

ORIGINAL ARTICLE

Assessing the Effects of Shared Family Mealtimes on Family Functioning and Socialization among Students of the University of Cyberjaya during Movement Control Order (MCO).

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Abstract

Background: The Movement Control Order (MCO) had been imposed from 18th March 2020 due to the presence of a new strain of corona virus (COVID-19). The commencement of MCO included restriction of all face-to-face academic activities in all sectors of education in Malaysia which has forced university students to undergo online learning at their respective homes. This study aims to determine the effects of family functioning and well-being among university students in relation to the frequency of shared family meals throughout the commencement of MCO.

Methods: A cross-sectional study was conducted among students of University of Cyberjaya of 18 years old and above. Respondents were chosen through stratified random sampling by categorising the students into different faculties and each student was chosen through random sampling. Data was collected online through a google form link and analysed using JASP.

Results: A total of 137 respondents participated in this research. The frequency of shared family mealtime per week was not associated with depression, anxiety and stress as the p- value is more than 0.05 but a better level of family functioning was associated with decreased incidence of depression and anxiety.

Conclusion: The shared family mealtimes among undergraduate University of Cyberjaya students has no significant correlation between depression, anxiety and stress. However, our study has proven that regular shared family mealtimes is associated with improved family functioning and socialisation which in return decreases the incidence of depression and anxiety.

Keywords: Family socialisation, Shared mealtimes, Functioning, Movement control order, COVID-19

Introduction

The appearance of a new strain of coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has changed the definition of normality in everybody's daily life throughout the entire world. On 30th January 2020, the World Health Organization (WHO) announced a Public Health Emergency of International Concern (PHEIC) due to the possibility of a pandemic happening. The Malaysian government imposed a Movement Control Order (MCO) on March 18, 2020, which forced all Malaysians to be in home confinement in an effort to reduce the spread of the virus.

Students pursuing their tertiary education at the University of Cyberjaya (UoC), usually necessitates them to stay at the provided accommodation or any residence nearby their university. Because of this, they are, for most of the time, separated from their family. The commencement of MCO included restrictions in all face-to-face academic activities in all sectors of education in Malaysia which has forced university students to undergo online learning at their respective homes. A study done by Kamaludin, et al. (2020) showed that 87.3% university students stayed with their family, 4.3% stayed alone and 8.4% stayed with their friends during the enforcement of the MCO [1].

Wang, et al. (2020) mentioned that home confinement may increase the opportunity between parent and child to bond and interact [2]. Janssen, et al. (2020) stated that home confinement may affect adolescents and their family members due to close proximity as most of the adolescents are striving to be independent [3].

Middleton, et al. (2020) reported various barriers on family mealtime such as conflicting schedules, exhaustion and lack of time while the perceived benefits of family mealtime are family connection and communication [4]. Utter, et al. (2017) reported that higher frequency of family meals suggested lower depressive symptoms, fewer emotional difficulties and better emotional well-being[5]. In relation to that, family meals have

been found to enhance the health and well-being in adolescents [6].

In another study by Kok (2015) reported that family meals were a crucial factor in bonding and communication between family members [7]. Lawrence & Plisco (2017) also reported that increase frequency of family mealtimes is positively correlated with family communication and satisfaction [8].

This study aims to determine the effects of family functioning and well-being among university students in relation to the frequency of shared family meals. This study can be beneficial to university students or the community in general with the same predicament, in relation to improving their precious time with the family during holidays. Every member of a household must have the realization of the effects of family meals in promoting a strong family functioning and socialization. Individuals should have a radical shift in mindset to attain a mentality that prioritizes family meals that improves their mental health. There is a significant number of studies that have been done previously with similar objectives. However, there was no complete investigative study conducted, considering movement control order (MCO) as a factor. Hence, we decided to fill the study gap of finding the effects of family functioning and well-being among university students during movement control order (MCO) in relation to the frequency of shared family meals.

Materials and methods

A quantitative cross-sectional study was conducted from July 2021 until October 2021 involving 137 students of the University of Cyberjaya. These students who participated in this study were all undergraduates, had good English proficiency, currently enrolled at UoC and aged 18 years and above. Students who were married and living independently during MCO were excluded from the study. Replicated responses by the same respondent were not considered. Participants who did not give consent

to the study and participants who were unable to access the questionnaire were classified under non-response criteria.

