

A Cross Sectional Study on the Family Relationship During Movement Control Order in Malaysia: Perception of Undergraduate Students

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Abstract

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. In December 2019, a number of cases of pneumonia of unknown aetiology were identified in Wuhan City, Hubei province in China which patients presented with pneumonia like symptoms of dry cough, dyspnoea, fever, and bilateral lung infiltrates on imaging. In late February, a large cluster of cases occurred in Seri Petaling tabligh gathering where this cause an unexpectedly sudden high rise of daily cases which urged the government to choose a more strict measure. A limited lock-down approach called Movement Control Order (MCO) was immediately initiated to the whole country as a way to flatten the curve. Lock down is a world's biggest psychological experiment which has found with more depressive symptoms and decreases in resilient level among people. Our objective is to determine the family relationship in terms of cohesion, expressiveness and conflict during MCO period and to find the factors that are associated with family relationship in terms of cohesion, expressiveness and conflict during MCO period among undergraduate students of Melaka-Manipal Medical College, Malaysia. A cross-sectional study was conducted from May 2020 to June 2020 on 258 students where data were collected using online questionnaires in google forms designed in English. A questionnaire related to family relationship was used in this study which is the Brief Family Relationship Scales consisting of 16-items in total. The Brief Family Relationship Scales was subcategorised into 3 mains domains (Cohesion, Expressiveness and Conflicts). In order to analyse the data accordingly, unpaired t test, ANOVA and were used. According the data, the p-value of ethnicity in relation with cohesion is 0.019, this thus shows that there is a significant association between the different ethnicities and the family relationship during movement control order amongst undergraduate students in MMMC. Other than that, there is also a significant association between the family type and expressiveness where the p value is 0.010. In sense of conflicts, we found that there were significant association between ethnicity and presence of family member with chronic disease where the p value is 0.008 and 0.023. In conclusion, an individual with higher scores in cohesion and expressiveness indicates a stronger family relationship whereas individual with higher scores in conflicts indicates a weaker family relationship.

Keywords

Family Relationship, Movement Control Order, Undergraduate Students

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1. Introduction

Diversity in definitions of family can be appreciated on a variety of levels, one of which involves the gap between the

scholarly community and the lay public. As Jorgenson (1989) argued, "there are serious discrepancies between families' self-definitions and the definitions of 'family' embodied in theoretical constructs used by researchers and clinicians"

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Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. [1] In December 2019, a number of cases of pneumonia of unknown aetiology were identified in Wuhan City, Hubei province in China which patients presented with pneumonia like symptoms of dry cough, dyspnea, fever, and bilateral lung infiltrates on imaging. [2] The causative agent was identified from throat swab samples conducted by the Chinese Centre for Disease Control and Prevention (CCDC) on 7th January 2020, and was subsequently named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The disease was named COVID-19 by the World Health Organization (WHO). [3]

In late February, a large cluster of cases occurred in Seri Petaling tabligh gathering where this cause an unexpectedly sudden high rise of daily cases which urged the government to choose a more strict measure. A limited lock-down approach called Movement Control Order (MCO) was immediately initiated to the whole country as a way to flatten the curve. [4] Malaysian Prime Minister announced a nationwide lockdown called the Movement Control Order (MCO) on 16th March 2020. There is no effective treatment or vaccine for COVID-19, so other ways of slowing its spread are needed. One of the World Health Organization’s (WHO) recommendations for controlling the disease is quarantine. [5] Lock down is a world’s biggest psychological experiment which has found with more depressive symptoms and decreases in resilient level among people. The lockdown is the period where the people will have only family members around them to share or do things with. This is the best time where family can play more roles especially young parents in molding traits of the children and caring the old age people in their home. [6] Family members are linked in important ways through each stage of life, and these relationships are an important source of social connection and social influence for individuals throughout their lives. [7]

The point of lockdown and social distancing measures is to forestall spread and end the expanded in number of

individuals getting the illness, yet at the interim it additionally uplifted feelings of dread of expanding aggressive behaviour at home, which incorporates physical, enthusiastic and sexual maltreatment. One of the UK’s domestic abuse charities, has made reports of a 25% increase in calls made to its helpline since lockdown measures were announced. The gathered time spent in lockdown implies that defenseless individuals are progressively presented to manhandle and it is increasingly hard for them to look for help. Because of the expanding concerns, the UK government has distributed rules on the best way to perceive household misuse, how to report and where with a rundown of the considerable number of administrations accessible. [8] For example, in rustic regions of Bangladesh spouse’s education past the tenth grade was related with a diminished danger of viciousness. In urban regions spouse’s education past the 6th grade had a defensive impact. An examination in India found an opposite connection between lifetime or ongoing abusive behaviour at home and a lady’s instructive accomplishment. Woman with no formal education were 4.5 occasions bound to report lifetime abusive behaviour at home contrasted and woman who finished more than 12 years of education. Be that as it may, observational information show various parts of the relationship between the instructive level and abusive behaviour at home. [9]

Gender has been found to be a important factor in the prosperity of marital relationships It has been all around explored and archived that men get more physical health benefits from marriage than ladies, and ladies are all the more mentally and physiologically defenseless against conjugal worry than men. [7] Ladies then again get increasingly money related advantages from their ordinarily higher winning male mates. This can be additionally demonstrated by the ascent of abusive behaviour at home cases in the nation. The ministry’s Talian Kasih hotline had seen a 57% increase (or 1,893 calls) from women in distress up to March 26. [10]

Another factor that we have resolved to assume a critical job seeing someone between relatives are family esteems. We further investigate whether the relatives are on an accord on how relatives ought to carry on in the house together, likewise how regularly little achievements are celebrated in the house among relatives. The other way around, when there are differences among relatives, are concerns and emotions appropriately voiced out and recognized. We feel that when a family has comparative perspectives on their individual family esteems, almost certainly, the family will have better and increasingly significant connections between relatives and therefore reinforce their family bond during the MCO in Malaysia. [11]

