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# A Cross-Sectional Study on the Association Between Psychological Well-Being, Loneliness and Television Binge-Watching Behaviour

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## Abstract

In this era of technology, streaming services like Netflix have gained more traffic growth and people are abandoning traditional television. This has led to a binge-watching behaviour where people watch their favourite shows back-to-back episodes in a single sitting. This study was designed to determine the association between psychological well-being, loneliness and television binge-watching behaviour along with television affinity in Malaysia among undergraduate students of a private medical college, Manipal University College Malaysia (MUCM). A cross-sectional study was conducted from January 2021 to February 2021 and 1800 students were selected as the study population. To enrol the students for this study, purposive sampling was used. An online questionnaire consisting of five sections was completed by 219 students. It had questions and statements related to psychological well-being, loneliness, television affinity and binge-watching behaviour using validated questionnaires. The analysis included frequency, percentage, mean, standard deviation and the statistical tests used were unpaired T-test, ANOVA chi-square test, correlation and logistic regression. Among the 219 students who participated, the researchers found that 61.7% spent watching television shows on weekdays with an average of less than 2 hours and 73.1% watched television shows on weekends for more than 2 hours on an average. 76.7% of the samples admitted to binge-watching and only 19.6% of them viewed their television-viewing habit negatively. The total mean score of samples' television affinity was known to be  $15.2 \pm 3.3$ , which was moderate. There was a positive significant association between loneliness and television affinity (r-value: 0.14, p-value: 0.024) as well as loneliness and binge-watching behaviour (OR: 1.29; 95% CI: 1.19-1.40, p-value: <0.005). The findings further displayed a negative significant association between psychological well-being and television affinity (r-value: - 0.25, p-value: <0.005) where samples with poor psychological well-being were having high television affinity. This study also showed that samples who had poor psychological well-being were less likely to binge-watch with a positive significant association between those two variables (OR: 1.01; 95% CI: 1.01-1.02, p-value: <0.005). For future study, the researchers would suggest that there is a need to explore other factors such as anxiety and depression in association with television affinity and binge-watching behaviour. The findings in this study reflected that the samples who felt lonely tend to have higher television affinity and binge-watching. Thus, the concern is finding more appropriate ways to address the feelings of loneliness among the medical university students.

## Keywords

Psychological Well-Being, Loneliness, Television Affinity, Binge-Watching Behaviour

Received: March 19, 2021 / Accepted: April 14, 2021 / Published online: April 29, 2021

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## 1. Introduction

Over the last few years, the audience of primetime television have gone through a series of developments and changes. There has been a noticeable shift in viewership from satellite television (TV) to watching TV shows via video-on-demand streaming services such as Netflix or Amazon Prime Video. For instance, in the year 2014 a significant decline of watching satellite TV has been reported which was more abrupt than in any other previous year noticed so far. [1] According to Nielsen, there was a drop of 6 hours from 147 hours to 141 hours in the third quarter of 2014 from the third quarter of 2013. Also, to be noted is a drop of 12 minutes of traditional television viewership since 2013. All in all, in the year 2014 there has seen a significant decline in traditional television viewing than any previous year. [2] This begs the question of what constitutes binge-watching. Binge-watching, also called binge-viewing or marathon-viewing, is the practice of watching a content for a long time span, usually a single television show or multiple television shows in a single sitting. [3] Binge-watching can be easily confused as to watching a couple of episodes of a show in the span of a single day. Therefore, a suitable example of binge-watching can be observed in a study conducted by Netflix for the show *Stranger Things*. This was after Nielsen announced its observation of viewership on Netflix. A significant event occurred during the debut of the second season of the show, where 361,000 out of 4 million viewers binge watched all 9 episodes in a single day.