The total number of students from the medical sciences undergraduate program were 1752 with a target sample size of 171 in which, the z score and the margin of error used was 1.96 and 7% respectively with 0.27 estimated proportion [9]. The sample size was achieved after adding the consideration of 10% for non-respondents. Stratified random sampling was used to classify the students of UoC into different faculties and later, proportionate sampling was used to choose students from each of the faculty.

Data collection for this study was done by distributing a link to google form which consisted of a set of questionnaires considering the inclusion, exclusion, and non-response criteria. All the questionnaires were in English and comprised of 3 parts which were the sociodemographic characteristics, FAD Assessment and Depression Anxiety Stress Scale-21 (DASS).

Part 1 contained of 9 sociodemographic characteristics, including age, gender, nationality, ethnicity, course of study, year of study, household income, marital status, number of family members living in the house, whom do they live with during MCO and frequency of shared family mealtime. The operational definition for regular shared family mealtime was having 7 or more shared family mealtimes in a week. Otherwise, non-regular classification is for students who had less than 7 shared family mealtimes in a week. The method used to measure the family functioning score using FAD Assessment is as the value of the score increases, it is suggestive of worse family functioning.

Part 2 was a validated questionnaire of 53 items which consisted of 7 elements such as problem solving, communication, roles, affective responsiveness, affective involvement, behaviour control and general functioning. The response option to these items were strongly agree, agree,

disagree and strongly disagree where strongly agree was scored 1 and strongly disagree was scored 4. The overall score was divided into 2 groups: healthy family functioning (score \leq 127) and unhealthy family functioning (score $>$ 127). This assessment acts as a tool to evaluate the family functioning of the participants and has concluded that the higher the score, the worst the family functioning [10].

Part 3 was a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three scales contained 7 items, divided into subscales with similar content. Scores for depression, anxiety and stress were calculated by summing the scores for the relevant items and categorising it into normal (0-9, 0-7, 0-14), mild (10-13, 8-9, 15-18), moderate (14-20, 10-14, 19-25) severe (21-27, 15-19, 26-33) and extremely severe (28+, 20+, 34+) [9]. students who had no symptoms of depression, anxiety and stress was considered in the 'NO' group. However, students who scored mild, moderate or severe in DASS Scoring would be categorised in the 'YES' category.

The data analysis for this study was done using Jeffreys's Amazing Statistics Program (JASP) software. Descriptive statistics was used to analyse the frequency of mealtimes and Chi-Square to analyse the association between frequency of shared family mealtimes and emotional well-being. It was also used to measure the relationship between the overall score of family functioning in students and the regularity of shared family mealtimes.

Ethical consideration

This study was approved by the Research Ethics Committee, Faculty of Medicine University of Cyberjaya No.UOC/CRERC/ER/322.

Results

A total of 137 students have agreed and participated in this research. Majority of the

respondents are female (62.8%), of the age group of 22 and above (56.9%), Malay (54.8%) and from Faculty of Medicine (37.2%). Most of these respondents have regular shared family mealtimes (59.9%) and 5 or more family members living in the house (51.1%).

Prevalence of shared family mealtimes

The highest prevalence of the frequency of shared family mealtime is more than 7 times per week with 30.7%. The lowest prevalence of shared family mealtime is 5.8% with the frequency of 1 shared family mealtime in a week. Table 2 shows the prevalence of shared family mealtimes among students according to the frequency. This table shows that almost 60% of students shared a regular family mealtime in a week with their family members.

Frequency of depression, anxiety and stress

Table 3 shows that 78.8% of UoC students do not fall under the depressed category while 21.2% of students were found to have depression. 35.8% of students have anxiety while 64.2% of students do not fall under the anxiety category. 1.5% of students claimed to have stress while 98.5% of students do not fall under the stress category.

Association between shared family mealtime with depression, anxiety and stress

Based on this table, the frequency of shared family mealtimes (per week) was not associated with depression as the p-value in the statistical test as shown in Table 4 is 0.314. Hence, there is no difference in the development of depression between students who frequently shared family mealtimes and students who were sharing family mealtimes non-regularly.

The frequency of shared family mealtime per week is not associated with anxiety as the p-value is 0.629. Hence, there is no difference in the development of anxiety between students who

frequently shared family mealtimes and students who are non-regular.

The frequency of shared family mealtime per week is not associated with stress as the p-value is 0.775 as observed in Table 4. Hence, there is no difference in the stress level between students who frequently shared family mealtimes and students who are non-regular.