Other than that, we believe that Presence of family member

who have chronic disease has a direct impact on the relationships between family members. Based on the journal from the Third National Health Morbidity Survey (NHMS III) 2006 on the Prevalence of Chronic Illness and Health Seeking Behavior in Malaysian Population. It is estimated that the overall prevalence of chronic illness in the Malaysian population within a recall period of one year was 15.5%. Chronic illness was reported significantly higher among the females, 16.8%. The most common chronic illness was hypertension (7.9%), followed by diabetes mellitus (4.0%) and highest reported by the Indians (19.7%). This inevitably puts a strain on family relationships between family members and thus contribute to the overall dynamic of the family. [12]

Next it will be the socioeconomic status of the family. Despite the fact that we discover support for the idea that a family's financial position influences the existence course advancement and interrelationships of relatives, we likewise discover proof that singular contrasts showing up during youth and immaturity help shape monetary and instructive accomplishments and furthermore fitness as a parent and sentimental accomplice during the grown-up years.[13] In additions, poor and lower-pay couples are well-suited to be at higher hazard for conjugal misery and disintegration, given that they are bound to encounter more noteworthy misfortunes and hardships. Likewise, the separation rate is as of now higher for these couples contrasted with centre and higher-pay couples (Neff and Karney, 2017). Therefore, the separation rate may show a reduction, an expansion, or no change following the emergency, contingent upon the nature of family connections preceding the emergency just as parts of their more extensive individual and social settings. [14]

Types of family in particular, children raised in lone-parent families have been found, on average, to do less well over a scope of proportions of prosperity than their companions in two-parent families, while parental detachment has been seen as related with a variety of unfavourable results for children. [15] Backing incorporates support, giving transportation to the juvenile to the action, and financing the interest. [16] This has given weakening of joint family framework and production of family units which adds to issues like steady contending and fights among the life partners, rising separation rates and the expanding carelessness of the mature age individuals (Priya, 2017). In Inci's (2008) study, a positive connection was seen between the quantity of individuals and the family's broad capacities. In any case, Çakıcı (2006) found that no such correlation. [11] The connection between the quantity of kin and youngsters has would in general gotten more grounded after some time in a couple of developed countries. [17]

The study about Level of family bonding among young adults during national lockdown due to covid-19 has been

done in country of Bangladesh and India in April 2020 and researcher have studied how HIV and AIDS pandemic changing family relationship Botswana [18] but to our knowledge, the family relationship during movement control order in Malaysia has never been done therefore we focused on the family relationship during movement control order in Malaysia among undergraduate students in Melaka-Manipal Medical College, Malaysia.

Our research objectives are:

1. To determine the family relationship in terms of cohesion, expressiveness and conflict during MCO period among undergraduate students of Melaka-Manipal Medical College, Malaysia.
2. To find the factors that are associated with family relationship in terms of cohesion, expressiveness and conflict during MCO period among undergraduate students of Melaka-Manipal Medical College, Malaysia.

2. Methodology

2.1. Study Design, Study Setting and Study Population

This was an analytical cross-sectional study to discuss about the family relationship during Movement Control Order in Malaysia: Perception of undergraduate students in Melaka-Manipal Medical College, Malaysia. This study was carried out from May 2020 to June 2020 in Melaka-Manipal Medical College (Muar Campus), Malaysia.

Melaka-Manipal Medical College has two campuses which is Melaka campus, Melaka and Muar campus, Johor in Malaysia which has a total of 3 different undergraduate programs such as Foundation in Science (FIS), MBBS and BDS. The FIS and BDS students. However, the MBBS students in Semester 6 and 7 are based in the Muar Campus while the MBBS students in Semester 8, 9, and 10 students are based in the Melaka Campus. The investigation populace comprised of all undergraduate students at Melaka-Manipal Medical College which included Semester 6, 7, 8, 9, and 10 medical students with a total population of 1100 students.

2.2. Sample Size

Based on a previous research of “ Level of family bonding among young adults during national lockdown due to CoVid-19 ” in Madurai, Tamil Nadu, India they found that there is an increase in family bonding in high level by 24.8% after lockdown. [6]

Sample size was calculated based on the application software “Epi Info” version 7.0.

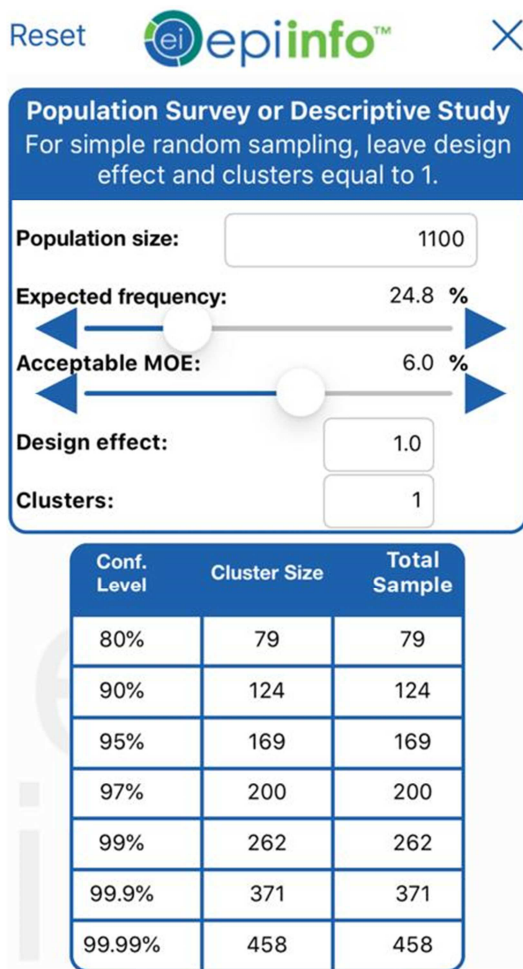


Figure 1. Sample size.

