

**SUBJECTIVE WELLBEING AND ITS ASSOCIATED FACTORS
AMONG COMMUNITY IN A UNIVERSITY DURING THE
COVID-19 PANDEMIC IN MALAYSIA**

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LIST OF SYMBOLS, ABBREVIATIONS OR NOMENCLATURES

COVID-19	Coronavirus disease 2019
DASS-21	Depression, Anxiety and Stress Scale 21
MCO	Movement Control Order
PWI	Personal Well-being Index
USM	Universiti Sains Malaysia

ABSTRAK

Pengenalan: Pandemik COVID-19 telah memberi kesan negatif kepada psikososial manusia. Komuniti universiti (kakitangan dan pelajar) juga terdedah kepada risiko mengalami tekanan psikologi semasa Perintah Kawalan Pergerakan (PKP) disebabkan oleh rutin kehidupan yang terganggu. Kesejahteraan boleh dipengaruhi oleh emosi negatif apabila di dalam keadaan yang tertekan. Kajian ini bertujuan untuk mengkaji status psikologi dan kesejahteraan subjektif kakitangan dan pelajar universiti semasa pandemik COVID-19 serta faktor-faktor yang mempengaruhinya.

Kaedah: Satu kajian keratan rentas dalam talian telah dijalankan semasa pandemik COVID-19 dari Mac hingga April 2020, melibatkan 1148 komuniti universiti yang terdiri daripada kakitangan dan pelajar Universiti Sains Malaysia. Soal selidik terdiri daripada proforma sosiodemografik peserta serta soalan berkaitan COVID-19 dan PKP. *Depression, Anxiety and Stress 21* (DASS-21) dan *Personal Wellbeing Index* (PWI) digunakan untuk menilai tahap kemurungan, kebimbangan dan tekanan, serta kesejahteraan subjektif. Analisa regresi berganda telah dilakukan bagi mengkaji faktor-faktor sosiodemografik dan skor DASS-21 yang mempengaruhi skor kesejahteraan subjektif.

Keputusan: Daripada 1148 responden, seramai 27.4% melaporkan kebimbangan yang sederhana hingga sangat teruk berbanding 18.4% dan 11.5% bagi kemurungan dan tekanan pada tahap yang sama. Skor kesejahteraan subjektif dikalangan komuniti

universiti ialah 7.67 (1.38). Di antara 8 aspek kesejahteraan, kepuasan terhadap kesihatan diri adalah tertinggi (7.98). Tahap kepuasan yang agak rendah didapati dalam aspek hubungan dengan komuniti, pencapaian hidup serta keselamatan masa depan dengan skor 7.50, 7.49 dan 7.44 masing-masing. Umur yang lebih tua ($b=0.016$, 95% CI 0.008 hingga 0.025) dan berkahwin ($b=0.189$, 95% CI 0.018 hingga 0.359) didapati menyumbang kepada skor kesejahteraan subjektif. Skor kesejahteraan subjektif adalah lebih rendah di kalangan kakitangan universiti ($b=-0.206$, 95% CI -0.390 hingga -0.022) berbanding pelajar. Mengalami kesukaran akibat PKP ($b=-0.363$, 95% CI -0.496 hingga -0.231), serta mengalami gejala kemurungan ($b=-0.046$, 95% CI -0.062 hingga -0.030) dan tekanan ($b=-0.022$, 95% CI -0.037 hingga -0.007) semasa pandemic juga didapati mengurangkan skor kesejahteraan subjektif secara signifikan.

Kesimpulan: Kesukaran akibat PKP, kemurungan serta stres boleh memberi kesan kepada pengurangan kesejahteraan di kalangan komuniti universiti, terutama kakitangan, semasa pandemik. Bantuan psikologi serta sosial seharusnya ditekankan bagi membantu kesan negatif terhadap kesejahteraan komuniti universiti yang boleh menjejaskan produktiviti sebuah universiti.

Kata kunci: Kesejahteraan subjektif, komuniti universiti, COVID-19.