Effects of shared family mealtimes

There are 7 components of family functioning assessment: problem solving, communication, roles, affective responsiveness, affective involvement, behaviour control and general functioning. Table 5 showed, 82% of the participants with regular shared family mealtimes had healthy family functioning scores compared to 75% of the participants with irregular shared family mealtimes. Moreover, only 18% of participants with regular shared family mealtime had unhealthy family functioning score compared to 25% from the group with irregular shared family mealtime. Hence, the family functioning is better with regular shared family mealtimes, (p-value was 0.019).

Discussion

The aim of this research is to understand the effects of regular shared family mealtimes on family functioning and the well-being of university students. This was accomplished by (i) measuring the effects of shared family mealtimes on various aspects of family functioning using family assessment device (FAD) and (ii) by measuring mental well-being of the university students in association with the frequency of family mealtime.

Prevalence of Depression, Anxiety and Stress

The symptoms of anxiety (35.8%) were found to be the highest followed by depression (21.2%) and stress (1.5%) among UoC students during the MCO. However, a study done by Shah,

Mohammad et al. (2021) showed a contrasting result where depression (58.6%) was the highest accompanied by stress (57.4%) and lastly anxiety (50.9%) during the Covid-19 pandemic [11]. In our study, we observed high levels of anxiety relative to depression and stress and this can be attributed to financial constraints, remote online learning, and uncertainty related to student's academic performance, graduation, and future career prospects. [12].

From our point of view, the results should be interpreted in the context of the period of time when the study took place, between July 2021 and October 2021 where most students have returned to their families and adopted to e-learning and online platforms for online classes. The stress associated with the initial phase of lockdown and transition to e-learning was decreased with students establishing family and institutional support (with more students coping with new learning methods, this might explain our results of low levels of stress observed among university students. This is supported by a study done by Malik & Javed (2021)[13].

Mental well-being and frequency of shared family mealtimes

The findings from our research suggested no significant correlation between depression, anxiety, stress and mental well-being and regular shared family mealtimes. These findings were not consistent with the study done by Harrison, Norris et al. (2015) which showed frequent family meals were inversely associated with feelings of depression or suicidal thoughts in adolescents [14]. This study also measured frequency of family mealtimes as well as mealtime atmosphere, greater priority of mealtimes and higher levels of mealtime structure, which was not investigated in our study.

Another study from White, Haycraft, et al. (2014) reported that increased family mealtime was linked to lower rate of incidence for depression

and eating disorders in girls [15]. Besides, this study included adolescents and children. From our point of view, our study has been conducted in unique circumstances, the high level of anxiety and stress during movement control order might have interfered with the benefits of shared family mealtimes, as well as the quality of shared family mealtimes.

Regular shared family mealtimes and family functioning

Our findings suggest that regular shared family mealtimes are associated with improved family functioning, which is also supported by the results from a systematic review and meta-analysis completed by Shannon M. Robson, in 2020 [16]. In study conducted by McCullough, Robson, et al. (2020), almost all the papers included in the study demonstrated a positive relationship between family meal frequency and measures of family functioning. According to the literature, improved family functioning in relation to regular family mealtimes can be attributed to many factors, including the frequency of shared family mealtimes, length of family mealtimes, location of family mealtimes as well as people present during family mealtimes [17]. Study done by Kok also indicated that for most families, relationship building, bonding among family members and communication was more often the focus of family mealtimes and noticed that mealtimes also provided routine and structure to the family [7]. This could lay out some insight on how family mealtimes improved family functioning.

Family functioning and mental well-being

According to our finding, a better level of family functioning was associated with decreased incidence of depression and anxiety. These findings are consistent with results from a paper by Ghamari (2012), showing that there is a significant relationship between family dysfunction and depression [18]. Recent research from China also found that adolescent depressive

symptoms were significantly lower in subjects with higher family functioning.

Our study was performed by measuring frequency of family shared mealtimes, but we did not measure other factors that could have influenced the perception and effects of these shared mealtimes, such as positive mealtime atmosphere, members attending family mealtimes and behaviours and attitude during mealtimes. Further research can be improved by measuring all these variables alongside the frequency of shared family mealtimes.