Population size: 1100

Expected frequency: 24.8%

Precision error: 6.0%

So, with a confidence level of 95% we conclude that our sample size is 169.

Upon calculating the sample size (n) using formula application software “Epi Info” version 6.0, we then chose to allow non-response of 30% and calculation is as below:-

$$\begin{aligned}
 n_{\text{final}} &= n_{\text{calculated}} / 1 - \text{non response \%} \\
 &= 169 / 1 - 0.3 (30\%) \\
 &= 241
 \end{aligned}$$

Therefore, the final sample size in the study was 241.

2.3. Sampling

The sampling method used for this study was purposive sampling which is a non-probability sampling method. The inclusion criteria were undergraduate students, students of Melaka Manipal Medical College, the medical students who voluntarily agreed to participate in the study and completed

questionnaires after they filled up the questionnaire on google forms. The exclusion criteria were those who did not provide consent, incomplete questionnaires and irrelevant responses. The questionnaires were distributed in a google form to all the students of Melaka Manipal Medical College in Muar and Melaka campus.

2.4. Data Collection

The data was collected through online to the targeted undergraduate students in Melaka Manipal Medical College which involved students from MBBS, BDS and FIS in Muar and Melaka. Students were given information and voluntarily participate in the study and complete the informed consent and the questionnaire. The independent variables in this study included education of parents, gender, presence of family member who have chronic disease, socioeconomic status of the family, types of family and number of children in the family while our outcome was to study its association with family relationship during Movement Control Order in Malaysia. Data were collected using self-administered questionnaire, designed in English and consists of multiple-choice questions. The questionnaire we had prepared were self-administered and had been made up of 4 distinct parts; A (Socio-Demographic), B (Cohesion), C (Expressiveness) & D (Conflicts). In which we have included 1 questionnaire namely the Brief Family Relationship Scales.

Socio-Demographic

The socio-demographic section consisted of 10 variables such as gender, ethnicity, nationality, age, program, presence of family member with chronic disease, number of family member in the family, family types, education of both parents & total income of the whole family.

Brief Family Relationship Scales

The Relationship dimension of the Family Environment Scale, which consists of the Cohesion, Expressiveness, and Conflict subscales, which used to measures a person’s perception of the quality of his or her family relationship functioning in expect of support, expression of opinions, and angry conflict within a family. [19] The Brief Family Relationship Scale was scored on using a 3-point likert scale and the participants are then required to rate the degree of how much they agree with each of the statements on a scale of 1-5 (with ‘1’ being ‘Not At All’, ‘3’ being ‘Somewhat’ and ‘5’ being ‘Alot’). The examples in the Cohesion part to which the respondents showed how much they agreed with the seven statements, such as ‘In our family we spend a lot of time doing things together at home; In our family we work hard at what we do in our home; In our family there is a feeling of togetherness.’ The next section is Expressiveness which will be asking respondents for 3 questions which is ‘In

our family we can talk openly in our home; In our family we sometimes tell each other about our personal problems; In our family we begin discussions easily.' For the conflicts section of the questionnaire, there were 6 statements regarding family conflicts. Examples were eg: In our family we argue a lot; in our family we are really mad at each other a lot.' There are reverse scoring being applied for items (write the items) the participants' score was then calculated by summing up the answers from each 16 statements. Participants' with higher total score are considered to have a greatest strength of relationship within family during the Movement Control Order, while participants with lower total score are considered to have a lower strength of relationship

within family during the Movement Control Order.

2.5. Data Processing and Data Analysis

The data was analysed by using software applications such as Microsoft Excel and Epi. Info version 7.2. Microsoft Excel was used to enter in the data collected and Epi. Info for data processing purposes. Our study was a descriptive quantitative study which included multiple variables that was analysed by using mean and standard deviation values. The following variables were included in the analysis: 5 demographic questions and Brief Family Relationships Scales. Odds ratio was used as a measure of association between the variables. The level of significance in this study was 0.05 (5%).

Table 1. Statistical tool used

Independent Variables	Dependant Variables	Statistical Testing
Gender	Family relationship	Unpaired t-test
Ethnicity	Family relationship	ANOVA
Nationality		Unpaired t-test
Presence of chronic disease among family members	Family relationship	Unpaired t-test
Income of family (total income)	Family relationship	ANOVA
Education of parents	Family relationship	ANOVA
Family type (nuclear family/ single parent/ extended family)	Family relationship	ANOVA
Number of children in the family	Family relationship	ANOVA

2.6. Ethical Consideration

The respondents' participation was voluntary, aware and they had the rights to withdraw from the study if they had wished to do so. Respondents participated based on an informed consent where they were provided with sufficient data about the study that they had embraced, and all the data provided from their responses were kept under strict confidentiality. Respondents' anonymity was maintained, and endorsement was garnered from the Faculty of Medicine's Research Ethics Committee of Melaka Manipal Medical College, Malaysia.

3. Results

Table 2. Sociodemographic characteristics of undergraduate students (n=258).

Variables	Categories	n (%)
Age	≤20	85 (32.95%)
	21-22	82 (31.78%)
	>22	91 (35.27%)
Gender	Mean (SD)	21.3 (2.3)
	Minimum-Maximum	16-27
	Male	69 (26.74%)
Ethnicity	Female	189 (73.26%)
	Malay	25 (9.69%)
	Chinese	102 (39.53%)
	Indian	106 (41.09%)
Nationality	Others	25 (9.69%)
	Malaysian	252 (97.67%)
	International	6 (2.33%)
Number of family members	≤3	30 (11.63%)
	4-5	151 (58.53%)
	>5	77 (29.84%)

