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Mindfulness and Related Factors among Undergraduate Students

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Abstract

The purpose of this research is to investigate the status of mindfulness among students. 273 undergraduate students studying in the first semester were research participants. This study was carried out using Mindfulness Attention Awareness Scale. The mean level of mindfulness in the respondents is 3.77 and there was no significant correlation between the level of mindfulness and age, gender, religion, race, family and educational background. Field of study had no effect on this level. The correlation was between the level of mindfulness and health condition ($r=.04$, 2 tailed). To strengthen the level of mindfulness among students, increasing health condition, upgrading the quality of mental health, applying mindful principles and increasing thrust and novelty in universities are beneficial.

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1. Introduction

In recent years, clinicians and psychologists have more focused on mindfulness, as an item of mental health. Mindfulness is a psychological process and coping ability to adjust maladaptive behaviours, improve awareness and reduce stress, anxiety and depression in both patient and healthy populations (Taren, 2013). It is external, internal and non-judgmental reaction of the consciousness based on attention and awareness (Brown & Rayan, 2003). It involves two components in the present moment; self-regulation of attention to increase recognition of mental

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events and adopting an orientation toward one's experiences characterized by curiosity, openness, and acceptance (Bishop et al in 2004). Mindfulness helps to improve positive health outcomes (Holzel, 2011) and encounter uncomfortable emotions and feelings (Eifert & Heffner, 2003). The majority of students enter in the university in their late teens, at a time in life in which many mental difficulties have been shown to commence (Lynch et al., 2011). It can produce instability and effect on academic achievement (Beauchemin, 2008). Students' life can be both exciting and challenging as students are thrown into the academic mill while at the same time trying to find their footing socially, financially and often geographically (Kawase et al., 2008). It has influence on the mindset (Lynch, 2011) and outcomes of undergraduate students (Karakashian, 2011) compared with their non-university peers (Lynch et al., 2011). We tried to more specify our investigation, as a novel research location, from the university to the fields of study related to the organizational part of mindfulness. Organizational mindfulness is achieved by continuous scrutiny and refinement of expectations based on new experiences and appreciation of the subtleties of context (Hoy, 2003). Its requirements (flexibility, vigilance, openness, and the ability to break set) can be different in each fields of study. Playing with ideas and creating novelty in the faculty classrooms, to feel safe for taking reasonable risks and experiment, and to be resilient are related to organizational mindfulness. In addition, different principal can have distinct profound effects on mindfulness (Hoy, Gage & Tarter, 2006). Some main factors build the framework of mindfulness, as a property of mental health, are individual, attributes and behaviours, social and economic circumstances and environmental factors. Some protective ones related to our study, are physical health, social support of parents, good parenting / family interaction, social and gender equality, physical security and safety (WHO, 2012). Lack of positive propellants reduces the level of mindfulness even many years later (Kieling et al, 2011). In this research, seven factors (age, gender, health condition, family status, educational background, religion and race) were examined in correlation with the level of mindfulness. Baer (2008) believed that age affect the mind's ability to judge and concentrate better, but Lykins in 2009 and Shill & Lumely in 2002 considered no relationship between age and mindfulness. Cresswell et al in 2007 revealed there is a marginal association between gender and mindfulness with males reporting greater trait mindfulness. Women may have lower levels of mindfulness than men leading to differences in adaptability and stress responsiveness (Pico-Alfonso et al., 2007). According to a Shill and Lumley survey in 2002, females are more psychologically minded than males. Cresswell et al. in 2007 discovered mindfulness was not associated with ethnicity/race. There are rare studies about the relationship between educational background and mindfulness but Schmertz in 2008 about the educational level believed educational level is not significantly relate with the level of mindfulness. There is positive relationship between mindfulness and mental and physical health (Keng et al., 2011; Mandal et al, 2012). We cannot find any study searched the relationship between existence of parents in the life during this specific age range and the level of mindfulness. It may be the first time that this factor is investigated. Bhui (2008) believed religion is a cultural way of coping from which people derive meaning for their lives. In relation with religion, Mindfulness is a coping strategy and as a power of mind, is relate to meaning of life. Concerning the effects of both religion and race, Bhui (2008) found Black Caribbean Christians used more religious coping than Irish and White British Christians and that Bangladeshi Muslims showed more dependence on religious coping than Pakistani Muslims. Shill & Lumley (2002) did not find a specific correlation between religion and mindedness. The purpose of this study is to identify the level of mindfulness among undergraduate students of University Technology Malaysia (UTM), to demonstrate the level of mindfulness among different fields of study and to recognize the relationship between the level of mindfulness and seven factors.

