2.51)	6	1-10
To promote well-being and happiness	7.01 (2.11)	7	1-10
To communicate with others	7.09 (2.22)	8	1-10
To improve relationships with others	7.23 (2.18)	8	1-10
To reflect on feelings and thoughts	7.04 (2.11)	8	1-10
To identify and express emotions	6.89 (2.24)	7	1-10

\*on a frequency scale of 1-10, where 1=not very much and 10=a great deal

The areas of life to which participants indicated they were currently applying MAC skills most frequently were: to work with others, to improve relationships with others, to be calm and relaxed, to manage stress/anxiety, and to cope with challenges. They were applying MAC skills the least in the area of feeling more connected with the community.

**Area of life where applying MAC skills most frequently by Gender (Males=19, Females=61)**

(Percentages represent reported scores between 6-10, on a frequency scale of 1-10, where 1=not very much and 10=a great deal)

<b>Lesson</b>	<b>Gender</b>	
	<b>Male % (n)</b>	<b>Female % (n)</b>
To improve awareness and focus	68.4 (13)	78.7 (48)
To cope with challenges	73.7 (14)	83.6 (51)
To resolve conflict	63.2 (12)	77.0 (47)

To work with others	63.2 (12)	82.0 (50)
To manage stress/anxiety	63.2 (12)	83.6 (51)
<sup>X</sup> To be calm and relaxed	68.4 (13)	85.0 (51)
<sup>X</sup> To concentrate at school	63.2 (12)	80.0 (48)
<sup>X</sup> To help with sleep	57.9 (11)	68.3 (41)
<sup>X</sup> To cope with feeling sad**	52.6 (10)	76.7 (46)
<sup>X</sup> To deal with anger and aggression	63.2 (12)	76.7 (46)
<sup>X</sup> To feel more connected with the community	63.2 (12)	58.3 (35)
<sup>X</sup> To promote well-being and happiness	73.7 (14)	78.3 (47)
<sup>X</sup> To communicate with others	73.7 (14)	78.3 (47)
<sup>X</sup> To improve relationships with others	68.4 (13)	80.0 (48)
<sup>Y</sup> To reflect on feelings and thoughts	72.2 (13)	78.7 (48)
<sup>Y</sup> To identify and express emotions	66.7 (12)	73.8 (45)

\*\* p-value is significant at  $p < 0.05$

<sup>X</sup> n=79: males=19, females=60

<sup>Y</sup> n=79: males=18, females=61

There is a statistically significant difference in gender and the application of MAC skills to the area of coping with feeling sad. Females report applying MAC skills in this area more than males.

In an open-ended question regarding the areas of their lives that MAC lessons made the greatest difference, participants reported: to be calm and relaxed; to manage stress or anxiety; to identify and express emotions; to improve relationships with others; and to deal with anger and aggression.

The following table indicates the MAC lessons that participants indicated they were most likely to continue to use.

### MAC Lessons most likely to continue to use (n=80)

(Reported scores on a frequency scale of 1-10, where 1=not very much and 10=a great deal)

Lesson	Mean (SD)	Median	Range
TUZA/Mindful Breathing	6.44 (2.79)	7.0	1-10
Mindful Listening	7.38 (2.10)	8.0	1-10
Mindful Speaking	7.16 (2.40)	8.0	1-10
Mindful Eating	5.43 (2.81)	6.0	1-10
Body Scan	6.37 (2.38)	7.0	1-10
Self-Awareness	6.97 (2.08)	8.0	1-10
Self-Management	7.01 (2.18)	7.0	2-10
Social Awareness	7.12 (2.04)	8.0	2-10
Relationship Skills	7.26 (2.08)	8.0	2-10
Responsible Decision-Making	7.21 (1.94)	8.0	2-10

The MAC lessons that the participants indicated that they were most likely to continue to use are: mindful listening, relationship skills, responsible decision-making, mindful speaking, social awareness and self-management. The lessons that participants reported they were likely to continue to use less frequently include TUZA/mindful breathing, the body scan and mindful eating.

**MAC Lessons most likely to continue to use by Gender (Males=18, Females=60)**

(Percentages represent reported scores between 6-10 on a frequency scale of 1-10, where 1=not very much and 10=a great deal)

Lesson	Gender	
	Male % (n)	Female % (n)
TUZA/Mindful Breathing	50.0 (9)	73.3 (44)
Mindful Listening	83.3 (15)	85.0 (51)
Mindful Speaking	88.9 (16)	81.7 (49)
Mindful Eating	50.0 (9)	61.7 (37)
Body Scan	66.7 (12)	66.7 (40)
Self-Awareness	72.2 (13)	78.3 (47)
Self-Management	70.6 (12)	76.7 (46)
<sup>X</sup> Social Awareness	72.2 (13)	84.7 (50)
<sup>Y</sup> Relationship Skills	66.7 (12)	79.3 (46)
<sup>X</sup> Responsible Decision-Making	72.2 (13)	79.7 (47)

<sup>X</sup> males=18, females=59

<sup>Y</sup> males=18, females=58

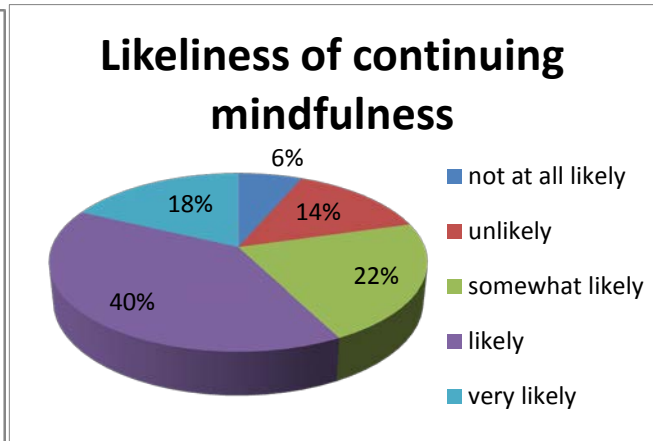
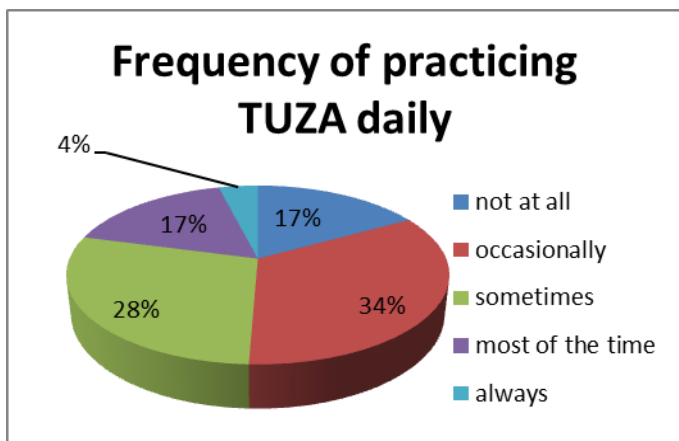
The following table illustrates that at the conclusion of the program just over half of the participants indicated that they practice TUZA twice daily as recommended by MAC facilitators. While the majority report using TUZA twice a day, only four percent responded that they “always” practice it, many use it “most of the time” (17 percent) and most “sometimes use it” (28 percent). When asked about the overall likeliness of continuing to use the mindfulness lessons learned through MAC, almost 60 percent reported that they are either “likely” or “very likely” to continue using what they learned with a mean score of 3.49 (and a standard deviation of 1.14).

Variable	Mean (SD)	Median	Range
Frequency of practicing TUZA twice/day as recommended <sup>1</sup>	2.57 (1.08)	2	1-5
Likeliness of using mindfulness lessons learned in future <sup>2</sup>	3.49 (1.14)	4	1-5

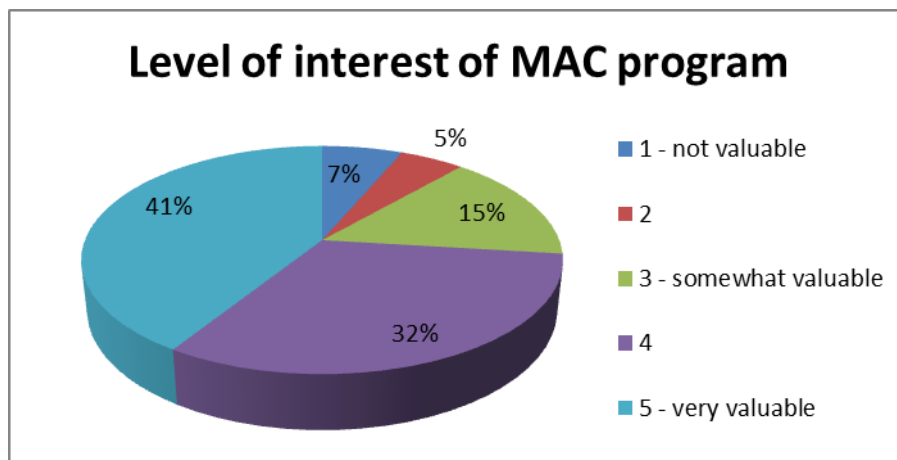
<sup>1</sup> based on a scale of 1-5, where 1=not at all, 5=always

<sup>2</sup> based on a scale of 1-5, where 1=not at all likely, 5=very likely





When asked about how valuable the MAC program was overall, 73 percent of participants indicated that they found it highly valuable, giving it a rating of 4 or 5 out of 5. Only 12 percent of participants indicated that it was not valuable, indicated by a rating of 1 or 2. The MAC program recommends that TUZA/mindful breathing be practiced daily. At the conclusion of the program however only four percent of the participants responded that they “always” practice it every day. Seventeen percent indicated that they use it “most of the time”, and 28 percent indicated they “sometimes use it”.