Variables	Categories	n (%)
Income of family (total income)	<RM 4,360	34 (13.18%)
	RM 4,360 – RM 9,619	117 (45.35%)
	> RM 9,619	107 (41.47%)
Education level of mother	Primary	10 (3.88%)
	Secondary	28 (10.85%)
	High school	53 (20.54%)
	Diploma	71 (27.52%)
	Bachelor	68 (26.36%)
Education level of father	Master/PhD	28 (10.85%)
	Primary	12 (4.65%)
	Secondary	33 (12.79%)
	High school	38 (14.73%)
	Diploma	43 (16.67%)
Presence of family member with chronic disease	Bachelor	84 (32.56%)
	Master/PhD	48 (18.60%)
	Yes	190 (73.64%)
Family type	No	68 (26.36%)
	Nuclear family	199 (77.13%)
	Single-parent family	19 (7.37%)
	Extended family	40 (15.50%)

Table 2 shows the sociodemographic of undergraduate students. A total of 258 questionnaire with 16 questions were distributed to undergraduate students in Melaka Manipal Medical College. In this study, the minimum age collected is 16 years and the maximum age is 27 years. The age of the students were divided into three categories, which the age of students is 20 and below, 21 to 22 and students who is older than 22 years old. Of those who responded, there were 32.95% of total participants were in the age group of 20 and below, and 31.78% of students were within age of 21 to 22 and the highest were 35.27% students from the age more than 22. The mean age of this studies are 21.3 years with a standard deviation of 2.3.

Majority of the students were females, 73.26% compared to males, 26.74%. For ethnicity, we categorized in Malay, Chinese, Indian and others where the percentage of Indian students and is 41.09%, followed by Chinese 39.53% and 9.69% is for both Malay and others students. There were 97.67% of students were Malaysians and 2.33% were non-Malaysians. In aspect of number of family members, a higher percentage of students has 4 to 5 members in the house which is about 11.63%, followed by more than 5 members, 29.84% and 11.63% which is 3 members or below. Family income less than RM 4,360 has 13.18% of students and income within RM 4,360 to RM 9,619 has 45.35% whereas income more than RM 9,619 has 41.47% of students.

According to data, the highest percentage education level of mothers were Diploma, 27.52%, followed by Bachelor, 26.36%; High school, 20.54%; Master/PhD and Secondary has the same percentage, 10.85%; and lastly is Primary school, 3.88%. As for father's education level, the highest percentage were Bachelor, 32.56% followed by Master/PhD, 18.60%; Diploma, 16.67%; High school, 14.73%; Secondary,

12.79% and Primary, 4.65%. About 73.64% of students had family member that has chronic disease and 26.36% of students who does not have family member that has chronic disease. Nuclear family has the highest percentage which is 77.13%, followed by extended family, 15.50% and single-parent family which is 7.37%.

Table 3. Family relationship among undergraduate students during movement control order (MCO) (n=258).

Variables	Mean (SD)	Minimum-Maximum
Cohesion (7-35)	28.9 (5.1)	9.0-35.0
Expressiveness (3-15)	11.4 (3.0)	3.0-15.0
Conflict (6-30)	12.9 (4.4)	6.0-30.0

Table 3 shows the variables of the family relationship among undergraduate students during movement control order (MCO) which is cohesion, expressiveness and conflicts. The mean value of cohesion is 28.9, whereas their minimum scoring is 9.0 and maximum scoring is 35.0. Next is followed by conflicts, 12.9, minimum scoring is 3.0 where maximum scoring is 15.0. Lastly is expressiveness, 11.4. Their minimum scoring is 6.0 and maximum scoring is 30.0.

Table 4. Association between sociodemographic characteristics and family relationship (cohesion) among undergraduate students during movement control order (MCO) (n=258).

Independent variables	Cohesion Mean (SD)	Mean difference (95% CI)	P value
Gender			
Female	29.1 (5.1)	0.8 (-0.6, 2.2)	0.289
Male	28.4 (5.1)		
Ethnicity			
Chinese	28.1 (5.1)	-	0.019
Indian	30.1 (4.4)		
Malay	27.6 (5.6)		
Others	28.6 (6.3)		
Nationality			
International Students	27.5 (6.0)	-1.5 (-5.6, 2.7)	0.490
Malaysian	29.0 (5.1)		
Number of family members in the house			
≤3	29.4 (5.1)	-	0.084
4-5	28.3 (5.3)		
>5	29.9 (4.5)		
Income of family (total income)			
<RM 4,360	28.2 (5.8)	-	0.415
<RM 4,360-RM 9,619	28.7 (4.7)		
>RM 9,619	29.4 (5.2)		
Education level of parents (mother)			
Primary/Secondary	29.5 (4.4)	-	0.507
Diploma/ High School	28.6 (5.3)		
Bachelor/Master PhD	29.1 (5.0)		
Education level of parents (father)			
Primary/Secondary	29.2 (4.7)	-	0.912
Diploma/ High School	27.8 (5.4)		
Bachelor/Master PhD	28.9 (5.1)		
Presence of family member with chronic disease			
No	28.9 (4.9)	-0.2 (-1.6,1.2)	0.749
Yes	29.1 (5.7)		
Family types			
Extended family	30.4 (5.2)	-	0.139
Nuclear family	28.7 (5.1)		
Single-parent family	28.4 (4.6)		

Table 4 shows an association between gender, ethnicity, nationality, number of family members in the house, income of the family, the individual levels of education of mother and father, the presence of family member with disease, the type of family and the overall family relationship (cohesion aspect) during movement control order amongst undergraduate students in MMMC.

While investigating the different genders, it was found that females have a mean score of 29.1 (SD=5.1), which is slightly higher than males with a mean score of 28.4 (SD=5.1). The mean difference is 0.8 with 95% CI range from -0.6 to 2.2. The p-value is 0.289 thus indicating that there is no significant association between gender and family relationship during movement control order amongst undergraduate students in MMMC.

Whilst investigating the ethnicity variable, the Chinese group has a mean score of 28.1 (SD=5.1), the Indian group has a mean score of 30.1 (SD=4.4), the Malay group has a mean score of 27.6 (SD=5.6) and other races has mean score of 28.6 (SD=6.3). The p-value is 0.019, this thus shows that there is a significant association between the different ethnicities and the family relationship during movement control order amongst undergraduate students in MMMC where the Indian ethnic group has the highest means score.