However, this act of binge-watching tends to denote a rather negative perspective due to the association of the word 'binge' with extremely unhealthy behaviour of gluttony. [4] Recent studies showed that intensive consumption of streaming can also trigger goal struggles, giving the user a feeling of guilt which may lower the mental well-being [5]. The research implies that, particularly, the excessive forms of binge-watching can involve symptoms of addiction, such as lack of control, negative health and social effects, feeling of guilt, and neglect of duties. It is important to distinguish the healthy way of consuming TV series from the problematic and excessive forms of binge-watching. [6] In addition, binge-watching not only makes a person become less productive, it also may affect their physical health. Since watching is a sedentary activity in which a person only sits still and watches the episodes, it is usually associated with hand-in-hand eating. This can increase the risk of ones from getting obesity, diabetes, heart disease and other chronic health conditions. [7]

According to the Internet Users Survey 2020 (IUS 2020) done under Malaysian Communications and Multimedia Commission (MCMC), there is 1.3% increase in the

percentage of Internet users from 87.4% in 2018 to 88.7% in 2020. [8] When it comes to the duration of daily use of the Internet, 28.6% of the Internet users reported spending 5-8 hours a day on the Internet and 87.3% using the Internet for watching or downloading video and online television. [8] The increased trend in the duration of hours spent can be due to the pandemic of Covid-19 and subsequent Movement Control Order (MCO) implemented in Malaysia since 18 March 2019. Therefore, most of the users rely on the Internet to work from home, socializing virtually and for entertainment purposes. [8]

This can be supported by a report from the Malaysia Digital Association in March 2020 upon the Covid-19 Lockdown in collaboration with its Market Intelligence Partner SimilarWeb, where they provided an overview of Malaysians adapting to the MCO by going online for work, food and television. [9] The report shows that there is a rise in the demand for entertainment, especially streaming video online. The global platform, Netflix has gained 195% year-on-year traffic growth in the third week of March. Local platforms like Tonton showed 232% growth, and other services such as Dimsum and Viu each gained 140% increased growth in traffic for the same period. [9] More users are abandoning the free-to-air (FTA) television and opting for over-the-top (OTT) services because of its convenience and flexibility. YouTube particularly has shown to be having the most significant increase of 32.3% from 48.3% in 2018 to 80.6% in 2020 according to the survey by IUS 2020 [9] and the keyword 'movie' is the most search query that the Malaysian entered into the YouTube's search tools throughout 2019. [10]

Even before the pandemic struck, this online streaming behaviour is not an unfamiliar phenomenon to the Malaysians. It was documented by the Malaysia Digital Association (MDA) in their report on 2016 Malaysia Digital Landscape that the netizen spends a total average 18 hours using the internet weekly of which 7.2 hours per week are on watching online videos. [11] 42% of Malaysian netizens watch television content and movies via the Internet and 80% of Malaysian netizens stream or download online video content monthly. [11] With the rising of video streaming services, global platforms for video sharing dominate Malaysian consumption instead of the local platforms. [12]

Therefore, this study is suitable to be conducted among the undergraduate students due to the individuals being put in situations that strain their emotional needs. By understanding this emotional needs, the researchers can suggest options on how these needs can be met through binge-watching. [13] One reason why the act of binge-watching is loved by many is because it encourages a sense of community around a show, where experts call it as a "shared cultural space." This basis permits viewers to debate and luxuriate about the show

with everybody from a colleague to a stranger in line at the grocery store. This shared space makes it easier to relate to others and share personal views. [14-17] In addition, romantic relationships could also be strengthened by binge-watching together as it may be a fun activity that makes a shared interest and offers a simple way to spend some time together. For example, when binge-watching becomes uncontrolled, viewers may start to abandon their work, students may miss class which will distract them from their academic activities and also will affect their relationship with friends and family members. Although people are aware of the negative impacts brought by binge-watching, they find it hard to resist their desire to watch TV shows episodes continuously. [28] A survey carried out by Winland in 2014 showed that students who tend to indulge themselves in binge-watching tend to have poor academic performance. Out of the 74 participants involved, 87% of them spent 3 hours or more watching content online in a single sitting, whereas 59.7% of them agreed that such activity is distracting them from their academic performance. 39.4% reported to have less engagement with their academic lifestyle, when compared to their binge-watching behaviour. [18]

#### Research Objectives

The objectives that guided this research are as follows:

- 1) To find the association between gender, age, nationality, ethnicity, residency, living arrangement and television affinity.
- 2) To find the association between loneliness, psychological well-being and television affinity.
- 3) To find the association between binge-watching behaviour and television affinity.
- 4) To find the association between gender, age, nationality, ethnicity, residency, living arrangement and binge-watching behaviour.
- 5) To find the association between loneliness, psychological well-being and binge-watching behaviour.