ABSTRACT

Introduction: COVID-19 pandemic has impacted people negatively psychosocially. The university community (staff and students) are among those who are vulnerable to psychological distress during the movement control order (MCO) due to disruption of routine. Wellbeing can be influenced by negative emotions in stressful events. This study aimed to examine the psychological status and subjective wellbeing of the university staff and students during the COVID-19 pandemic as well as factors associated with it.

Methods: A cross-sectional online study, was conducted during the COVID-19 pandemic from March until April 2020, involving 1148 staff and students of Universiti Sains Malaysia via voluntary response sampling. Questionnaires consisted of sociodemographic proforma and questions relating to COVID-19 and MCO. Depression, Anxiety and Stress 21 (DASS-21) and Personal Wellbeing Index (PWI) were used to assess the psychological status and subjective wellbeing respectively. Descriptive analysis was used to describe the demographic characteristics. Multiple regression analysis was carried out to find the association between subjective wellbeing score with the sociodemographic data and DASS-21 scores.

Result: Of the 1148 respondents, 27.4% reported to have moderate to very severe anxiety, compared to 18.4% and 11.5% for depression and stress of the same severity respectively. The mean (SD) subjective wellbeing score among the university community was 7.67 (1.38). Among the 8 domains of wellbeing, satisfaction with personal health was the

highest (7.98). A relatively low level of satisfaction was found in the aspects of community relations, life achievement and future security with scores of 7.50, 7.49 and 7.44 respectively. Older age ($b = 0.016$, 95% CI 0.008 to 0.025) and being married ($b = 0.189$, 95% CI 0.018 to 0.359) were found to contribute to higher subjective wellbeing scores. Subjective wellbeing scores were lower among university staff ($b = 0.206$, 95% CI 0.390 to 0.022) than among students. Additionally, experiencing difficulties due to MCO ($b = -0.363$, 95% CI -0.496 to -0.231), as well as higher scores of depression ($b = -0.046$, 95% CI -0.062 to -0.030) and stress ($b = -0.022$, 95% CI -0.037 to -0.007) were found to significantly reduce subjective wellbeing scores.

Conclusion: Difficulties due to MCO, depression and stress are negatively affecting towards the wellbeing of the university community, especially staff, during the pandemic. Psychosocial support should be emphasized to reduce the negative impact on the wellbeing of the university community that can affect the productivity of a university.

Key words: Subjective wellbeing, university community, COVID-19.

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Coronavirus disease 2019 also known as COVID-19 caused by virus SARS-CoV-2 was first detected in Wuhan, China in December 2019. By March 2021, World Health Organization (WHO) announced that COVID-19 was a pandemic after it spread globally [1]. Previous pandemic (eg. SARS) in 2003 have shown to have detrimental effects psychologically to the health care population [2]. The growing number of cases and high death rates, compounded with ambiguity of information and fake news have generated worry to the public during this recent pandemic. A study in China during the early phase of the pandemic found almost half of participants had moderate to very severe psychological distress [3].

In Malaysia, the first case of COVID-19 was detected in February and later grew its numbers. Many countries have implemented lockdown or restricted movement control order (MCO) as a measure to control the outbreak, including Malaysia [1]. This has further affected the wellbeing of the nation. During the lockdown, most services including education sector were closed, while essential sectors such as health were still operated with certain conditions. Universities were mostly affected as it has diverse sectors consists of students, staff, and health workers. Students were among the groups that are greatly affected [4–6]. Social isolation added more adverse impact on top of postponement of study term and examination, and needing to adapt to online learning. Data among university students in other countries showed higher prevalence of psychological distress compared to general population [7,8]. During the pandemic, being a student was linked to increased depressive symptoms when compared to other work

statuses [9,10]. According to Cao et al (2020), the Covid-19 outbreak caused anxiety symptoms in 25% of Chinese undergraduate medical college students, worried of infection to themselves as well as to their beloved ones [4]. Other members of the university are not spared from being affected by the disruption of work and daily routine resulted from this pandemic. A study among 2530 members of a university in Spain during the initial period of lockdown revealed 21.34%, 34.19% and 28.14% had moderate to extremely severe score of anxiety, depression and stress respectively [5].