Next, we investigated the variable that is the Nationality. International students have a mean score of 27.5 (SD=6.0), whereas Malaysian students have a mean score of 29.0 (SD=5.1). There is a mean difference of -1.5 with 95% CI range of -5.6 to 2.7. The p-value is 0.490, thus indicating that there is no significant association between the nationality and the family relationship during movement control order amongst undergraduate students in MMMC.

Participants of the study with more than 5 family members in each household have a means score 29.9 (SD=4.5), participants with less than or equal to 3 family members in each household have a mean score of 29.4 (SD=5.1), and lastly participants with 4-5 family members in each house hold have a mean score of 28.3 (SD=5.3). The p-value is 0.084 and thus showing that there is no significant association between the number of family members and the family relationship during movement control order amongst undergraduate students in MMMC.

When the family of a participant has a total income of less than RM4,360, they have a mean score of 28.2 (SD=5.8). When the family of the participant has a total income that is between Rm 4,360 and Rm9,619, they have a mean score of

28.7 (SD=4.7). Lastly when the family of the participants has a total income that is more than RM9,619, they have a mean score of 29.4 (SD=5.2). The p-value is 0.415 which shows that there is no significant association between the total income of each family and the family relationship during movement control order amongst undergraduate students in MMMC.

Participants whose mother have an education level up to Primary/Secondary have a mean score of 29.5 (SD=4.4), participants whose mother have an education level up to Diploma/High School have a mean score 28.6 (SD=5.3), participants whose mother have an education level up to a Bachelors/Master PhD have a mean score of 29.1 (SD=5.0). The p-value is 0.507 which shows is no significant association between the education level of the participant's mother and the family relationship during movement control order amongst undergraduate students in MMMC.

Participants whose father have an education level up to Primary/Secondary have a mean score of 29.2 (SD=4.7), participants whose mother have an education level up to Diploma/High School have a mean score 27.8 (SD=5.4), participants whose mother have an education level up to a Bachelors/Master PhD have a mean score of 28.9 (SD=5.1). The p-value is 0.912 which shows is no significant association between the education level of the participant's father and the family relationship during movement control order amongst undergraduate students in MMMC.

Next, we investigated the variable that is the presence of a family member with chronic disease. Participants whose family do not have a family member with chronic disease have a mean score of 28.9 (SD=4.9), whereas participants whose family have a family member with chronic disease have a mean score of 29.1 (SD=5.7). There is a mean difference of -0.2 with 95% CI range of -1.6 and 1.2. The p-value is 0.749, thus indicating that there is no significant association between the presence of a family member with chronic disease and the family relationship during movement control order amongst undergraduate students in MMMC.

Participants whose family type is classified as extended family, they have a mean score of 30.4 (SD=5.2), participants whose mother whose family type is classified as nuclear family have a mean score 28.7 (SD=5.1), participants whose family type is classified as single-parent family have a mean score of 28.4 (SD=4.6). The p-value is 0.139 which shows is a significant association between the family type and the family relationship during movement control order amongst

undergraduate students in MMMC.

Table 5. Association between sociodemographic characteristics and family relationship (expressiveness) among undergraduate students during movement control order (MCO) (n=258).

Independent variables	Expressiveness Mean (SD)	Mean difference (95% CI)	P value
Gender			
Female	11.5 (3.0)	0.2 (-0.6, 1.1)	0.585
Male	11.2 (2.9)		
Ethnicity			
Chinese	11.7 (2.8)	-	0.096
Indian	11.4 (2.9)		
Malay	10.0 (3.8)		
Others	11.6 (3.0)		
Nationality			
International Students	12.8 (2.1)	1.5 (-0.9, 3.9)	0.232
Malaysian	11.4 (3.0)		
Number of family members in the house			
≤3	11.5 (2.9)	-	0.081
4-5	11.1 (3.1)		
>5	12.0 (2.6)		
Income of family (total income)			
<RM 4,360	11.0 (3.0)	-	0.662
<RM 4,360-RM 9,619	11.5 (2.9)		
>RM 9,619	11.4 (3.1)		
Education level of parents (father)			
Primary/Secondary	11.3 (2.8)	-	0.835
Diploma/ High School	11.3 (3.1)		
Bachelor/Master PhD	11.5 (3.0)		
Education level of parents (mother)			
Primary/Secondary	11.6 (3.0)	-	0.892
Diploma/ High School	11.3 (3.1)		
Bachelor/Master PhD	11.4 (2.9)		
Presence of family member with chronic disease			
No	11.3 (3.0)	-0.4 (-1.3, 0.4)	0.299
Yes	11.7 (3.0)		
Family types			
Extended family	12.6 (2.8)	-	0.010
Nuclear family	11.1 (3.0)		
Single-parent family	11.8 (2.1)		

Table 5 shows association between sociodemographic characteristics and family relationship (expressiveness) among 258 undergraduate students during movement control order (MCO) in MMMC, Malaysia.

While investigating between male and female gender, it was found that females have a higher mean score of 11.5 (SD=3.0), which is slightly higher than males with a mean score of 11.2 (SD=2.9). The mean difference of 95% CI is 0.2, ranging from -0.6 to 1.1. The p-value is 0.585, showing that there is no significant association between gender and family relationship during movement control order amongst undergraduate students in MMMC.

Whilst investigating the ethnicity variable, the Chinese group has a mean score of 11.7 (SD=2.8), the Indian group has a mean score of 11.4 (SD=2.9), while the Malay group has a mean score of 10.0 (SD=3.8) and other races has mean score of 11.6 (SD=3.0). The p-value is 0.096, this thus shows no significant association between the different ethnicities and the family relationship during movement control order amongst undergraduate students in MMMC.