2. Research Methodology

Undergraduate students in the first semester of 4 faculties, in University Technology Malaysia (UTM) were selected randomly by utilizing multi sampling in order to give equal chance to all members of the population. Therefore, 4 faculties including Education, Management, Science and Civil Engineering were chosen for this study. 300 students were selected with equal numbers in each faculty. The questionnaire consists of 2 parts. Part A is items about their relationship with the level of mindfulness and part B is English version (the main version) of the MAAS (Mindfulness Attention Awareness Scale). MAAS (Brown & Ryan, 2003) is a one-dimensional scale which purports to measure attention and awareness of present moment experiences (Haigh et al., 2010). MAAS have good internal consistency, with alphas of .82 and .87 in students, cancer patients and adult samples (Carlson & Brown, 2005) and in our study after modifying question number 9, the alphas is .75 in pilot study. MAAS demonstrated adequate convergent, discriminant, and incremental validity (Brown & Ryan, 2003). The measure takes 10 minutes or less to

complete. Data were analysed by Statistical Package for Social Science 19.

3. Result and Discussion

Table 1 shows number of respondents based on Demographic factors. In the item of educational background the Malaysian matriculation program is a pre-university preparatory program, STPM is The Sijil Tinggi Persekolahan Malaysia (Malaysian Higher School Certificate) and STAM is Sijil Tinggi Agama Malaysia (Malaysian Religion Higher Certificate).

Table 1. Number of Respondents based on Demographic Factors

Demography	Percentage			
Gender	Female: 73.3%	Male: 26.7%		
Race	Malay: 80.2%	Chinese: 9.2%	Indian: 1.1%	Other Races: 6.6%
Religion	Buddhism: 5.9%	Islam: 87.2%	Christianity: 5.1%	Hindu: 0.4%
	Irreligion: 0	Else: 1.1%		
Health Problem	Physical: 10.3%	Psychological: 7%	None: 80.6%	Both: 1%
Education	Management: 19.4%	Engineering: 27.1%	Science: 26%	Education: 27.5%
Background	STPM/STAM: 12.8%	Diploma: 15.4%	Matriculation: 60.4%	Else: 10.6%
Age	17-21y: 84.6%	22-26y: 12.1%	27-31y: 1.5%	Above: 1.8%
Family	Alive Parents: 92.3%	1 Alive Parent: 6.6%	No Alive Parent: 0.4	

The mean score in this research is 3.77 while the score for community adults is 4.20 and 3.83 for College students respectively Brown & Ryan, 2003; Brown et al., 2011. The finding of the overall analysis showed that the level of mindfulness does not relate to age, gender, race, religion, educational background and family condition. The correlation was between the level of mindfulness and health condition ($r=0.04$, 2 tailed). There was no relationship between fields of study and the level of mindfulness. In addition, the highest level relates to the faculty of Science and Education and the lowest is related to the faculty of Management.

4. Discussion

The aim of the current study is a novel approach to compare and contrast the outcomes, as stated in the previous works about the level of mindfulness. In addition, this study is the first expanded study undertaken to determine the level of mindfulness based on the field of study, and its relation with age, gender, educational background, race, religion, family status and health condition. The findings of the study indicate that the participants of this research have a mean level of mindfulness below the level of community adults and college students. It seems this low score is associated with the weakness in organizational mindfulness and the role of the university as a new environment with its requirements and conditions. Undergraduate students in the first semester, who are new and unfamiliar members of this atmosphere, may be at high risk as a group for the disturbance of their mindfulness in parallel with other mental difficulties (Lynch et al., 2011). To bring mental processes under greater voluntary control, fostering general mental well-being and developing specific capacities such as calmness, concentration and training of attention and awareness skills are one of the solutions (Walsh & Shapiro, 2006). With regards to the lack of association between the level of mindfulness and age, there may be some explanations. It is likely that the available age range is too small. It may be an artefact of self-report measurement. Students of all ages were likely to be have been equally influenced by demand characteristics and social and academic desirability bias (Miners, 2007). No association between gender and the level of mindfulness may originate from any sexual limitations. In addition, UTM does not discriminate towards male and female students which can affect their organizational mindfulness. Demand characteristics and social and academic desirability bias, the same as age bias, affects this demographic, too. Race, like gender showed different effects on mindfulness in previous studies. Different races in Malaysia, over the past few decades, live together with minimum conflicts and discrimination and their cultures have many similarities (Mossakowski, 2003). One race in different countries may show more racial/ethnic effects than races who live in one country. The effect of similar work and life culture of the country's residents who are followers of