#### *Pre- and Post- Questionnaire Analysis*

The following reports on the matched standardized tools on the pre- and post- questionnaire data (n=76). This analysis explores the impact of the MAC program on key social, emotional and behavioural indicators, including aspects of participants’ critical thinking, self-awareness, and social skills before and after study involvement. A scale measuring academic motivation was incorporated in order to ascertain differences in participants’ motivation in school before and after participating in the program. Paired sample t-tests were used to assess pre- and post- program differences, analyzed using SPSS

statistical software (v. 20). As noted in the limitations section of the report, no long-term follow up was conducted to assess the fidelity of program gains.

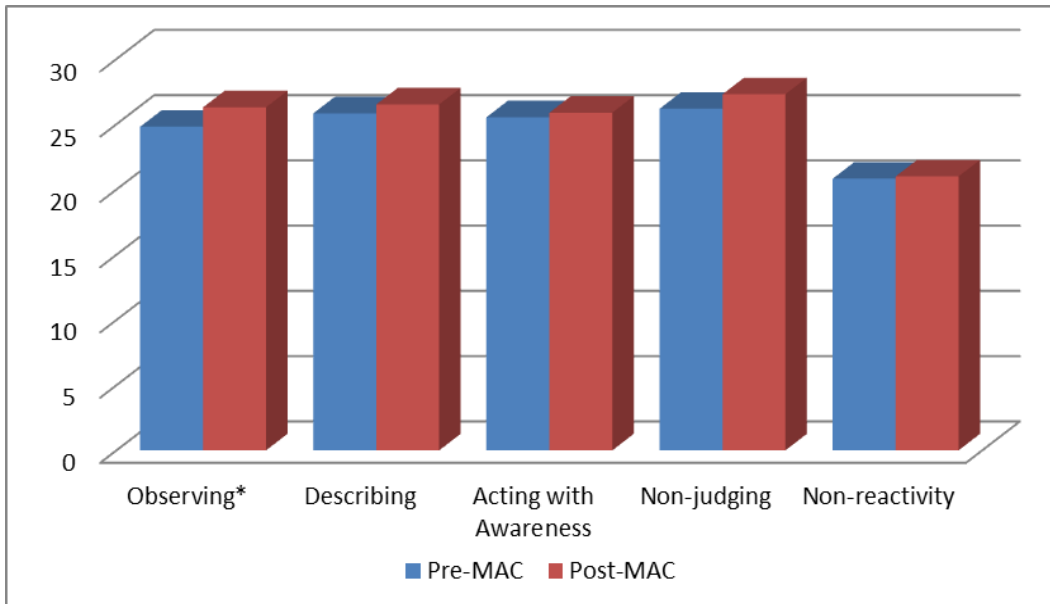
According to the Five-Facet Mindfulness Questionnaire, which assesses current factors that represent elements of mindfulness practice, the grade 11 and 12 students trended towards improved scores for all five mindfulness facets. In particular, the students showed a statistically significant improvement in their observing skills ( $p < 0.05$ ). As described earlier, the construct for observing includes awareness of, or attending to, internal and external stimuli, such as sensations, emotions and cognitions (Baer et al., 2006).

### Five-Facet Mindfulness Questionnaire

Mindfulness Facet	N	Pre-MAC Mean (SD)	Post-MAC Mean (SD)	P-value
Observing	75	24.80 (5.06)	26.29 (5.83)	0.015*
Describing	76	25.83 (4.74)	26.51 (5.06)	0.232
Acting with Awareness	76	25.53 (6.12)	25.88 (5.11)	0.585
Non-judging of inner experience	76	26.18 (6.72)	27.29 (6.82)	0.080
Non-reactivity to inner experience	76	20.82 (4.54)	20.99 (4.52)	0.726

\* Significant at the  $p < 0.05$  level

### Mindfulness Facet Mean Scores



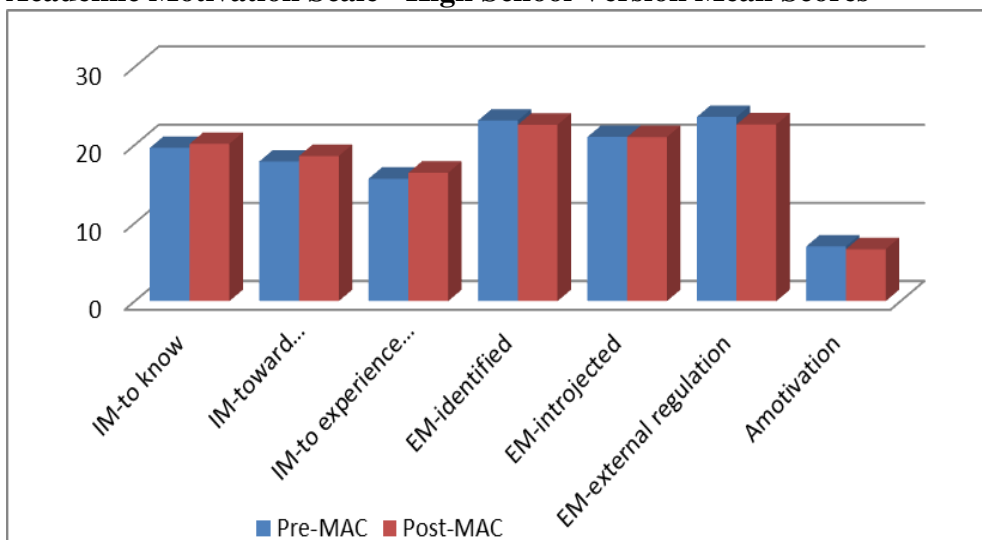
\* Significant at the  $p < 0.05$  level

The Academic Motivation Scale – High School Version assesses differences in various types of student motivation in school. All factors related to intrinsic motivation (the pleasure and satisfaction derived from participating in an activity for its own sake) show small increasing trends from pre to post MAC for the students, although the increases are not statistically significant. Similarly, the students trended towards lower scores on measures of extrinsic motivation (behaviours engaged as a means to an end and not for their own sake) (Deci, 1975, as cited by Vallerand et al., 1992) between pre and post assessment, although these differences are not statistically significant. Scores of amotivation (a perceived lack of connection between one’s outcomes and his/her own actions) (Vallerand et al., 1992) also decreased after the MAC program as compared to baseline although this change is not significant.

### Academic Motivation Scale

Motivation Type	n	Pre-MAC Mean (SD)	Post-MAC Mean (SD)	P-value
Intrinsic motivation – to know	76	19.61 (5.03)	20.12 (4.83)	0.304
Intrinsic motivation – toward accomplishment	76	17.86 (5.75)	18.57 (5.49)	0.182
Intrinsic motivation – to experience stimulation	69	15.67 (5.17)	16.42 (5.10)	0.096
Extrinsic motivation – identified	76	23.11 (3.96)	22.57 (4.44)	0.276
Extrinsic motivation – introjected	75	21.01 (5.41)	21.00 (5.47)	0.979
Extrinsic motivation – external regulation	74	23.57 (4.21)	22.61 (4.88)	0.060
Amotivation	76	7.00 (4.48)	6.64 (4.09)	0.407

### Academic Motivation Scale - High School Version Mean Scores



As assessed by the Positive Youth Development Questionnaire, participants showed significant improvements ( $p < 0.05$ ) at post assessment compared to baseline in both character (respect for cultural and societal rules and standards for morality, and acting with integrity) and confidence (one’s internal

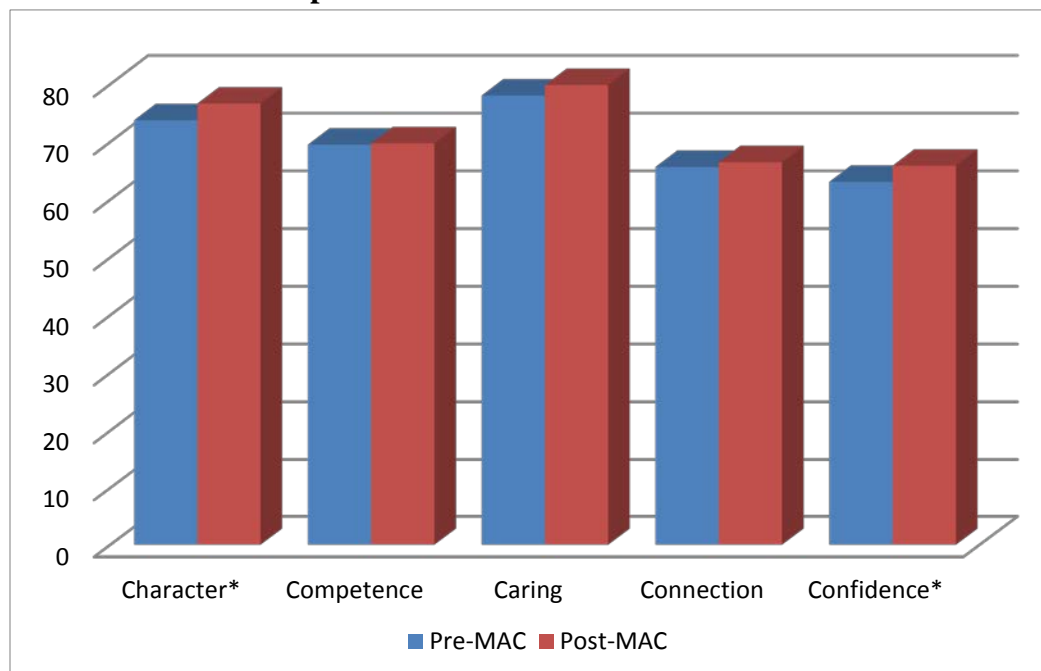
sense of self worth or self efficacy) (Lerner et al., 2008a). Positive trends were also present for the remaining measures of competence, caring, and connection although these improvements were not statistically significant.