These negative psychological impacts from COVID-19 could have a toll on the nation's subjective wellbeing (SWB). Subjective wellbeing is a subjective happiness which constitutes of one's perception of satisfaction in life and influenced by emotions [11]. It can be broadly quantified as satisfaction in life as a whole or narrowly in specific domain of life. High SWB has been associated with greater quality of life; better health, stronger relationships, and productivity [12,13]. It can be influenced by negative events and emotions and enhanced by good coping and cognitive appraisals. Previous data have shown that wellbeing score is lower during this pandemic due to increase in negative effects psychologically [6,14].

1.2 RATIONALE AND SIGNIFICANCE OF THE STUDY

Outbreaks of COVID-19 leading to a full lockdown can disrupt daily life routine which can affect the psychological status and wellbeing of the nation. The ambiguity around the pandemic and socioeconomic factors might play some role in the psychological impact. This may lead to impair of function if not recognized and intervene early. The university comprises of diverse backgrounds of students and staff. Being a sanctuary for developing future professionals and specialists in multiarea, thus considered one of the country's most valuable resources. Therefore, it is essential to monitor the wellbeing of the university community during the time of crisis such as COVID-19 pandemic and provide early effective psychological intervention and support whichever is necessary.

1.3 RESEARCH QUESTIONS

- 1.3.1 What is the psychological status and subjective wellbeing of the staff and students in Universiti Sains Malaysia (USM) during COVID-19 pandemic?
- 1.3.2 What are the factors affecting subjective wellbeing of the staff and students in USM during COVID-19 pandemic?

1.4 OBJECTIVES

2.4.1 General Objectives

- 2.4.1.1 This study aimed to establish the level of subjective wellbeing in staff and students of Universiti Sains Malaysia (USM) during the COVID-19 pandemic and examine the factors affecting it.

2.4.2 Specific Objectives

- 2.4.2.1 To measure the personal wellbeing among staff and students of Universiti Sains Malaysia (USM) during Movement Control Order (MCO).
- 2.4.2.2 To determine the level of depression, anxiety and stress among staff and students in Universiti Sains Malaysia (USM) during MCO.
- 2.4.2.3 To identify factors associated with subjective wellbeing among staff and students in USM during MCO.