Followed by the nationality variable, it shows that international students have a mean score of 12.8 (SD=2.1), whereas Malaysian students have a mean score of 11.4 (SD=3.0). There is a mean difference of 1.5 with 95% CI range of -0.9 to 3.9. The p-value is 0.232, thus indicating that there is no significant association between the nationality and the family relationship during movement control order amongst undergraduate students in MMMC.

Participants of the study, who live with more than 5 family members in each household have a means score 12.0 (SD=2.6), while participants with 4-5 family members in each house hold have a mean score of 11.1 (SD=3.1) and lastly, participants with less than or equal to 3 family members in each household have a mean score of 11.5 (SD=2.9). The p-value is 0.081 and thus showing that there is no significant association between the number of family members and the family relationship during movement control order amongst undergraduate students in MMMC.

When the family of a participant has a total income of less than RM4,360, they have a mean score of 11.0 (SD=3.0).

When the family of the participant has a total income that is between RM 4,360 and RM 9,619, they have a mean score of 11.5 (SD=2.9). Lastly when the family of the participants has a total income that is more than RM9,619, they have a mean score of 11.4 (SD=3.1). The p-value is 0.662 which shows that there is no significant association between the total income of each family and the family relationship during movement control order amongst undergraduate students in MMMC.

Participants whose father have an education level up to Primary/Secondary have a mean score of 11.3 (SD=2.8), participants whose fathers have an education level up to Diploma/High School have a mean score 11.3 (SD=3.1), participants whose father have an education level up to a Bachelors/Master PhD have a mean score of 11.5 (SD=3.0). The p-value is 0.835, which shows there is no significant association between the education level of the participant's father and the family relationship during movement control order amongst undergraduate students in MMMC.

Participants whose mother have an education level up to Primary/Secondary have a mean score of 11.6 (SD=3.0), participants whose mother have an education level up to Diploma/High School have a mean score 11.3 (SD=3.1), participants whose mother have an education level up to a Bachelors/Master PhD have a mean score of 11.4 (SD=2.9). The p-value is 0.892 which shows is no significant

association between the education level of the participant's mother and the family relationship during movement control order amongst undergraduate students in MMMC.

Next, we investigated the variable that is the presence of a family member with chronic disease. Participants whose family do not have a family members with chronic disease have a mean score of 11.3 (SD=3.0), whereas participants whose family have a family member with chronic disease have a mean score of 11.7 (SD=3.0). There is a mean difference of -0.4 with 95% CI, ranging between -1.3 to 0.4. The p-value is 0.299, thus indicating that there is no significant association between the presence of a family member with chronic disease and the family relationship during movement control order amongst undergraduate students in MMMC.

The different family types were investigated, and participants whose family type is classified as extended family, they have a mean score of 12.6 (SD=2.8). Participants whose mother whose family type is classified as nuclear family have a mean score 11.1 (SD=3.0), and participants whose family type is classified as single-parent family have a mean score of 11.8 (SD=2.1). The p-value is 0.010, thus proving there is a significant association between the family type and the family relationship during movement control order amongst undergraduate students in MMMC.

Table 6. Association between sociodemographic characteristics and family relationship (conflict) among undergraduate during movement control (MCO) (n=258).

Independent variables	Conflict Mean (SD)	Mean difference (95% CI)	P value
Gender			
Male	12.6 (4.3)	0.4 (-0.7, 1.6)	0.451
Female	13.0 (4.3)		
Ethnicity			
Malays	13.6 (4.9)	-	0.008
Chinese	13.5 (4.5)		
Indian	11.8 (3.8)		
Others	14.2 (4.5)		
Nationality			
International students	15.7 (4.2)	2.8 (-0.7, 6.3)	0.119
Malaysian	12.8 (4.3)		
Number of family member in the house			
≤3	12.5 (3.6)	-	0.843
4-5	13.0 (4.6)		
>5	13.0 (4.2)		
Income of family			
< RM 4360	13.8 (4.5)	-	0.417
RM 4360- RM 9619	12.8 (4.1)		
> RM 9619	12.7 (4.5)		
Education level of parents (father)			
Primary / Secondary	13.1 (3.7)	-	0.455
High school / Diploma	13.3 (4.3)		
Bachelor / Master / PhD	12.6 (4.6)		
Education level of parents (mother)			
Primary / Secondary	13.7 (3.6)	-	0.441
High school / diploma	12.6 (4.2)		
Bachelor / Master/ PhD	12.9 (4.9)		
Presence of family member with chronic disease			
Yes	13.9 (5.1)	-1.4 (-2.6, -0.1)	0.023

Independent variables	Conflict Mean (SD)	Mean difference (95% CI)	P value
No	12.5 (4.0)		
Family types			0.344
Nuclear family	13.1 (4.4)		
Single-parent family	13.2 (2.9)		
Extended family	12.0 (4.5)		

The table above shows the association between the socio-demographic data and family relationship (conflict). The male & female participants had a similar mean value of 0.01 (SD = 4.3). The mean difference resulted in a value of 0.5 with a 95% confidence interval of -0.7 to 1.6. In this variable, the P value was 0.451 which was more than 0.05, this meant that there was no significant association between the gender and conflict.

Furthermore, 4 ethnicities were involved in this study such as Malay, Indian, Chinese and Others. The 'other' category had the highest mean value of 14.2 (SD = 4.5), followed by Malay with a mean value of 13.6 (SD = 4.9), Chinese with a mean of 13.5 (SD = 4.5) and Indian with a mean of 11.8 (SD = 3.8). This variable had a P value of 0.008 which was less than 0.05, this meant that there was significant association between the ethnicities and conflict. The Malaysians had a lower mean value of 12.8 (SD = 4.3) compared to the International students with a mean of 15.7 (SD = 4.2) in this domain. The mean difference between these 2 categories in this variable was 2.8 with a 95% confidence interval ranging from -0.7 to 6.3. The P value in this variable was 0.119 which was higher than 0.05, this meant that there was no significant association between nationality and this domain in conflict.