### Positive Youth Development (PYD) Questionnaire

PYD Measure	N	Pre-MAC Mean (SD)	Post-MAC Mean (SD)	P-value
Character	69	73.74 (13.33)	76.63 (12.12)	0.016*
Competence	56	69.51 (13.33)	69.74 (14.04)	0.827
Caring	70	78.03 (14.50)	79.84 (14.20)	0.163
Connection	71	65.65 (14.06)	66.49 (12.03)	0.522
Confidence	57	63.07 (20.62)	65.86 (19.03)	0.041*

\* Significant at the  $p < 0.05$  level

### Positive Youth Development Measure Mean Scores



\* Significant at the  $p < 0.05$  level

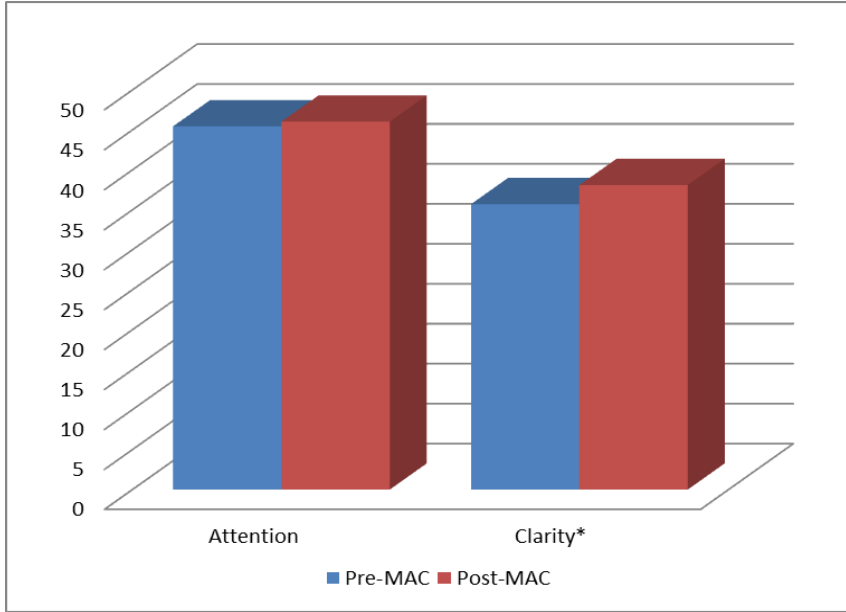
The Trait Meta-Mood Scale is a measure of emotional intelligence examining the domains of attention to feelings and clarity in discrimination of feelings (Salovey et al., 1995). The students showed a statistically significant improvement in their emotional clarity post-MAC as compared to baseline. While scores for attention also increased this change was not significant.

### Trait Meta-Mood Scale

Measure	N	Pre-MAC Mean (SD)	Post-MAC Mean (SD)	P-value
Attention	71	45.45 (6.76)	46.03 (7.05)	0.383
Clarity	72	35.72 (6.17)	38.10 (5.84)	0.001*

\* Significant at the  $p < 0.05$  level

### Trait Meta-Mood Scale Mean Scores



\* Significant at the  $p < 0.05$  level

The Revised Child Anxiety and Depression Scale is a self-report measure of the most prevalent anxiety disorders and major depression disorder as defined by the DSM-IV. The students showed a statistically significant decline in social phobia scores from baseline to post-MAC ( $p < 0.05$ ). Their levels of generalized anxiety also dropped remarkably from baseline to post-MAC significant at the  $p < 0.001$  level. The students had declining trends across all other anxiety disorders and depression disorder although the reductions were not significant.

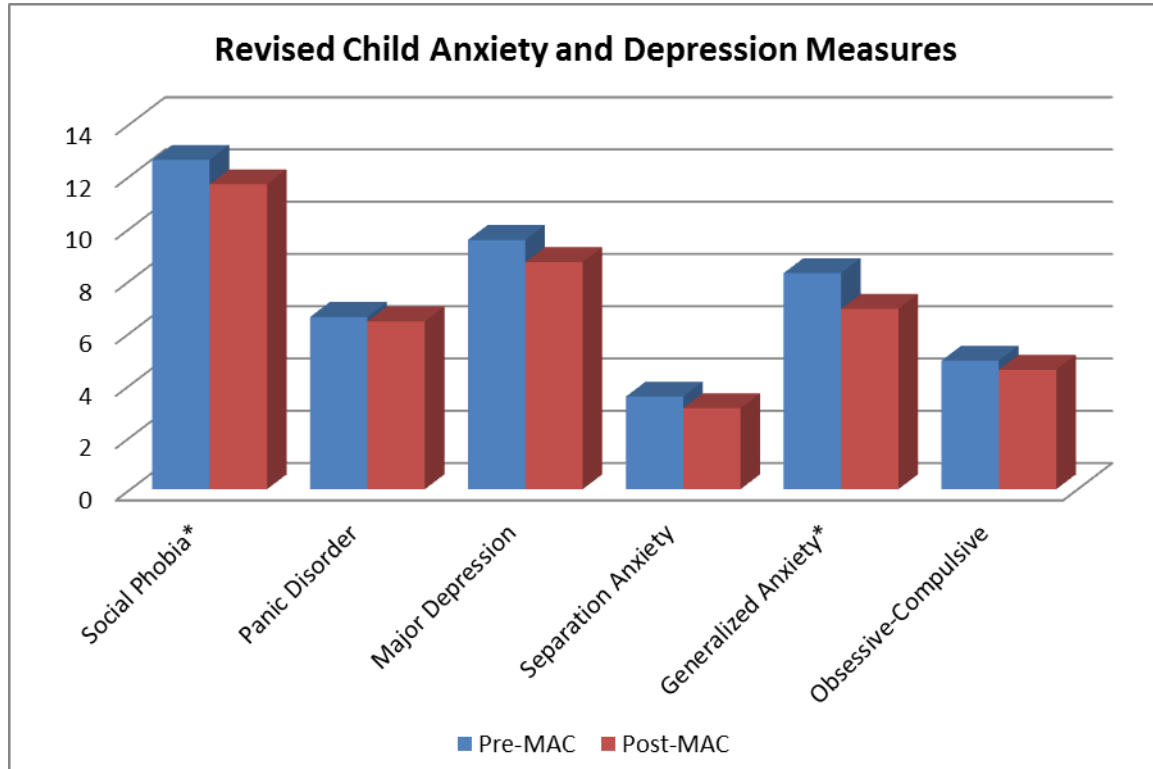
### Revised Child Anxiety and Depression Scale (RCADS)

Measure	N	Pre-MAC Mean (SD)	Post-MAC Mean (SD)	P-value
Social Phobia	72	12.60 (5.11)	11.67 (4.58)	0.031*
Panic Disorder	73	6.59 (5.08)	6.42 (4.34)	0.704
Major Depression	68	9.54 (5.64)	8.69 (5.22)	0.097
Separation Anxiety	72	3.54 (2.86)	3.10 (2.68)	0.153
Generalized Anxiety	73	8.27 (4.12)	6.90 (3.60)	0.000*

Obsessive-Compulsive	72	4.92 (3.46)	4.57 (3.14)	0.386
Total RCADS Score	64	45.23 (22.00)	40.42 (18.43)	0.008*

\* Significant at the p<0.05 level

### Revised Child Anxiety and Depression Measures



\* Significant at the p<0.05 level

### Limitations

The analysis provided above should be employed with some caution. First, the modest sample size for the pre- and post- questionnaire analysis (n=76) could be larger to ensure greater reliability. Second, the results are based on self-report only; no direct observations or external raters were used to verify the accuracy of student responses. Third, there is no long term follow up of the assessment that would indicate participants' fidelity to the MAC skills and lessons learned over time. Fourth, the inclusion of a randomized control trial, with a group participating in the MAC compared to a group not participating in the program, is recommended in order to rule out differences in pre and post scores as a result of chance. Without an equivalent comparison group, the internal validity of the study is suspect.

## QUALITATIVE ANALYSIS

### Focus Groups with Teachers

The focus group data were analyzed through an iterative coding process using thematic analysis. There were a number of themes that surfaced from the focus groups with teachers, documented in the sub-sections below.

#### *Improved Relationships with Others*

A number of teachers noted that the sharing of experiences and perspectives with other members of the MAC was a unique way to understand others more fully and to build relationships with students, as illustrated by the following quotation:

I found an increased respect because the students did see, I think that the students saw authenticity there and they saw, these people are real, like these people are real people and they have emotions too and it's okay. So it's okay for me to have my emotions too and to really acknowledge that about myself and, look at that, they're accepting me for who I am. I believe that it enhanced and strengthened the relationships [with students].

Some teachers perceived greater cohesion, camaraderie, mutual trust and respect within the classroom. One participant indicated that s/he felt that s/he was being more authentic in all of her/his relationships (both in and outside of the classroom) as a result of participating. The quote below captures the "deeper connection" in relationships after participating in the MAC.

I think I have already said one of them, I have applied mindfulness to make a deeper connection with my loved ones and just generally people in my community, whether it be a work community or anybody, a stranger that I might meet at the store when I'm doing a transaction of purchasing something. So really trying to be more connected with others.

#### *Improved Communication Skills*

Some staff members reported applying mindful listening and mindful speaking without judgment when communicating with others. By focusing on others "completely" and receiving them mindfully, a number of participants noted being more connected to others, and at the same time found greater meaning in the moment. This participant expressed his/her attempts to become a better listener to others.

I am making a much more deliberate effort to be a better listener, a deeper listener, to really be connected with the person as absolutely possible when there are other things to do. One of the most valuable things that I ever hear is when someone says something like, thank you for listening so carefully I really feel as though you listened to me. So I think that is really important to a person who is feeling the need to be listened to.

### *Practical Tools for Achieving Calmness, Relaxation and Easing Stress*

Some staff reported being able to successfully recall and apply mindfulness skills learned to focus in the present, and to process negative thoughts or feelings (letting them come and pass without judgment), which many deemed as being very helpful.