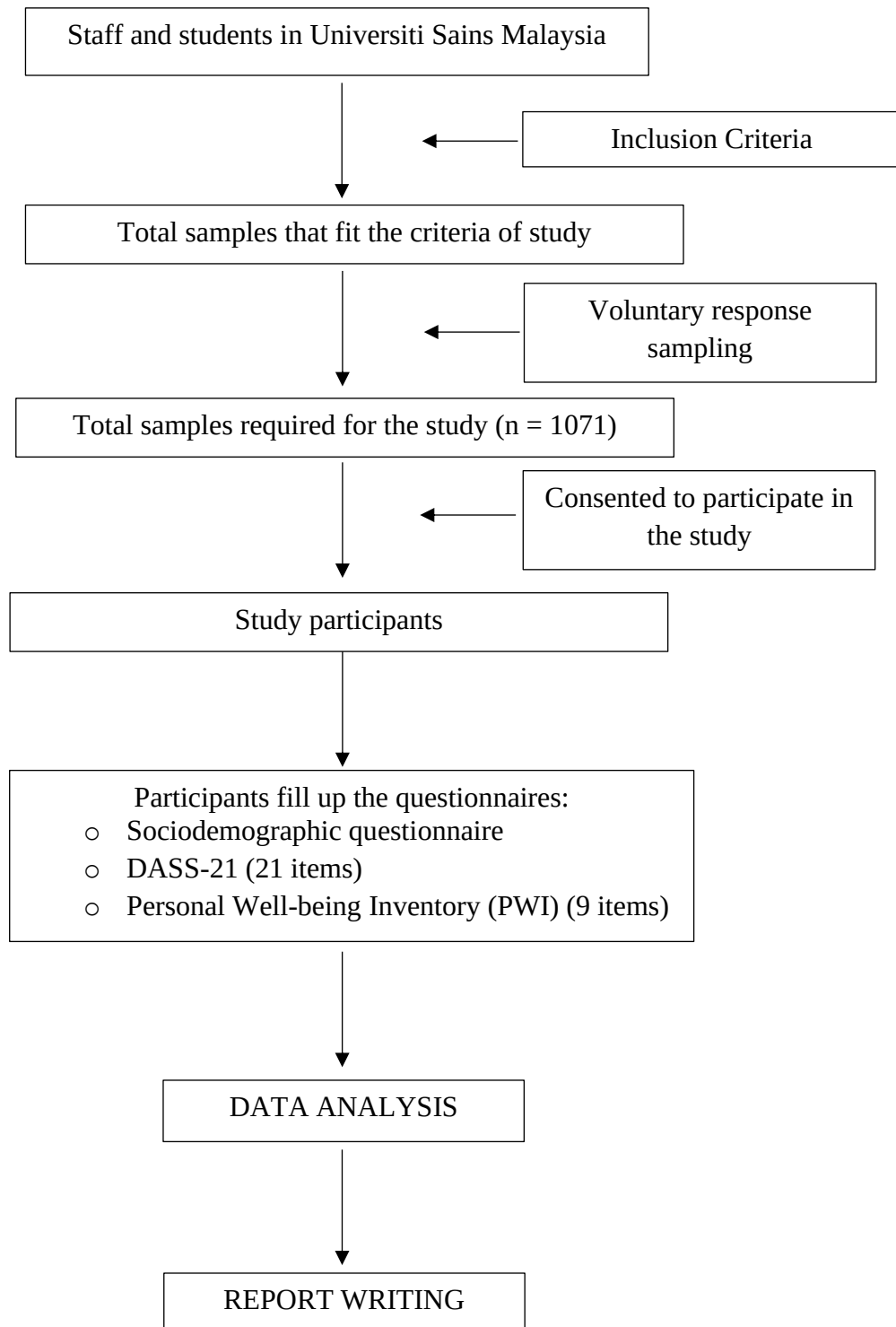
1.5 METHODOLOGY

This study was a cross-sectional conducted from March until April 2020, through online. Participants were recruited using voluntary response sampling among university community, consisted of staff and students of Universiti Sains Malaysia (USM), from three major campuses: main, engineering and health. A set of questionnaires were formed using Google Form which contained of sociodemographic data, Depression, Anxiety and Stress 21 (DASS-21) for psychological status, and Personal Wellbeing Index (PWI) for wellbeing measurements. The questionnaire was distributed to the university community via email and social media platform. Those who were enrolled in the university's courses and an active employee of USM were eligible for the study. Students who are only doing attachments from other institutes and staff who are on sabbatical leave or non-paid leave are excluded from the study. Out of 1220 respondents, 1148 completed the questionnaire. Data analyses were done using The Statistical Package for Social Study (SPSS) version 26. Descriptive statistics were used to describe the socio-demographics of the participants, DASS-21 and PWI scores. Multiple regression analysis was applied to determine the significant factors associated with subjective wellbeing. Initially, simple linear regression analysis was carried out to identify significant factors with p-value <0.25 . Then the factors are analysed using multiple linear regression to get the final model with significant factors of p-value < 0.05 .

1.6 OPERATIONAL DEFINITIONS

University students is defined as all individuals registered as USM's student between June 2019 to June 2020. This includes active undergraduate and postgraduate students during that period. USM staff is defined as all staff who are working for USM either permanent or contract between June 2019 to June 2020. USM is directly responsible to their salary and welfare. Pandemic is defined as worldwide spread of a new disease (such as COVID-19). Subjective wellbeing is defined as general evaluation of one's quality of life in term of life satisfaction, positive level of pleasant emotions and low levels of negative mood. The mean of 8 domains of PWI score depicts the subjective wellbeing level. Depression is defined as negative emotion states that may comprised of feeling of dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and slowness or lack in initiative. The cut-off point of more than 9 in Depression subscale of DASS indicates symptoms of depression. Anxiety is defined as collection of autonomic arousals, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The cut-off point of more than 7 in anxiety subscale of DASS indicates symptoms of anxiety. Stress is defined as symptoms of non-specific arousal such as difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. The cut-off points of more than 14 in stress subscale of DASS indicate symptoms of stress.