The results partially support our first hypothesis, regular shared family mealtimes are associated with improvements in some aspects of family functioning, however, frequency of shared family mealtimes did not have any significant correlation with mental well-being. Many factors can affect mental wellbeing such as perceived social support, family demands, socioeconomic status, gender, and educational background [19]. Further research includes a larger variety of participants and with these factors in mind can help achieve a better understanding of the effects of shared family mealtimes on mental wellbeing and family functioning.

Our study has limitations. Firstly, the participants of our study were limited to undergraduate students of the medical sciences. Thus, the findings may not represent all the undergraduate students. Academic and non-academic stressors may have a larger effect on the mental well-being of these cohort of university students. These factors need to be considered to achieve a better understanding of the effects of regular shared mealtimes of mental well-being. Secondly, our study was performed by measuring frequency of family shared mealtimes, but we did not measure other factors that could have influenced the perception and effects of these shared mealtimes, such as positive mealtime atmosphere, members attending family mealtimes and behaviours and attitude during mealtimes.

Conclusion

Our findings stated that the highest prevalence of the frequency of shared family mealtime is 7 times per week and the lowest prevalence of shared family mealtime is once per week. This study has highlighted that there is no difference in the stress, depression and anxiety level between students who regular share family mealtimes and students who doesn't. It has also been discussed that regularly shared family mealtimes have a higher score in FAD (worst family functioning) which contradicts the objective our study. This can be justified by several biasness. Firstly, a small sample size would not reflect the response of an exact population. Recall bias can also contribute to such results, whereby the respondents can either over report or underreport while answering the questionnaire. Last but not the least, response bias can cause inconsistency of the results as respondents might answer questionnaire to meet the researchers' expectations.

Recommendations

Future research can further examine different aspects of shared family mealtimes, such as communication and activities during a shared family mealtime and the presence of family members to better understand how shared family mealtimes can be utilised as an effective tool to improve mental wellbeing and family functioning.

Table 1. Sociodemographic data

Sociodemographic variables	Frequency, n	Percentage, %
Age		
21 and below	59	43.1%
22 and above	78	56.9%
Gender		
Male	51	37.2%
Female	86	62.8%
Ethnicity		
Malay	75	54.8%
Non-Malay	62	45.3%
Faculty		
BMET	8	5.8%
BHMS	7	5.1%
MBBS	51	37.2%
BOSH	31	22.6%
BPHARM	19	13.9%
BPHYSIO	12	8.8%
BPSY	9	6.6%
Household income (RM)		
< RM 4,849	29	21.2%
RM 4,850 – RM 10,959	62	45.2%
> RM 10,960	46	33.6%
Frequency of shared family mealtimes		
Irregular	55	40.1%
Regular	82	59.9%
Family members living in the house		
4 or less	67	48.9%
5 or more	70	51.1%

Table 2. Prevalence of shared family mealtimes among University of Cyberjaya students.

Shared family mealtimes (per week)		Frequency, n	Percentage, %
Non-regular	1	8	5.8%
	2-4	35	25.5%
	5-6	12	8.8%
Total		55	40.1
Regular	7	42	30.7%
	>7	40	29.2%
Total		82	59.9

Table 3. Frequency of Depression, Anxiety and Stress among University of Cyberjaya students.

Prevalence of depression	Frequency, n	Percentage, %
Yes	29	21.2%
No	108	78.8%
Total	137	100%
Prevalence of anxiety	Frequency, n	Percentage, %
Yes	49	35.8%
No	88	64.2%
Total	137	100%
Prevalence of stress	Frequency, n	Percentage, %
Yes	2	1.5%
No	135	98.5%
Total	137	100%

Table 4. Association between shared family mealtime with depression, anxiety and stress among University of Cyberjaya students.

Frequency of shared family mealtimes (per week)	Depression		Total	Statistical test	
	Normal (NO)	YES		χ^2(df)	p-value
Regular	67 (82%)	15 (18%)	82 (100%)	1.01 (2)	0.314
Non-regular	41 (75%)	14 (25%)	55 (100%)		

Table 5. Effects of shared family mealtimes among University of Cyberjaya students on various aspects of family functioning.

Frequency of shared family mealtimes (per week)	Family functioning		Total	Statistical test	
	Healthy	Unhealthy		χ^2(df)	p-value
Regular	68 (82%)	14 (18%)	82 (100%)	5.50 (2)	0.019
Non-regular	36 (75%)	19 (25%)	55 (100%)		

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