...(T)he idea that also thoughts can come and the ideas of just being able to let them go. So whether they are disturbing thoughts or positive thoughts or whatever, just allowing them to sort of ebb and flow and that was a sort of theme throughout everything, was that you will have thoughts, you cannot get rid of some of these thoughts but that you are able to sort of handle them and deal with them, and that you could sort of see the students understand that as the sessions progressed.

Skills learned (such as TUZA/deep breathing, finding their “still spot”) were easily transferred beyond the classroom to everyday life and daily stressors and situations.

The third example... is I have two family members who are quite ill and I do feel quite anxious about it and quite concerned. But I can take a big step back, relax a little bit more about it and just know that my calmer energy will help those people far more than my worrying and being anxious about it.

### *Greater Self-Awareness*

Through the MAC program, a number of staff indicated that they became better able to identify their own thoughts, feelings, triggers and impulses. This led some participants to have a greater sense of emotional regulation and self-management of their personal reactions. A few discussed “acting mindfully versus acting mindlessly”; others noted having a better sense of their own responsibility for their behaviours, reactions and resultant consequences. These participants expressed that they now think before acting and are able to “check” themselves before quickly reacting to others or situations.

I first learned to be kinder with myself. There are times in a day when I feel very overwhelmed and very tired and... I would sometimes get very hard on myself and down. And I realized that



mindfulness has taught me to be conscious and aware of how you're feeling without judgment and to realize that I was where I was and my energy levels were where they were for a reason. And to not get upset with myself or to feel disappointed with myself, but just to accept that that is what they were and there was a reason for it and to not judge myself.

### *Capacity to Cope with Challenging Situations and Positive Approaches to Conflict*

Some teachers acknowledged having improved social awareness of others' unique experiences and perspectives, and a number reported that they approach people without judgment and are more understanding in situations of conflict.

For sure for me it was reactions, and in that way, too, communicating with other people and conflict resolution, and especially with students or even amongst students. Taking a second to have a reaction, taking a breath and then being able to communicate what I feel and being able to hear what they're saying without that judgment, trying to put that aside and hear them first.

Others noted that they utilize the communication techniques learned through MAC, as well as their developed social awareness and self-management skills as a way to cope with challenging situations and/or conflict. The quotes that follow illustrate how these skills assist them "to resolve issues in a very, very peaceful manner".

I would say one of the first ways I've used my source is with stress and anxiety around illness and so on. It has helped me be better able to cope with uncertainties so it has made me calmer, more appreciative, aware that things come and go and has eased my anxiety over that. And one of the other things that stuck with me was the idea of coping with challenges or conflicts. So in relationships outside of school, within school, with students... sort of not jumping to things, sort of waiting and being calm and responding, not reacting. Which has really, really made a lot of conflicts end very peacefully so that has been very helpful.

I have already mentioned previously that it has really, really helped with challenging situations and conflict. So in terms of work, whether with colleagues or with students, it has allowed me not to react, it has allowed me to sort of sit back and not judge where that person is coming from and be able to resolve issues in a very, very peaceful manner. So it has definitely helped from that aspect.

### *Building a Mindful Practice in Personal and Professional Lives*

Several teachers discussed opportunities for integrating MAC lessons into the classroom setting, such as engaging in TUZA/mindful breathing at the start of class in order to focus students before

lessons or within the religion curriculum where the concepts applied in mindfulness may be more meaningful if infused with lessons of faith.

And definitely for myself, too, is that in a practical way I would like to try and integrate that part of the meditation program into my religion program, so TUZA in a way that we can maybe start the day, something that takes two minutes. But when we get into religions like Hinduism, Buddhism, and world religions, an opportunity to do something like the body scan and the deeper mindfulness meditation opens itself up a little bit, and I would like to keep that a part of the program.

Some participants reported that the MAC skills they learned were applicable in their interactions with work colleagues and students, and believe they can be used to connect with students and encourage discussions within the classroom. This teacher explains how “positive” the practice of mindfulness has been in her relationships with her/his students.

... I have sort of pursued and had an interest in mindfulness for a few years now. And I have been trying to apply it in my everyday life personally and I always wanted to find a way that I could use it in my professional life with my students. And within that, I sort of found the tools that I could use to help me with students and I have definitely found a positive impact in terms of my relation with them, with students that are at-risk, how we can talk with one another, not have any issues or issues we can resolve, so it has been very positive.

Many teachers were motivated to integrate mindfulness practices in their family life at home, particularly with their children. Some also reported being more socially aware of the needs within their own communities, and a greater desire to serve others.

It's a life altering experience, to practice mindfulness is truly life altering. And it changes things and this is what my experience has been as well. Now it's at the point where if I don't practice this every day, if I don't... every morning taking that deep breath and 2 minutes of TUZA even, I try to make it at least 15 but even if it's 2 minutes, even a couple of deep breaths before I'm meeting with somebody or if I'm anticipating a situation that I know is going to be challenging, that is so very helpful. So, yes, absolutely I will take this with me. I will continue to use it within the scope of my teaching and with my interactions with my colleagues, with peers, with children, with people who are in service roles out there in the community, with everyone, so yes.

### *Sense of Enriched Life and Improved Well-Being*

A number of teachers reported feeling more authentic, more connected, and happier, and believe they are kinder and less judgmental as a result of participating in the program. The following quote illustrates how a teacher's relationships have been "enriched" by the practice of mindfulness.

And I find you need to make a conscious effort to do that and I think if every connection that you have with others and yourself, if we incorporate this, then I think we are enriched for it and we are better people and we are better listeners and I feel better about myself. I feel more authentic in my relationships with others and I feel authentic with myself.

There was an overall consensus that mindfulness has the potential to increase personal growth and the level of compassion among individuals. The following quote conveys how carrying mindfulness into daily life can bring about "amazing change".

I just wanted to say I would absolutely use it. It has enriched my life so much to the point of the idea of not being judgmental, first and foremost myself, which was always such an issue, and then not judging others. It is such a weight lifted off when you are going through the world and sort of just seeing everybody for who they are, not judging, listening, it's just an amazing change. And I definitely, definitely want to carry it through into my life daily.

### Focus Groups with Students

Many of the themes raised in the focus group with teachers, also emerged in the focus groups with students. New themes, however, such as opportunities for self-discovery, impact on learning and uncomfortable experiences in the program also evident in the student data.

### *Stress Reduction and Relaxation*

Just whenever something in my day stresses me out, taking deep breaths is always really helpful for me.

Many students reported that the practice of TUZA/mindful breathing and other skills/techniques taught in the MAC program were helpful tools for decreasing stress and for relaxing in the moment. While some noted that they do not believe the practice of TUZA/mindful breathing is relevant and are not using these skills, on the whole, students were receptive to the practice of TUZA in their daily lives. "Yeah, it's something that we practiced every day so then I got used to using that in my own life," remarked one participant. Some perceived it to be a successful stress reduction skill that is transferable

to different areas of their lives, such as to concentrate in school, to ease the stressors related to exams, and to distract themselves from ongoing worries. TUZA was also reported by some to be an effective tool for relaxation, as well as to simply recharge, take a break and re-energize throughout the day. The following quotes demonstrate the importance of mindful breathing for many participants.

Basically, whenever something would stress me out or get me nervous, I would just tell myself to slow down, stop or pause and take a breath. It would just calm me down so that was nice.

Well it helps a lot with relaxing when you're really stressed out with something you just take breaths and try to stay in the moment.

I don't have patience with others and TUZA has helped me to develop patience with others.

### *Greater Cohesion and Connectedness*

Through the mutual sharing of experiences within the classroom, several students reported "growing together" as a class. One participant reported that the Council process offered a safe, judgment-free environment that fostered mutual trust and respect amongst members. The "intimate" circle format allowed for a transparency of facial expressions and a connection to others' raw emotions. It also fostered a sense of "unity" and equality among Council members, and was described as being void of power hierarchies.

I also felt that when we're all in a circle, there's a lot less inclusiveness and no one gets left out because everyone's there, everyone's equal in the circle.

Students expressed their desire to share personal experiences with others their own age. Through the MAC, a few participants discovered commonalities with others and felt they could more easily relate to their peers.

It brought the class together and you get a sense of what everyone is about and what they go through.

I like the group talks because usually you don't get to know a lot of people on a personal level that you would like to know. So as a class I think we grew and that we got to know one another because one person spoke and everyone listened and you could get everything off your chest so it was nice.

## *Greater Social Awareness and Understanding of Others*

According to one participant, the MAC program helps to understand others more fully by putting him/herself in “other people’s shoes”.

There was this other thing that they would always say, like, put yourself in other people’s shoes for understanding, which really helped and I’ve been applying a lot.

Some participants noted that the MAC allowed the group the opportunity to listen to others’ opinions in order to learn and understand members better, as well as to empathize with their experiences. Many students reported being more open-minded, and better able to actively listen and respect differing perspectives, and more able to accept and appreciate the diversity of opinions offered. The following quotes demonstrate how the importance of listening to others was impressed upon these students.

They taught us to actually listen to what people are saying instead of just hearing it and letting it pass through the other ear, like actually listening. So I guess in the future that will help develop relationships and just with your social skills and everything instead of just zoning out. That happens to me a lot when people are talking and I’m not really listening but to actually listen. It’s good for the future too when you’re talking to people and social life I guess, jobs.

Like how to actually take the time to listen to somebody’s thoughts and not pretend listening so you’re actually hearing them out and then you can state your opinion afterwards. Just to sit and listen to the person.

In tandem with actively listening to others, participants discussed the importance of mindful speaking.

I think that the mindful speaking, like to speak from the heart, would probably help the most in the long run because you just kind of watch what you say and speak how you feel as opposed to basing it off other people and it is coming from you.

Mindful speaking like since we started the MAC council, I’ve been more open and not as closed off anymore. And I don’t know, I guess it feels good that people actually do care about what you have to say and they do listen so yeah.