1.7 FLOW CHART METHODOLOGY



1.8 DISSERTATION ORGANISATION

This dissertation is formatted in accordance with the Postgraduate Office, School of Medical Sciences' guidelines for Format B Manuscript Ready (2016). The manuscript is a part of a larger study, as in the study protocol in the second chapter, which was submitted for ethical approval. The third chapter is the manuscript that has been prepared for submission to the MDPI Health journal.

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CHAPTER 2: STUDY PROTOCOL

PSYCHOSOCIAL SEQUELAE AND PERSONAL WELLBEING DURING MOVEMENT CONTROL ORDER AMONG STUDENTS AND STAFF OF UNIVERSITI SAINS MALAYSIA

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2.1 INTRODUCTION AND STUDY BACKGROUND

Coronavirus is a group of RNA viruses that causes common cold, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). In December 2020, there were reported cases of severe acute respiratory syndrome in China. Later the causative organism was identified as coronavirus 2 (SARS-CoV-2) which cause a disease outbreak that spread to the whole world. The disease is later known as coronavirus disease 2019 (COVID-19).

On 11 March 2020, World Health Organisation (WHO) announced that COVID-19 has a pandemic after the disease has spread to the entire world due to mainly borderless travels. Based on the latest report by Chinese Centre of Disease Control and Prevention, the case fatality rate of COVID-19 is 5.2% during the initial first weeks of the outbreak in mainland China including Wuhan (Yang et al, 2020). The case fatality is higher in Italy (7.2%) due to the aging population (Onder et al, 2020). On the comparison with other coronaviruses, case fatality rate due to COVID-19 seems lower than severe acute respiratory syndrome coronavirus (SARS-COV) (9.6%) and Middle East respiratory syndrome coronavirus (MERs-COV) (34.5%). However, COVID-19 was found to be easily transmitted compared to SARS-COV and MERs-COV.

Higher viral load was found in the saliva of infected individual during the incubation period (To et al, 2020). COVID 19 is easily transmitted through droplets from infected individuals. Globalisation further help the transmission of COVID 19. On 15 March 2020, there was sudden increased of COVID-19 in Malaysia and the first reported death on 17 March 2020. Lockdown in Wuhan, China has successfully contained COVID-19. Malaysia government decided to take a drastic action to contain the disease by imposing movement control order (MCO) from 18 March to 31 March 2020. MCO is

in accordance to control of infectious disease act 1988 and police act 1967. MCO is part of social distancing as local defence against a highly virulent strain in the absence of vaccine and antiviral drugs such as COVID-19.

MCO is defined as limitation of movement and mass gathering for sport, social, culture and religious. This also include restriction of Malaysian to travel oversea and visitors to enter our country. Closure of all schools, kindergartens, tertiary institutions and offices except for essential services. In general, basically Malaysians are advised to stay home. Home confinement may reduce the spread of COVID-19. However, movement restriction and home confinement may affect the psychosocial and wellbeing of many Malaysians.

2.2 PROBLEM STATEMENT & STUDY RATIONALE

MCO inevitably causes disruption to the students' learning process in almost every phase of their tertiary study in the university. Their duration of the study will be affected, and the stress of uncertainty will create anxiety and psychological effect. Inability to be connected to their parents and family members may also contribute to psychological sequelae during this difficult period. The psychological effect may also differ according to their courses. The uncertainty will be more significant in courses that may need social interaction with others. For example, medicine, dentistry and allied health.

Disruption of daily routine and career enhancement of the university staff including academic staff may also occur. MCO affects the rhythm of university life and may cause many psychology reaction and sequelae. There is potential financial burden during MCO especially to those students who were juggling part-time job and studying.

Contract staff who received daily payment may also feel the financial impact. Even those permanent staff will be affected too especially those with lower income group and with large family commitment. Psychological impact and wellbeing among staff will be more pronounced in campuses that involved service to the public such as medicine, dentistry and allied health. They are also perhaps part of the front-liner in treating and screening for patients with COVID-19.