different religions alleviates religion's role on the level of mindfulness. In addition, religious involvement and desire is more effective factor than the religion on mental health (Reeves, 2011). There are rare researches about the effect of educational school background on the level of mindfulness. Previous mental activities, unhealthy or healthy environment, disorders and stresses influence the future mental health of students (Taylor & Repetti, 1997) but mindfulness might have low dependency with educational school background. With regard to family status and living with parents, it seems it is more dominant in childhood than adulthood because they adopt and almost accept this absence in their lives. In this age, social spheres and interpersonal stressors shift from the family to the peer domain (Wagner & Compas, 1990). Some previous studies showed a dominant relationship between physical health and mindfulness (Keng et al., 2011). Our study confirmed that findings about physical health. In addition, psychological health included all mental health diseases and problems showed a correlation with the level of mindfulness. Lower level of mindfulness among some faculties (fields of study) may be related to specific programs, disciplines and policies. The curriculum influences on their organizational mindfulness. Mindfulness is continuous scrutiny and refinement of expectations based on new experiences and appreciation of the subtleties of context. Identification of novel aspects of context can improve foresight and functioning (Hoy, 2003). Playing with ideas, creating novelty in the classrooms, and feeling safe to take reasonable risks, are some positive influences of field of study on the students' level of mindfulness (Hoy et al, 2006). Higher levels of mindfulness among faculties may be related to routines and standard practices protect institutional functioning from the vagaries of personality. It often comes at the cost of thoughtful adaptability. There is likely an organizational environment that cultivates mindful actions. Rigid bureaucracies are not conducive to mindfulness; in fact, they may produce a mindless standardization (Hoy, 2003).

Mindfulness is fundamentally about cultivating awareness and attention, it has significant relevance to the quality of life (Ruff & Mackenzie, 2009). Mindfulness can predict success (Collins, 2009), can be trained (Grossman, 2004) and promotes wellbeing (Wenk-Sormaz, 2005). This study on understanding the level of mindfulness among undergraduate students of UTM and its correlation with demographic factors yielded a low level of mindfulness among undergraduate students in comparison with general population. These students need to be recuperated in order to nurture and develop effective healthy students in the educational system. In addition, there were no relationship between age, gender, religion, educational background, family status and race with the level of mindfulness but health (physical and psychological) showed this correlation ($\alpha=.04$, 2 tailed). Meanwhile, this study proved to other nations in order to prepare healthy students not only with high capabilities in physical, brain and mental status, but also to enhance the aspects of mindfulness as a crucial component in their life.

References

- Baer, R., (2008). Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non meditating Samples. *Assessment*, 15 (3), 329-342. doi: 10.1177/1073191107313003
- Baer, R., Smith, G. & Allen, K., (2004). Assessment of mindfulness by self-report. The Kentucky Inventory of Mindfulness Skills. *Assess*, 11, 191-206. doi: 10.1177/1073191104268029
- Beauchemin, J., Tiffany, L., & Fiona, P. (2008). Mindfulness Meditation May Lessen Anxiety, Promote Social Skills, and Improve Academic Performance among Adolescents with Learning Disabilities. *Journal of evidence based complementary and alternative medicine*, 13 (1), 34-45.
- Bhui, K., King, M. & Dein, S., (2008). Ethnicity and religious coping with mental distress. *Journal of Mental Health*, 17, (2), 141-151. doi: 10.1080/09638230701498408.
- Bishop, S., Lau, M., Shapiro, S., Carlson, L., Anderson, N., Carmody, J., Segal, Z., Abbey, S., Speca, M., Velting, D. & Devins, G., (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science & Practice*, 11 (3), 230-249.
- Brown, K.W., Rayan, R.M. & Creswell, J.D., (2007). Mindfulness: Theoretical Foundations and evidence for its salutary effects. *Psychological Inquiry*, 18: 211–237. doi: 10.1080/10478400701598298.
- Brown, K.W., West, A.M., Lovernich, T.M. & Biegel, G.M., (2011). Assessing adolescent mindfulness: Validation of an adapted Mindfulness Attention Awareness Scale in adolescent normative and psychiatric populations. *Psychological Assessment*, 23: 1023–1033. doi: 10.1037/a0021338
- Carlson, L.E. & Brown, K.W. (2005). Validation of the Mindful Attention Awareness Scale in a cancer population. *Journal of Psychosomatic Research*, 58, 29-33.
- Collins, A. B., (2009). Life experiences and resilience in college students: A relationship influenced by hope and mindfulness. *ProQuest Dissertations and Theses*.