### *Increased Self-Management Skills*

“Thinking before acting” was a key take-away for many students. Some noted that the MAC instilled greater patience among members who were able to translate the skill of reflecting on their feelings and emotions in order to regulate themselves in stressful situations.

They helped me deal (with) and express my emotions in a better way. Like when I’m upset or angry, now I’ll think before doing something.

Last year I had a bad temper problem but since I took (the MAC), I’ve been more calm and... More calm, that’s basically it. So I don’t have this anger that I used to have when I find out something’s bad.

Many felt they were better able to identify their own triggers and impulses, reflect on behaviours and consequences, and control their reactions in order to positively address conflict and attain resolution. The quotes below express how some students are better equipped to identify and regulate their emotions after participating in the MAC.

It made me more aware of how I react to things. It helps me be able to calm down and realize that I can’t always run away from things and I have to face situations. So, to change my perspective on how I should act, myself and how I should present myself.

Respondent: I learned that my emotions, right when I’m about to get upset, I kind of realize when I’m about to feel a certain way or when I’m about to just blow up. I learned that.

Interviewer: So you’ve learned to just take a moment?

Respondent: Yeah. I learned that when I’m about to get really upset, I learned how to stop and take a breath and calm down so I won’t have an explosion like that.

### *Ability to Build Relationships and Communication Skills*

The MAC lessons related to social awareness and relationship building were deemed to be relevant and applicable for several students.

In the Council and even with my peers I never talk about situations or problems I’ve been going through but when I opened up, everyone was very cool and I liked that.

By utilizing the learned skills of mindful listening and reflection when focusing on others, and mindful speaking (offering feedback in a positive, non-judgmental way so that it can be effectively received by others), a number of students indicated that they were able to be more authentic in their

interactions with others. Such improved communication skills were deemed to be practical when meeting new people, within the work environment and when working in teams, in particular, in accepting differing opinions that are likely to emerge.

It helps you in general as a person in every single way. In work, in relationships, at home, other people because the more you listen to them and it's easier to talk to them, the better of a person you've become and the more people want to talk to you. So it just helps you in general as a person.

### *Impact on Learning*

In comparison to traditional approaches to teaching, the MAC program's approach to social and emotional learning was deemed to be "so much better".

Well in my opinion that is how we should be taught because I learned so much more in the Council by talking to other people than sitting down and reading a textbook for an hour and a half. It's so much better, you talk... You learn by talking to one another and that's so much better than just writing something off the board. And that's something all schools should start doing because it's much better than the textbook method.

The MAC also had positive effects on this student's academic learning.

I can concentrate more in school and I can understand more things in school and also in my social life.

### *Opportunities for Self-Discovery*

A number of students revealed that they became more self-aware through the MAC process and were able to better understand themselves both emotionally and psychologically.

It helped me become more aware of myself and how others perceive me, stuff like that.

One of the homework assignments were also the two sides too. So your different faces that you show. It was really weird seeing how you can be one person but then be another. It depends what your surroundings are and what people are around you. So it just takes time to look at yourself and realize oh wow, I'm this person and then I'm also that person.

A few students identified the need to be able to rely on and confide in others as a means of reducing stress and gaining comfort as central to their learning, while others identified the importance of taking time to focus on the self in order to promote personal well-being as key. By applying calming and

relaxation techniques, students were able to reset and feel better about themselves. This student felt empowered by taking on a project that intimidated her/him at the beginning of the program.

At the beginning of the session, they told us we would be completing a community project. At first, I personally felt really intimidated that, oh my goodness, this is going to be really hard to do. Then as I learned how I can apply these things, I felt more empowered to actually take on the community project so it was good.

*Teachers and Students: What was Liked and Not Liked about the MAC; Suggestions for Improvement*

#### Favourite Aspects or Liked the Most by Teachers

Teachers mentioned a number of aspects of the MAC that they found particularly useful to the learning process. Several discussed the benefits of the circular Council format, describing it this way:

I think that the formation of the circle made it very inviting, it made it very equal for all and I think each student felt that their opinion was welcomed and respected.

I definitely think the circle is something, it's a great tool to use in your classroom as well for the same reasons, emphasizing that people are equal and can share equally and that it's a safe space to do that.

The use of the talking piece was deemed helpful, as demonstrated in the quote below.

I really liked the talking piece, I think it really focused the conversation and allowed for people to know when their turn was coming, and allowed people to feel comfortable in sharing that way.

A number of teachers commented on the competency of the facilitators, who they considered to be "well versed" in mindfulness, non-judgmental in their approach and effective in their presentation of the material.

The facilitators were absolutely top notch. I thought that they were very well versed in mindfulness. I thought that they were authentic in their presentation of mindfulness and it was obvious that they, themselves, not only had training and learned how to but they also were practitioners and I really appreciated that.

The facilitators were phenomenal, they really lived mindfulness, they were wonderful role models, they made the students feel comfortable, they were non-judgmental.



Their energy and their spirit and the tone that they set was fantastic. So even when the times, things that could irritate me, like when students aren't settling in... they were still just very smiley and welcoming, there were no judgments around any of that, they were being really invited into a positive space. So I just wanted to mention that because I think that they deserve to be commended for that.

A few teachers remarked on the appropriateness of the program for giving students the tools to promote emotional learning, even if they do not incorporate these tools at this point in their lives but adopt them sometime in the future.

I know not everybody could be mature enough right now to maybe incorporate mindfulness, but I felt that these were tools that they were going to leave with that even if now they weren't ready to use them at some point in their life they might come back to them.

I like that there's very specific skills around social, emotional learning. I certainly didn't have awareness of any of that when I was a teenager... So I think there are just tremendous skills that are built into it and even if they don't grasp onto it right away, to have some of that awareness at that stage of their life, I think can only be beneficial.

#### Favourite Aspects or Liked the Most by Students

The students also discussed the components of the MAC that they particularly enjoyed. Some felt that the program was helpful in bonding the class closer together.

The group discussions actually really helped our class get closer and just... get to know each other better. It was nice that everybody was comfortable enough to open up with one another without judgment.

I feel like we have a stronger relationship in this class than the other class because we heard other students in this class, their feelings and deep feelings and experiences in their lives so that distinguishes us from other classes that haven't done the mindfulness.

Like the teachers, several students discussed the rapport built between themselves and the facilitators, established within a non-judgmental environment.

They never judged us on what we were saying and what we were doing. They were always very open and they always shared stories about themselves to help us open up.

A number of comments surrounded how the class was formatted to stimulate student learning. As had several teachers, many students discussed the circle format as building connectivity with others in the group.

I liked the circle, being in a circle, because it lets you see everyone. And I feel like the way people express themselves is also through facial expressions and the way they move their hands and all that stuff. So it was good to see how everyone felt through their facial expressions and different things like that.

For me sitting in a circle shows... Because circles are usually a sign of completion, so sitting in a circle actually did make me feel like I was connected to everyone.

One student “liked the part when they paired us into twos because I get paired with people I don’t really talk to in class so I get to talk to them,” Another shared, “We did this little breathing exercise when we were standing up and it was really fun. You could see that everyone enjoyed it, so if they incorporated that more into the beginning and the middle it would have been better for everyone else, I think.”

Similar to comments raised by the teachers, some students noted the use of the talking stick as beneficial in giving everyone a chance to speak.

I actually liked the way they used the talking piece when they went around the circle and they gave everyone the chance if they wanted to elaborate on the topic they could and if they didn’t they would just skip and you wouldn’t be forced to make something up on the spot. You’d feel, oh you can come back to me once I think of something. That way, I feel like everyone has the chance to say something and not feel pressured as well as feel involved.

The web method and fishbowl approaches were also raised as important tools to include everyone in the discussion.

I like the web method because the web method, one person would have the talking stick and then once they finished talking, they’d give it a person of their choice. So this would encourage people who wouldn’t talk much to speak.

When the fish bowl method came into play I guess it was only four people were in the centre and everyone else was around them so it gave us an opportunity to just sit back, relax and just actually listen to four different opinions at the same time. So it was kind of a unique experience

that it just let us get to know them better and just like the way they are when not everyone can just join and start talking.

Some students were more comfortable sharing in smaller group discussions than in the larger group setting.

I liked how it wasn't just a big group we opened up to. They split us into smaller groups and then we got to know each other better that way because we opened up more because it was such a smaller group.

Some students thought the creative and/or artistic aspects of the MAC were useful.

I liked how they kind of incorporated that... even though we did creative stuff they still brought it back to mindfulness. So, when we were playing, well, listening to the music, we were meditating but listening to the music at the same time and then when we did the play, the play had a lesson in it and we connected the lesson back to mindfulness again.

While the community service project was described as needing some revision, one student commented, "I've never actually thought of just doing community service just for the fact... Just for doing it for no reason but I've always just done it for school. So through that I learned that you could just always help out, even if it's in little ways."

For some, the MAC program offered a welcome break from their regular class routine.

We could come to school, just relax and overlook ourselves instead of coming to first period and just working right away... just concentrate more on yourself instead of the work you're doing.

I liked it because it was different than just sitting in a class every day because in class you're just learning, you have homework to do and you have to study for tests. Here I felt there aren't too many requirements from you. You just come in, and if you wanted to share you could so I really liked the change in the environment. I thought it was something different and got me excited to come.

### Aspects of the Program Disliked by Teachers

Teachers discussed parts of the program that they did not prefer or wished had been different. Some disliked aspects that had to do with the structure of the program or its fit within the class schedule.

Our date was a Friday and unfortunately with the senior classes, not that we advocate this or promote it in any way, but some kids gave themselves an extra long weekend sometimes and I found the attendance was a bit sporadic.