This pandemic is considered a disaster. Any disaster causes a long-term sequela including in psychosocial aspect. Identification of the psychosocial and personal wellbeing is important to provide psychological support to students and staff of Universiti Sains Malaysia (USM). Thus, detection of psychosocial and personal wellbeing is not only during the MCO period but also for a longer period. Early detection may prevent potential problem in future learning process of the student and ensure productivity of the staff after the period of MCO. The outcome of this study may indirectly help USM in the preparedness of dealing with any disaster in the future especially on providing psychosocial support. This include the possibility to provide a hotline service for psychosocial support and activation of support group for certain period of time.

2.3 RESEARCH QUESTION(S)

- 2.3.1 What is the psychosocial and personal wellbeing of the students and staff of Universiti Sains Malaysia during and 12 months after MCO?
- 2.3.2 What is the impact of MCO on the psychosocial and personal wellbeing of the students and staff of Universiti Sains Malaysia?

- 2.3.3 Is there any different in the psychosocial and wellbeing of the students and staff according to different campuses in USM during and 12 months after MCO?
- 2.3.4 What are the factors affecting the psychosocial and personal wellbeing among students and staff of Universiti Sains Malaysia during and 12 months after MCO?

2.4 OBJECTIVES

2.4.1 General Objectives

- 2.4.1.1 To evaluate the short term and long-term psychosocial impact of movement control order among students and staff of Universiti Sains Malaysia.

2.4.2 Specific Objectives

- 2.4.2.1 To determine the level of anxiety, depression and stress among students and staff in Universiti Sains Malaysia during and 12 months post movement control order period
- 2.4.2.2 To determine the level of impact of event among students and staff in Universiti Sains Malaysia during and 12 months post movement control order period.
- 2.4.2.3 To measure the personal wellbeing related to movement control order among students and staff in Universiti Sains Malaysia.
- 2.4.2.4 To compare level of anxiety, depression, stress, post-traumatic stress disorder and wellbeing between different campuses among students and staff in Universiti Sains Malaysia during and 12

months post movement control order period in Universiti Sains Malaysia.

- 2.4.2.5 To determine the associated factors affecting psychosocial (anxiety, depression, stress and post-traumatic stress disorder) and personal wellbeing among students and staff in Universiti Sains Malaysia during and 12 months post movement control order period.

2.5 LITERATURE REVIEW

Any restriction of freedom to human beings will no doubt associated with psychosocial effect and subsequent sequelae. The impact will be more pronounce if the restriction is due to pandemic of a disease- COVID-19. There is fear of contracting the disease, which further escalated with available online news of unknown truth. Based on the experience of SARS-COV, there were various report of burn-out, psychological stress and post-traumatic stress among the health workers (Maunder et al, 2003; Maunder et al, 2006). However, there was no declaration of pandemic during SARS-COV outbreak. Thus, the impact of the outbreak was confined to the health workers (Abdullah et al, 2003).

Targeted social distancing among children during Asian influenza outbreak have proven effective to break the chain of infection (Glass et al, 2006). Unlike Asian influenza, COVID-19 affected older age group with higher mortality among elderly and those with systemic comorbidities. Thus, general social distancing is required to contain COVID-19 especially after WHO declared as a pandemic outbreak. Many affected countries declaring lockdown or MCO to flatten the curve of the outbreak.

COVID-19 outbreak is no doubt a disaster. In fact, during the initial outbreak in China, more than half of the respondents reported moderate to severe of psychological impact and a third reported moderate and severe anxiety (Wang et al, 2020). There were also increased reported online consultation on psychological problem (Li et al, 2020). MCO may perhaps increases this impact. Staying at home and disrupting the usual work or studying is the sequelae of the disaster. This interruption to our daily living for long period of time will result in psychosocial impact including anxiety, depression and post-traumatic stress disorder (PTSD). The impact is not only during the disaster but can be extended years after the unfortunate event (Kar & Bastia, 2006). Kar & Bastia (2006)