Next, 3-5 & more than 5 family member had no different in mean value of 13.0, but had a different in (SD = 4.6 & 4.2). Less than 3 family member had a mean value of 12.6 (SD= 3.6). The P value in this variable was 0.843, this meant that there was no significant association between family member and this domain in conflict. Follow by income between RM 4360-9619 & more than RM 9619 had not much different in mean value of 12.8 & 12.7, but had a different in (SD= 4.1 & 4.5). Income with less than RM4360 had a highest mean value of 13.8 (SD= 4.5). The P value in this variable was 0.417, this meant there was no significant association between family member and this domain in conflict.

Participants whose father had an education level up to high school/diploma had a highest mean value of 13.3 (SD= 4.3), follow by primary/secondary education level with mean value of 13.1 (SD= 3.7) & last is bachelor/master/phd education had a mean value of 12.6 (SD= 4.6). The P value in this variable was 0.455 which shows no significant association between this domain and family relationship. Participants whose mother had an education level up to Primary/Secondary had a highest mean value of 13.7 (SD=

3.6), follow by bachelor/master/phd education level with mean value of 12.9 (SD= 4.9) & last is high school/diploma education had a mean value of 12.6 (SD= 4.2). The P value in this variable was 0.441 which shows no significant association between this domain and family relationship.

Next, the presence of family member with chronic disease had a highest mean value of 13.9 (SD= 5.1) when compare to the family member without chronic disease with a mean value of 12.5 (SD= 4.0). The P value in this variable was 0.023 which was less than 0.05, this meant that there was significant between family relationship & this domain. Lastly, whose family type is classified as extended family had a lowest mean value of 12.0 (SD= 4.5). The mean value of nuclear & single-parent family had not much different 13.1 & 13.2 (SD= 4.4 & 4.5) respectively. The P value in this variable was 0.344 which shows no significant association between type of family and family relationship.

4. Discussion

A cross sectional study was conducted among undergraduate students including FIS, BDS and MBBS of Melaka Manipal Medical College in Malaysia to determine the family relationship in terms of cohesion, expressiveness and conflicts during MCO period among undergraduate students. We also aimed to determine the factor associated with family relationship in terms of cohesion, expressiveness and conflicts during MCO period.

The COVID-19 pandemic poses an acute threat to the well-being of children and families due to challenges related to social disruption such as financial insecurity, caregiving burden, and confinement-related stress (e.g., crowding, changes to structure, and routine). The consequences of these difficulties are likely to be longstanding, in part because of the ways in which contextual risk permeates the structures and processes of family systems especially during Movement Control Order. [20] Upon analysing our data, we found that the mean value of cohesion was 28.9 with a maximum value of 35.0. In comparison of previous study which was conducted among the subjective wellbeing of elderly and younger people during SARS pandemic in Hong Kong, the study shows that the higher family cohesion is probably going to be a significant cushion following threats experienced by a network where their mean value is 72.7

which is significantly higher. Comparable discoveries have been accounted for in Australia because of September 11 and other fear based oppressor related occasions. They discovered comparable increments in levels of fulfilment with family connectedness, which added to the support of regularizing levels of emotional prosperity. Consequently, the danger joined to such occasions doesn't definitely bring about negative results yet rather, may create positive impacts, for example, enhancing social cohesion, which at that point goes about as an incredible cradle for ordinary prosperity. [21] Other cross-sectional study was conducted to study the psycho-social experiences of youth during the COVID-19 lockdown in Zimbabwe found that the lockdown was a good way of family bonding hence the isolation did not affect them much. [22] Besides, another studies was conducted in Germany among parents to examined effects of daily parental autonomy support on changes in child behaviour, family environment, and parental well-being across three weeks during the COVID-19 pandemic proved that daily autonomy-supportive parenting was associated with an increase in positive emotional family climate (specifically: family cohesion) Finding indicated that solitary the impact on change in family attachment remained measurably noteworthy in the wake of controlling for these day by day encounters. [23]

In the aspect of expressiveness, we found that we have relatively high mean scores in expressiveness which is 11.4 over 15. This result was consistent with a study done among local residents in Liaoning Province, China associated with Impact of the COVID-19 Pandemic on Mental Health and Quality of Life which has reported the majority of participants received increased support from family members (63.9%). The majority also experienced and increased shared feelings with family members (57.8%), and increased caring for family members' feelings (77.9%). [24]

For conflicts, we found that the value in our study considered moderate where the mean score is 12.9 within the score of 6.0 to 30.0. The investigation of pandemics in relationship with savagery among lady and youngsters shows an undeniably high situations where emergencies and times of agitation inside family clashes have been connected to expanded relational brutality, including occurrence of viciousness against ladies and kids. [25] This can turn into a rearing ground for coercive cycles in parent-youngster collaborations wherein a parent responds sincerely to a getting out of hand kid, which prompts further cynicism from the kid and the inevitable heightening of the contention or parental shirking. After some time, these negative patterns of conduct have been connected to poor relationship quality and poor youngster psychosocial change. Or on the other hand case, with the normal

increments in conjugal clash during this unpleasant time, kin may impersonate antagonistic vibe and coercive connections saw between their parents. [26]

In this study, we found that there was significant association between ethnicity and the cohesion aspect of family relationship among undergraduate students during movement control order investigated in our study. Indians had the highest mean score of 30.1 followed by others with a mean score of 28.6, Chinese with a mean score of 28.1 and Malays with a mean score of 27.6. According to a descriptive study among young adults (aged 18-40 years) who are in their home with their family during the COVID-19 lockdown in India, it was found that there was no significant association between gender, type of family, age and family cohesion of the respondents. [6] In contrast, a telephone survey conducted among eight hundred and eighteen Hong Kong residents of age 18-60 years during the SARS epidemic revealed that male respondents were less likely than female respondents to be sharing feelings with others more frequently when feeling blue. [27] Therefore females provided more family support and played a big role in family cohesion.