Participation actually waned a little bit towards the end. Part of that was we were cramming to get a number of lessons in, just kind of fit them in before the semester ended, so even just the scheduling change might have alleviated that but it may not have, too. I was noticing that okay, they had taken in the level that they were able to, they had kind of reached the saturation point.

Maybe I had unrealistic expectations, but I wanted the students to be a lot closer as a result of this. I'm not sure if that was an unrealistic expectation or if it was because of absenteeism and whatnot, and maybe it being kind of pushed in at the end or too long or whatever, that it didn't happen in the way that I anticipated it might.

Some discussed having the program offered only to students interested in participating, rather than to all students in the class, as some were not invested in it.

For my particular class, there were a number that never did, that never quite opened up or really came to it with 100% effort. But I was hoping, too, that every week it would be a little bit different, but every week it was a different dynamic but the same handful of students really benefitted... I don't know if that, if it maybe would have been more beneficial if it was only the people that could, that really were interested in it were then participating. It would have changed the dynamics entirely but it's just a thought.

Others discussed not having sufficient time to engage in reflection before sharing meaningfully in the group.

Sometimes I found topics were so deep and so meaningful and you so wanted to share, but it was hard to come up with an example right on the spot. So maybe if they did a few more opportunities of think, pair and share kind of idea that might elicit more responses from kids.

### Aspects of Program Disliked by Students

There were aspects of the program that may have been uncomfortable or difficult for some student participants. Some felt that sharing feelings or emotions is a gradual process, and not something to be done right away, which may feel intrusive if they are not ready. One participant expressed, "I didn't like sharing my feelings. I don't like talking in public so I did not enjoy that part." Some felt awkward in the circular Council format or the silence fostered in the Council; others disliked being asked to speak when it was their turn.

With the circle it was kind of uncomfortable because you don't really do that often and then you're sitting there and everybody's eyes are on you and usually when you're at school, we've all been in school for four years we just sit and our eyes are like that and we don't look at anybody, right? So the second that you make us have to look at each other it makes us really uncomfortable. So, the first Council, I remember no one was saying anything and everybody's eyes were down, so maybe they should do it like we've already been doing it for so long.

I know a lot of people mentioned that the parts where it was silent were really awkward for them. All the silent moments, they're very awkward. It's really hard to share when everyone's silent.

When the talking object got passed around, sometimes people may not have wanted to speak when it got to their turn.

The following participant disliked the distraction that s/he experienced during the exercise of TUZA.

For me, I'm not really a fan of TUZA because I get easily distracted so it was kind of 15 minutes or 10 minutes or whatever of just looking at the wall for me or finding random dots on the wall. I didn't really like that...

This participant explained that their awkwardness in the Council was interpreted as disrespect.

Because we're teenagers, it was really distracting when we were looking at each other because we would make eye contact, laugh and stuff, but they found that disrespectful. I think it would have been better for them to understand us instead of just viewing us as disrespecting them because that's not what we were really doing. We just felt awkward-ish so we really didn't know how to respond to the situation.

Some felt that forced participation put pressure and/or guilt on Council members to participate, resulting in less genuine responses when students were put on the spot.

I also felt that you felt obligated to pick it up so it wasn't so awkward, so, I didn't like that either because, I don't know, you had to come up with something really fast and stuff.

A few students felt the material became redundant week to week and that greater diversity of topics was needed. One shared, "Yeah and maybe go over different subjects because it felt you were going over the same thing forever."

In one group in particular, discussion related to some students feeling infantilized by their leaders and their desire that the facilitators would have related to them as young adults, rather than as children.

So, sometimes one of the leaders spoke to us like we were children but we are in grade 12 so if they could speak to us like we're mature and we know what we are about, that would be nice. Sometimes she would explain things and it was like, okay we get it, we know what we are supposed to talk about. So if they could just speak to us more like we are adults instead of treating us like children.

As a mandatory program, some resisted participating fully, which resulted in low attendance and/or minimal contributions.

I think that knowing this was mandatory more people felt like they didn't want to come. I know I, personally, did not go to a few of the meetings on purpose but I feel like that was only because it was mandatory. It's like when I'm told to do something I don't really do it.

Various aspects of the program were depicted as "boring" or as not offering sufficient stimulation. One commented on the journaling activities, "I didn't like the journal part and that's it... I already tell everything, my feelings and everything so I don't need to write them down. It's repetitive." Others critiqued the circle discussion and lack of physical movement in the program.

For me I think that it would be better if we had more hands on activities. Or not just sitting around in a circle and having conversations but also activities that we move around and things like that.

I think having to get up a bit because half of the time we were sitting down and we'd only get up for, like, two seconds just to stretch a bit, so I found it kind of boring because I'm an active person. So, I can't be sitting down for too long.

More things that relate to what teenagers are actually going through instead of the big pictures.

### Student Suggestions for Program Improvement

Students offered a number of suggestions to improve the program for future participants. As is evident some of these recommendations conflict with those offered by other students or by teachers.

One recommendation was to shorten the individual MAC lessons.

I think I'd make it a little bit shorter, because I feel like for however long it goes, what, 72 minutes, because that's how long a period is, I would make it shorter because we spent a lot of time waiting for people to say stuff or waiting for someone to speak up or just kind of sitting around. We spent a lot of time waiting, so I think I would make the periods a little bit shorter.

Some wanted shorter sessions, but more of them. "Maybe make it shorter because at the end, it felt it was just dragging on. If you have more sessions, you could just make it shorter sessions," stated one participant. Again, the idea of including only students interested in participating was raised.

Bring in people who actually want to be there, who actually want to share stories and listen because there were some people who aren't even part of it and don't want to be part of it.

Others desired that sessions be conducted later and that they incorporate more fun or active activities.

At the end of the last session we did a little activity and that was really fun and I think that if they incorporated that more into the rest of the 12 sessions more people would have liked it and more people would have enjoyed getting to know each other in the circle. So, if they incorporated more games and more activities like we did right at the end that would have been better.

I think that we should probably not have the sessions so early in the morning because, for myself, I'm probably a little bit not as awake and aware and I don't really participate as much as in the middle of the day.

Other participants felt that program facilitators could make the Council "more interesting" by being more geared to their age group.

I think they should make it more interesting for our age because I felt it was a little bit over our age to be sitting there talking about certain things for a certain amount of time, especially for most of us who are out playing sports every day and busy with school. I think putting a little bit more interest in the subjects would do a lot better.

Another noted however, "I liked the creative parts, I liked when they brought in music and I also liked the part where they made us do a play. So, I liked the more creative aspects of it."

A more thorough explanation of MAC program expectations could be helpful before start of program, in order to review the program's objectives, goals, activities and topics.

I think just at the beginning they should really explain what it is about because I remember going into it and literally none of us had any idea at all. Whereas if they explain what you are going to get out of it and what you are going to be doing beforehand, because I remember she came into the class with yourself, and we had no idea what it was. We were like, okay meeting, but once you get in and you start to realize what it is about I think it would be beneficial for people coming into it knowing what they are getting into.

One student discussed having the facilitators guide students through blogging activities.

I also think that using the blog, a way that they can get people to use the blog more, is if in one of the sessions, we actually went to the computer lab and we actually got a login and a password because I think that most of my class did not go into the blog at all.

There seemed to be a lack of clarity around the community service project. Students were not held accountable for this part of the program so were not engaged or motivated to follow through, or were confused regarding the expectations. Some suggested conducting a project as a class (with the leaders) to encourage people to be engaged and invested to carry the project through.

I think any suggestions, maybe about the community service project, I don't think we should do it, unless they're there to watch over us or something because, with the community service project, I don't know if anybody actually did it, you know what I mean? So, I think, maybe if they kind of engaged us or we had a field trip or something to, like, a soup kitchen, that might be a little bit better because, they just said, go do a community service project. And then everybody was like, okay whatever and I don't think anybody really did it. So, I think they might want to engage more in that or give more specific details into that.

In the circle format, many students sat in cliques, which could be intimidating for some students. One student recommended that facilitators instruct students to switch seats randomly after they have chosen seating arrangements.

With the circle format though, I don't know if it made too, too much of a difference connecting us all because, even when you're sitting in a circle, when you all go to sit, unless you're late or something, you usually sit with your friends, you know what I mean? So you're usually just still within your group even though you're in a circle. So, I liked the part when they made everybody get up every once in a while and they would make us go sit in a different spot, I think when they did that it made everybody more connected, but when they didn't it didn't.

Another student suggested that facilitators consider other methods of structuring the discussion to avoid awkwardness and/or discomfort.



I didn't like the part where they made us do the popcorn method of speaking. So, you put the rock in the centre and someone has to come up and say something because there would be like... sometimes no one really wants to say anything. So it's kind of uncomfortable and then everybody feels like they're put on the spot and it's kind of awkward too when no one... it's just like a table, all these people just sitting there and no one is getting up to say anything so it's kind of uncomfortable in that way. I think there might be better ways to carry a discussion.

Some felt that incorporating more small group discussions could be beneficial for those uncomfortable speaking to the whole class, and could be more productive in terms of experience sharing.

There was a part where we broke off into smaller groups to talk about something and you could tell everybody would talk then, as opposed to when it was a bigger group, like people would be a little more scared to talk. So maybe if there were more times when you would break off into smaller groups and talk with a group of two or three, then there would be more progress because people would be more willing to share with 2 people than they would with 20.

#### Teacher Suggestions for Program Improvement

Teachers offered a number of recommendations to improve or enhance the effectiveness of the program.

Twelve sessions, I wish that it could have been more. There were times that I wished the sessions could have been longer, like there could have been more time given to come up with things.

Maybe rather than being twelve sessions long as a one-hour session kind of thing, maybe condense that into sort of like a two-day retreat or something like that.

One teacher suggested the use of the "pair and share" technique to avoid having students share experiences on the spot, which would allow students time to reflect and process their thoughts with a colleague before sharing with the broader group.