- Creswell, D., David, C., Baldwin, M., Naomi, I. & Matthew, D., (2007). Neural Correlates of Dispositional Mindfulness During Affect Labeling. *Psychosomatic Medicine*, 69 (6), 260-265.
- Eifert, G.H. & Heffner, M., (2003). The effects of acceptance versus control contexts on avoidance of panic-related symptoms. *Journal of Behavior Therapy and Experimental Psychiatry*, 34, 293-312.
- Grossman, P., Niemann, L., Schmidt, S., & Walach, H., (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Psychosomatic Research*, 57(1), 35-43. doi: 10.1016/S0022-3999(03)00573-7
- Haigh, A., Moore, T., Kashdan, T. & Fresco, T. (2010). Examination of the factor structure and concurrent validity of the Langer Mindfulness/Mindlessness Scale. *Assessment*, 18 (1): 11-26. doi:10.1177/1073191110386342 pp.11-26
- Holzel, B.K., Carmody, J., Vangel, M., Congleton, C. & Yerramsetti, S.M., (2011). Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Research*, 191, 36–43. doi: 10.1016/j.psychres.2010.08.006
- Hoy, W. K., & Tschannen-Moran, M. (2003). The conceptualization and measurement of faculty trust in schools: The omnibus t-scale. *The Journal of Leadership for Effective and Equitable Organizations*, 181-208.
- Hoy, W. k., Gage, C. & Tarter, J. (2006). School Mindfulness and Faculty Trust: Necessary Conditions for Each Other?. *Educational Administration Quarterly*, 42, 236. doi: 10.1177/0013161X04273844
- Karakashian, M. (2011). The predictive utility of mindfulness, experiential avoidance, and values-based action for well-being in college students.
- Kawase, E., Hashimoto, H., Sakamoto, H., Katsuki, Y., Iida, T., Umekage, R. & Sasaki, T. (2008). Variables associated with the need for support in mental health check-up of new undergraduate students. *Psychiatry and Clinical Neurosciences*, 62(1), 98-102.
- Keng, S., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical Psychology: Science & Practice*. 31(6):1041-56. doi: 10.1016/j.cpr.2011.04.006.
- Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., Rohde, L.A., Srinath, S., Ulkuer, N. & Rahman, A. (2011). Child and adolescent mental health worldwide: evidence for action. *Lancet*, 378 (9801), 1515-1525. doi: 10.1016/S0140-6736(11)60827-1.
- Lykins, E. L. B. & Baer, R. (2009). Psychological Functioning in a Sample of Long-Term Practitioners of Mindfulness Meditation. *Journal of Cognitive Psychotherapy: An International Quarterly*, 23 (3). doi: 10.1891/0889-8391.23.3.226.
- Lynch, S., Gander, N., Kohls, B., Kudielka & Walach, H. (2011). Mindfulness based Coping with University Life: A Non-randomized Wait-list-controlled Pilot Evaluation. *Stress and Health*, 27 (5), 365-375. doi: 10.1002/smi.1382
- Mandal, S. P., Arya, Y. K. & Pandey, R. (2012). Mental Health and Mindfulness: Mediation Role of Positive and Negative Affect. *Journal of Projective Psychology & Mental Health*, 19 (2), 150-159.
- Miners, R., (2007). Collected and connected: Mindfulness and the early adolescent. *ProQuest Dissertations and Theses*. Canada, 123-154.
- Mossakowski, K. (2003). Coping with Perceived Discrimination: Does Ethnic Identity Protect Mental Health?. *Journal of Health and Social Behavior*, 44 (3), 318-331.
- Perolini, C. M., (2012). Mindfulness and perfectionism as predictors of physical and psychological well-being in college students. *Dissertation Abstracts International Section A: Humanities and Social Sciences*, 72/9-A(3104), 0419-4209.
- Pico-Alfonso, A., Mastorci, F., Ceresini, G., Ceda, G.P., Manghi, M., Pino, O., Troisi, A. & Sgoifo, A. (2007). Acute psychosocial challenge and cardiac autonomic response in women : the role of estrogens, corticosteroids, and behavioral coping styles. *Psychoneuroendocrinology*, 32 (5), 451-463.
- Reeves, R., Beazley, A. & Adams, C., (2011). Religion and Spirituality: Can It Adversely Affect Mental Health Treatment?, *Journal of Psychosocial Nursing and Mental Health Services*, 49, 6: 6-7. doi: 10.3928/02793695-20110503-05.
- Ruff, M., & Elizabeth, R. (2009). The Role of Mindfulness in Health Care Reform: A Policy Paper. *Mackenzie. Guest editorial*, 313-323. doi: 10.1016/j.explore.2009.10.002
- Schmertz, S., (2008). Rumination as a Mediator of the Relation between Mindfulness and Social Anxiety in a Clinical Sample. *Psychology Dissertations*, 78 (9), 15.
- Taren, A.A., Creswell, J.D. & Gianaros, P.J., (2013). Dispositional Mindfulness Co-Varies with Smaller Amygdala and Caudate Volumes in Community Adults. *PLoS ONE*, 8 (5): e64574. doi: 10.1371/journal.pone.0064574.
- Taylor, S. E. & Repetti, R. L., (1997). What is an Unhealthy Environment and How Does It Get Under the Skin?. *Health Psychology*, 48, 411-447. doi: 10.1146/annurev.psych.48.1.411
- Wenk-Sormaz, H., (2005). Meditation can reduce habitual responding. *Alternative Therapies in Health and Medicine*, 11(2), 42-58.