In our study, there is no significant association between all other variables however, there is significant association between family type and expressiveness during movement control. The highest mean was obtained by extended family with a mean score of 12.6 followed by single parents with a mean score of 11.8 and lowest seen in a nuclear family with mean score 11.1. Based on a previous study done in Liaoning Province, mainland China, a research was done on the immediate impact of the COVID-19 pandemic on mental health and quality of life among local Chinese residents aged ≥ 18 years. The results obtained showed that the majority also experienced and increased shared feelings with family members (57.8%), increased shared feelings with others when feeling blue (62.4%), and increased caring for family members' feelings (77.9%). As for other sociodemographic variables, including age and education levels, were not significantly associated with the items in the questionnaires in this study. [24] Another study was done in Nepal, it studied the 'Risk and Protective Factors for Adolescent and Young Adult Mental Health within the Context of COVID-19: A Perspective from Nepal'. This explores the unique mental health risk and protective factors of Nepalese youths, who have been in complete lockdown since March 23. [28] It showed that, joint and extended families are common in Nepal, which provide youths with a support system. As a result, youths are reconnecting with their family values and cultural identity. Increased support from friends and family have been reported in the context of COVID-19. [29] Based on a study done in Hong Kong during the SARS epidemic,

the positive mental health impacts were studied along with the negative. They were sharing feelings more frequently with their family members (35.3%), and were sharing feelings more frequently with others when feeling blue (22%). Over 60% of the respondents cared more about family members' feelings. Else then that, gender, age and education were not significantly associated with the family relationship. [27]

In this study, we determined the association between sociodemographic variables and family relationship (conflict). According to some interpretations of this definition, conflict can exist in the absence of its expression. Two or more individuals or groups who have opposing goals but who do not act on or express their opposition, nevertheless are considered to be in conflict. [30] We found that there was no significant association between gender, nationality, number of family member, income of family member, education of both parents & types of family. However, the ethnicities had a significant association with family relationship (conflict). While other study show that conflict can be amplified or inhibited based on the extent to which family members differ and agree about such religiously based parameters. [31] According to our data, family incomes has no significant between conflicts of family member. A previous study which was conducted to identify the psychological impact of quarantine and how to reduce it, shows that there is significant association between family income with conflicts where the budgetary misfortune can be an issue during isolate, with individuals unfit to work and interfering with their expert exercises with no timely arrangement; the impacts seem, by all accounts, to be dependable. In the investigated examinations, the budgetary misfortune because of isolate made genuine financial misery and was seen as a hazard factor for side effects of mental issue and both annoyance and nervousness a while after quarantine. [32]

In context of number of family member in the house, a study was conducted in USA among families about the risk and resilience in family well-being during COVID-19 pandemics says that it has significant relationship among the number of family members in the house with conflicts among family members. This study mentioned that kin connections were endured because of the COVID-19 pandemic due to negative effect of pandemic-related stressors on conjugal connections and child rearing conduct, with overflow impacts into the kin subsystem. Such a deterioration in the kin relationship put families in danger for additional social interruptions and family stress. With the normal increments in conjugal clash during this unpleasant time, kin may impersonate threatening vibe and coercive communications saw between their folks. [33] Other study was done in Madurai, Tamil Nadu, India to

study the level of family bonding among young adult who are in their home with their family during COVID-19 lockdown mentioned that there were no variation between number of siblings and level of family bonding.[6]

Other than that, our study also show there was significant association between presence of family member with chronic disease & family relationship (conflict). Other study done by Julia A. & Jon D. in 1991, patients with chronic arthritis was associated with higher family conflict. [24] Based on Andrew M. in 2020, the actions such as social-distancing, sheltering in-place, restricted travel, and closures of key community foundations are likely to dramatically increase the risk for family violence around the globe during COVID-19 pandemic period. [34] Next, they study done by Campbell, J. L., & Snow, B. M. in 1992, suggest that men who have lower levels of marital satisfaction are less able or willing to express emotions, have higher levels of conflict between work or school and family relationship, and have lower levels of family cohesion. [35] The relationships between conflict and family influence were found to be moderated by the generations (first, second, third, or later) among involved family businesses suggested by Alejandro Bello-Pintado, Lucia Garcés-Galdeano in 2019. [36]

Since this study was a cross sectional study there were a few limitation found throughout the research studies. One of the limitation which we were only allowed to observe participant at one point in time which is 6 weeks of our research period. Therefore, we were unable to observe the effect of time on the changes in their family relationship since we do not follow up for this study design. Secondly, this research cannot be observed over time, as it is only focused during a lockdown. Besides that, our study was only done in one private medical college; hence the findings cannot be generalized to other settings.

According to our data, we found that cohesion and expressiveness has a higher mean score compare to conflicts, which means that most of the family has a relatively good relationship during this MCO. Hence, measures to take to promote good family relationship during lockdown can be improved in the sense of individuality and group-like. Individually, children can spend more time opening up and sharing about their day and their online classes with their parents, explaining the struggles they face and vice versa. It is a healthy outlet in venting while seeking support. This strengthens emotional bonding. In Group wise, leisure activities can be done together such as indoor board games, cooking, movie time, household chores, and exercising together. By doing things together, they can limit individual screen time with the digital world and at the same time gain a better perception of their family members and dealing with their conflicts especially during Movement Control Order.

Since our study only includes medical students in one private college, we would like to recommend future researchers to include students in other profession to get a more accurate result.

5. Conclusion

Among the family relationship in undergraduates' medical students of MMMC, it was found that the expressiveness and cohesion were seen at a high level, while conflict level was found to be moderate. Cohesion is seen highest compared to expressiveness and conflict, with had the highest mean seen in Indian students compared to the other ethnicities. Besides that, the results did not show any difference between male and female students as both the genders did not show great mean difference in the sense of expressiveness, cohesion and conflict. In terms of expressiveness, students with extended family have the highest mean compared to nuclear and single parent family. Students were found with moderate level of conflict and did not have significant association with all the areas studied. Overall, undergraduate students of MMMC are seen to be coping well with their family members during lockdown.

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