It's kind of hard to think of something so deep and meaningful on the spot. So maybe if they could get the kids to just turn and do pair and share kind of thing first to sort of give them an opportunity to sort of talk with just one partner and maybe sort of think through their thoughts and then come back to the group and then they could share from there.

Some felt that facilitators could make better use of thought journals within the MAC sessions.

The students did get journals and we didn't often get a lot of opportunity to journal within that circle, but maybe that would also be another way for those that didn't feel comfortable in talking immediately that they could journal about it, like a minute or two, and then maybe discuss something like that. So maybe incorporating the use of the journaling a little bit more into the circle might be a suggestion as well.

Some teachers expressed that restricting the program to include only students who are genuinely interested in participating would enhance the group dynamic.

What I was asking myself, too, is how to get these students that clearly wanted to share and were benefiting from the program... it's hard to have that with a timetable that you could only do it first period. I don't know if it's an after-school program or a lunch program that it would have the same numbers but I think it would certainly bring in students that wanted to share.

Twelve weeks was a bit much, but I wonder if it could be incorporated into a course but it would be an option that students could actually choose to take it, so if this was an interest for them. So I put that out just because then you might have a group that's gelling together more, if it's by choice.

## **SUMMARY AND DISCUSSION**

### *Demographics and Program Evaluation Findings*

The majority of students involved in the research study were female (76 percent as compared to males, 24 percent), in grade 12 (79 percent) and age 17 (69 percent). The MAC program lessons participants indicated they were most likely to continue to use in the future included mindful listening, relationship skills, responsible decision-making, mindful speaking, social awareness and self-management. Lessons that participants reported they were likely to continue to use, albeit less frequently included TUZA/mindful breathing, the body scan and mindful eating. At the conclusion of the program, just over half of the student sample indicated that they practice TUZA/mindful breathing twice daily as recommended. While the majority responded that they use TUZA twice a day, only four percent responded that they "always" practice it, many use it "most of the time" (17 percent) and most "sometimes use it" (28 percent).

The areas in which participants indicated they were employing the skills learned in the program currently (after completion of the program) include: to cope with challenges, to work with others, to improve their relationships with others, to manage stress or anxiety, and to be calm and relaxed. A statistically significant difference in gender was found in the area of coping with feeling sad, with

females indicating that were applying MAC skills to cope with sadness more often than their male counterparts.

Overall, participants felt that they learned “a lot” or “a great deal” during the MAC program, and most participants (81 percent) indicated that at the conclusion of the program they were currently applying what they learned about mindfulness into their daily lives. Almost three-quarters of the participants (73 percent) responded that they found the MAC program to be highly valuable, and only 12 percent expressed that it was not valuable. Two-thirds of the participants completed the homework journal assignments (mean of 2.94, on a scale from 1-5, with 1 being not at all and 5 being always) and many participated in the volunteer community service project (63 percent).

### *Pre- and Post- Questionnaire Analysis*

The pre- and post- questionnaire analysis revealed interesting findings on the gains associated with MAC participation. Statistically significant differences were found on all standardized instruments (the Five-Facet Mindfulness Questionnaire, the Positive Youth Development Questionnaire, the Trait Meta-Mood Scale and the Revised Child Anxiety and Depression Scale), with the exception of the Academic Motivation Scale – High School Version.

In the following section we review which aspects of the standardized scales employed achieved statistical significance. Statistical significance is a term used to discuss the probability of a test statistic occurring by chance or whether there may be a pattern or effect that the test statistic has on the population. If the probability of obtaining the value of the test statistic by chance is less than .05, then the researcher may conclude that there is an effect in the population (Field, 2005). Accordingly, the discussion of the following standardized scales uses the term statistical significance to note a particular domain or facet that appears to demonstrate an effect that is not likely to have occurred by chance.

The Five-Facet Mindfulness Questionnaire indicated improved scores for all five mindfulness facets (i.e., observing, describing, acting with awareness, non-judging of inner experience and non-reactivity to inner experience) but achieved statistical significance in students’ observing skills ( $p < 0.05$ ), referred to by Baer et al. (2006) as the ability to be aware of, or attend to, internal and external stimuli (i.e., sensations, emotions and cognitions).

The Academic Motivation Scale – High School Version demonstrated small increasing trends from pre to post program assessment on all factors related to intrinsic motivation (i.e., completing an activity) and decreasing trends on measures of extrinsic motivation (i.e., behaviours participated in as a means to an end, not for their own sake; Deci, 1975 as cited in Vallerand et al., 1992); although none of the factors achieved statistical significance.

The Positive Youth Development Questionnaire demonstrated statistically significant differences before and after MAC participation in the areas of character (acting with integrity, respect for cultural and societal rules and standards for morality) and confidence (one's internal sense of self worth or self efficacy; Lerner et al., 2008a). The other measures also demonstrated positive trends (i.e., competence, caring and connection) although these did not reach statistical significance.

The Trait Meta-Mood Scale showed statistically significant ( $p < 0.05$ ) improvement in students' emotional clarity in attention to feelings and clarity in discrimination of feelings (Salovey et al., 1995) after participating in the MAC relative to baseline scores. Scores for attention increased, but this change was not found to be statistically significant.

The Revised Child Anxiety and Depression Scale revealed a statistically significant difference in social phobia ( $p < 0.05$ ) and generalized anxiety scores ( $p < 0.001$ ) post MAC compared to baseline. Although not statistically significant, all other anxiety and depression disorders (i.e., panic disorder, major depression, separation anxiety, obsessive-compulsive) had declining trends.

Clearly, participating in the Council brought about significant experiences in the lives of many participants, as assessed before the program compared to directly after MAC participation. Students' improved ability to observe their own sensations, emotions and cognitions demonstrated in the Five-Facet Mindfulness Questionnaire appears to be confirmed in findings from the Trait Meta-Mood Scale in that after MAC participation, students show greater emotional clarity in discriminating between and attending to their feelings. These findings resonate with the literature on mindfulness practice in youth which has shown that contemplative-based programs have resulted in greater self-awareness leading to improved abilities in the early identification, and better acceptance of, one's own thoughts and feelings (Kerrigan et al., 2010), as well as in the development of a skill set that promotes improved emotional well-being (Meiklejohn et al., 2012). Participants also demonstrated improvements in the areas of character and confidence, also reported by Greenberg and Harris (2011), who found that student

participants in a ten lesson mindfulness series showed improvements in self-reported optimism, positive affect and benefits in self-concept. In addition, participants in our research study showed reduced levels of anxiety, particularly within the social phobia and generalized anxiety categories. Meiklejohn et al. (2012) have also noted that other research studies incorporating mindfulness training for students collectively demonstrate self-reported improvements in mood and decreases in anxiety, stress, and fatigue. Caution in interpreting this study's findings broadly is recommended however, due to the limitations previously noted. Future studies should adopt a random control design to ensure greater reliability (reducing bias and spurious causality) and measurements after time has elapsed (six months to a year) post MAC to assess the fidelity of program gains over time.

### *Qualitative Data*

The focus group with teachers raised a number of important themes and areas in which the MAC program effectively promoted the personal growth and learning of participants. A number of teachers discussed the improved relationships they experienced after participating in the MAC, both inside and outside the classroom, in their personal and professional lives. Likewise, Meiklejohn et al. (2012) noted similar preliminary findings related to mindfulness-based practice among teachers showing that the ability to establish and maintain supportive relationships with students in the classroom was improved. In this study, some teachers expressed developing better communication skills, particularly in relation to actively listening to others. One participant pointed to the "amazing change" and several participants reported feeling more enriched or as developing more enriched relationships with others as a result of their involvement in the program. The program was deemed by many participants as a means to achieve calmness, relaxation and reductions in stress, while others described accruing greater self-awareness or the capacity to cope in challenging situations. These findings are confirmed by other studies that have found mindfulness training useful for stress reduction and relaxation (Kabat-Zinn, 1990), as well as for improved emotional intelligence through the growth of self-awareness, empathy, social skills and motivation (Goleman, 1995).

A number of the themes addressed in the teacher focus group also emerged in the focus groups with students. Some students deemed that the skills developed through the MAC program were effective tools in increasing relaxation and in stress reduction, in developing greater cohesion and connectedness among members, and in augmenting social awareness and understanding of others. Others pointed to the self-management skills learned to effectively identify and regulate their feelings and emotions.

Strengthened self-regulation and impulse control were also notable potential benefits found by Meiklejohn et al. (2012) in a review of school-based mindfulness training programs throughout K-12 education globally. The communication and relationship skills were considered by a number of participants to be relevant and applicable to students' daily lives. Furthermore, the MAC had an impact on student learning; one participant noted the positive difference in instructional style engaged through the MAC vis-à-vis the traditional classroom, while another focused on the improved concentration s/he experiences as a result of participating. A number of students commented on the opportunities for self-discovery presented in the MAC, and their increased awareness and/or perceptions of themselves due to in the process. Likewise, research by Kerrigan et al. (2012) noted that a minority of youth participants identified a transformational shift in their overall sense of self and/or life orientation as a result of participating in mindfulness-based programming.

There were uncomfortable experiences and areas for improvement however, of the MAC program. Some participants felt uncomfortable or pressured to share with the larger group. For others, the silence fostered in the Council was awkward. A number of participants made recommendations on how to better deliver the program to avoid being put on the spot to relate personal information (for example, talking in smaller groups). Some discussion surrounded the need for age appropriate interaction; one participant expressed how the leader(s) "could just speak to us more like we are adults instead of treating us like children." A few participants felt the MAC could be "more interesting," however others discussed enjoying the creative aspects of the program, which could potentially be further developed. While the program could be further refined to address these issues, the skills taught in the MAC are invaluable, as captured by one student, "It (mindfulness) helps you in general as a person in every single way. In work, in relationships, at home, other people because the more you listen to them and it's easier to talk to them, the better of a person you've become and the more people want to talk to you. So it just helps you in general as a person."

### Aspects Liked Most by Participants

Both teacher and student responses indicated that the circular format of the group was helpful. This arrangement was deemed to be inviting, promoting a sense of equality and unity among Council members. The use of the talking piece encouraged respect and attention to the speaker, and helped to focus the discussion. The "top notch" facilitators were seen as well versed in the area of mindfulness practice, and were considered to be authentic, trustworthy, energetic, "roles models" and as building

strong rapport with participants. The facilitators helped to create a safe space for discussion, in a non-judgmental and comfortable environment. The importance of practicing mindful listening particularly resonated with students, and helped to develop greater cohesion among classmates. Feedback from teachers indicated that the program was appropriate for students' social and emotional learning, providing important take-away tools and life skills for young adults. Students noted the MAC's use of creative and artistic media as beneficial to their learning, as well as the 'active' components of the program that engaged them and offered something different from the traditional educational format. While a number of students noted how the community service projects could be more effective, some students expressed that they learned that their actions, no matter how small, are able to make a positive difference.

### Aspects Disliked by Participants

Participants noted that poor or sporadic attendance in the group adversely affected the group dynamic. Some commented that there was not enough reflection time built in to the program or that students were put on the spot to speak. Input from the teachers noted that not everyone in the group was invested, which affected the level of connectivity created among members. At times there was a lack of continuity/flow; some sessions were delayed and then were packed altogether at the end of the program. Feedback from students revealed that the request to have everyone share created awkwardness or pressure, and for some, sharing feelings/emotions right away felt intrusive and/or less genuine, and thus sharing of these intimate details should be a gradual process. At times, some students felt infantilized by program facilitators and desired interaction at an age appropriate level (this was particularly apparent in one specific class). The introduction of more diverse topics was discussed as a means to offset potential redundancy in the program.

### Suggestions for Program Improvement

Recommendations by a number of participants included offering the MAC in a different format, with shorter but more sessions. Another suggestion by teachers and students was to restrict the program to students genuinely interested in participating, which potentially could enhance the dynamic. The use of the "pair and share" technique was suggested as a tool to allow more time for students to adequately reflect on their experiences before sharing their thoughts with the group. Better use of journals and/or blogging was identified as something to be fostered through built-in time and modeling of these

activities within a MAC session, as was small group discussion, which may be particularly beneficial for those who are uncomfortable speaking to the wider group. A thorough explanation of MAC objectives, goals, expectations and activities at the start of the program were identified as potentially helpful, as students indicated the wish to be informed of the components of the MAC before launching into the program. Moreover, feedback from students indicated that there was a lack of clarity pertaining to the community service project. Students were not held accountable for this component and were thus not motivated/engaged to participate. Conducting a group project (including the educators) might be helpful in increasing the level of engagement and participation in this aspect of the program.



## REFERENCES

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
- Baer, R. A. (2006). Kentucky Inventory of Mindfulness Skills. Retrieved May 16, 2011, from <http://integrativehealthpartners.org/downloads/KIMS.pdf>
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment, 11*(3), 191-206.
- Baer, R. A., Hopkins, J., Krietemeyer, J., Smith, G. T., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*(1), 27-45.
- Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., ... & Williams, M.G. (2008). Construct validity of the Five Facet Mindfulness Questionnaire in meditating and nonmeditating samples. *Assessment, 15*(3), 329-342.
- Baer, R., Walsh, E., & Lykins, E. B. (2009). Assessment of mindfulness. *Clinical Handbook of Mindfulness, 3*, 153-168.
- Baum, C., Kuyken, W., Bohus, M., Heidenreich, T., Michalak, J., & Steil, R. (2010). The psychometric properties of the Kentucky Inventory of Mindfulness Skills in clinical populations. *Assessment, 17*(2), 220-229.
- Broderick, P. C., & Metz, S. (2009). Learning to BREATHE: A pilot trial of a mindfulness curriculum for adolescents. *Advances in School Mental Health Promotion, 2*(1), 35-46.
- Canadian Mental Health Association (2012). *Fast facts about mental illness*. Retrieved November 5, 2012 from <http://www.cmha.ca/media/fast-facts-about-mental-illness/>
- Chorpita, B. F., Moffitt, C. E., & Gray, J. A. (2005). Psychometric properties of the Revised Child Anxiety and Depression Scale in a clinical sample. *Behaviour Research and Therapy, 43*, 309-322.
- Chorpita, B. F., Yim, L., Moffitt, C., Umemoto, L. A., & Francis, S. E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. *Behaviour Research and Therapy, 25*, 377-395.
- Duerr, M., Zajonc, A., & Dana, D. (2003). Survey of transformative and spiritual dimensions of higher education. *Journal of Transformative Education, 1*(3), 177-211.
- Field, A. (2005). *Discovering statistics using SPSS* (2<sup>nd</sup> ed). London: Sage.
- Goleman, D. (1996). *Emotional intelligence: Why it can matter more than IQ*. New York: Bantam Books.

- Government of Ontario (2006). The Ontario Curriculum Grades 11 and 12: Guidance and Career Education. Retrieved November 1, 2012, from <http://www.edu.gov.on.ca/eng/curriculum/secondary/guidance1112currb.pdf>
- Greenberg, M. T., & Harris, A. R. Nurturing mindfulness in children and youth: Current state of research. *Child Development Perspectives*, 6(2), 161-166.
- Hart, T. (2004). Opening the contemplative mind in the classroom. *Journal of Transformative Education*, 2(1), 28-46.
- Holland, D. (2004). Integrating mindfulness meditation and somatic awareness into a public educational setting. *Journal of Humanistic Psychology*, 44(4), 468-484.
- Jennings, P. A. (2008). Contemplative education and youth development. *New Directions for Youth Development*, 118, 101-105.
- Kabat-Zinn, J. (1982). An outpatient program in behavioural medicine for chronic pain patients based on the practice of mindfulness mediation: Theoretical considerations and preliminary results. *General Hospital Psychiatry*, 4, 33-47.
- Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Delta.
- Kabat-Zinn, J., Massion, A. O., Kirsteller, J., Peterson, L. G., Fletcher, K. E., Pbert, L., Lenderking, W. R., & Santorelli, S. F. (1992). Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *American Journal of Psychiatry*, 149, 936-943.
- Kerrigan, D., Johnson, K., Stewart, M., Magyari, T., Hutton, N., Ellen, J. M., & Sibinga, E. M. S. (2011). Perceptions, experiences, and shifts in perspectives occurring among urban youth participating in a mindfulness-based stress reduction program. *Complementary Therapies in Clinical Practice*, 17, 96-101.
- Lerner, R., et al. (2008a). The Positive Youth Development Student Questionnaire Short Version. Retrieved July 19, 2011, from <https://cyfernetsearch.org/sites/default/files/Positive%20Youth%20Development%20Student%20Questionnaire.pdf>
- Lerner, R., et al. (2008b). The Positive Youth Development Student Questionnaire Short Version Psychometrics. Retrieved July 19, 2011, from [https://cyfernetsearch.org/sites/default/files/Positive%20youth%20development%20student%20short%20\(10%20yrs%20and%20older\)\\_0.pdf](https://cyfernetsearch.org/sites/default/files/Positive%20youth%20development%20student%20short%20(10%20yrs%20and%20older)_0.pdf)
- Lerner, R. M., Lerner, J. V., Almerigi, J., Theokas, C., Phelps, E., Gestsdottir, S., ... & von Eye, A. (2005). Positive youth development, participation in community youth development programs, and community contributions of fifth grade adolescents: Findings from the first wave of the 4-H Study of Positive Youth Development. *Journal of Early Adolescence*, 25, 17-71.

- Meiklejohn, J., Phillips, C., Freedman, M. L., Biegel, G., Roach, A., Frank, J., ... Saltzman, A. (2012, March). Integrating mindfulness training into K-12 education: fostering the resilience of teachers and students. *Journal of Mindfulness*. DOI: 10.1007/s12671-012-0094-5
- Mindfulness Without Borders (2011). Program Highlights. The Advantage for Youth. Retrieved November 5, 2012, from <http://mindfulnesswithoutborders.org/youth>
- Riskin, L. L. (2004). Mindfulness: Foundational training for dispute resolution. *Journal of Legal Education*, 54(1), 79-90.
- Roelofs, J., Meesters, C., Huurne, M., Bamelis, L., & Muris, P. (2006). On the links between attachment style, parental rearing behaviors, and internalizing and externalizing problems in non-clinical children. *Journal of Child and Family Studies*, 15(3), 331–344.
- Rwanda Education NGO Coordination Platform (2010). Mindfulness Without Borders. Retrieved July 19, 2010, from <http://www.rencp.org/members/mindfulness-without-borders/>
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Salovey, P., Mayer, J., Goldman, S., Turvey, C., & Palfai, T. (1995). Emotional attention, clarity and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J.W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 125-154) Washington, DC: American Psychological Association.
- Spence, S. H. (1997). Structure of anxiety symptoms among children: A confirmatory factor-analytic study. *Journal of Abnormal Psychology*, 106, 280-297.
- Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 2<sup>nd</sup> Ed. Thousand Oaks, CA: Sage.
- Teasdale, J. D., Segal, Z., & Williams, M. G. (1995). How does cognitive therapy prevent depressive relapse and why should Attentional Control (Mindfulness) Training help? *Behaviour Research & Therapy*, 33(1), 25-39.
- Teasdale, J. D., Segal, Z. V., Williams, M. G., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology*, 68(4), 615-623.
- Vallerand R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C. B., & Vallières, E. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic and amotivation in education. *Educational & Psychological Measurement*, 52, 1003-1019.
- Weiss, D. C., & Chorpita, B. F. (2011). Revised Children's Anxiety and Depression Scale: User's Guide. Retrieved October 4, 2011, from <http://www.childfirst.ucla.edu/RCADSGuide20110202.pdf>