## 2. Research Methodology

### 2.1. Study Design, Study Population, Study Time and Study Setting

A descriptive study with a cross-sectional design was orchestrated from January 2021 to February 2021 among the undergraduate students of a private medical college, Manipal University College Malaysia (MUCM). The university is divided into 2 campuses in Malaysia, with the main campus located in Melaka and another campus located in Muar, Johor. Students enrolled in this university are enrolled in one of the following courses: Foundation in Science (FIS),

Bachelor of Dental Surgery (BDS) and Bachelor of Medicine and Bachelor of Surgery (MBBS). The population of the study included all the 1800 students of the various undergraduate programmes.

### 2.2. Sample Size

Based on previous research findings highlighted in India, Bangladesh, Nepal and Indonesia during the Covid-19 pandemic, 73.7% of the samples involved agreed that they do have the habit of binge-watching. [19] Using the formula application software "Epi Info" version 7.2, the sample size (n) was calculated and the results were as follows:

StatCalc - Sample Size and Power				
Population survey or descriptive study				
		Confidence Level	Cluster Size	Total Sample
Population size	1800	80%	84	84
Expected frequency	73.7%	90%	135	135
Acceptable margin of error	6%	95%	186	186
		97%	222	222
Design effect	1.0	99%	298	298
		99.9%	440	440
Clusters	1	99.99%	561	561

Figure 1. Calculation of minimum sample size using Epi Info.

The minimum sample size required is 186 with a confidence level of 95%. After further calculation using the Epi Info software, the researchers then chose to allow a non-response of 10% and the calculation is as below:

$$\begin{aligned}
 n(\text{final}) &= \frac{n(\text{calculated})}{1 - (\text{non response})} \\
 &= \frac{186}{1 - (0.1)} \\
 &= 206.67 \text{ (Final Sample Size)}
 \end{aligned}$$

Therefore, the final sample size for this study is 207.

### 2.3. Sampling Method

The purposive sampling method was used. The inclusion criteria included Malaysian and International students of MUCM (MBBS, BDS, FIS) who provide informed consent to participate in this study. For those who did not consent or fail to complete all the questions were excluded.

### 2.4. Data Collection

The data was collected by distribution of online questionnaires through Google Form to the targeted undergraduate students of Manipal University College Malaysia (MUCM). In this study, it aimed to assess the association between the independent and dependent variables. The independent variables were age, gender, ethnicity, nationality, field of study, residency, living

arrangement, emotional loneliness, social loneliness and psychological well-being. Dependent variables of this study were television affinity, average amount of hours spent watching television shows and television viewing habits including binge-watching.

The questionnaire consisted of five sections. The first section contained the demographic part which included age, gender, nationality, ethnicity, field of study, residency and who is staying with them. The second section was about television affinity of the respondents had five items and used five-point Likert response scale items adapted from Rubin and Rubin's (1982) Television Affinity Scale. [20] The respondents were given statements such as "I would feel lost without television shows to watch", "I could easily do without television shows for several days", "Watching television shows is one of the more important things I do each day", "Television shows are very important in my life" and "If the television/ streaming website wasn't working, I would really miss it". Then the respondents would choose from 1 (Strongly disagree) to 5 (Strongly agree) for each statement. Total score was calculated and higher score indicates higher television affinity with the reliability coefficient of the scale known to be 0.84. [21] The third section was related to television viewing habits where the question sets used were the modified version of Katherine's (2015) Television Viewing Habits Questionnaire. [22] There were nine items, including multiple choice questions, yes/no questions and Likert-type. Questions included, such as asking respondents the average hour spent watching television shows during weekdays and weekends, whether they watch back-to-back episodes in a single sitting and how they view their television-viewing habits. The fourth section was about loneliness perceived by the respondents. The set of questions were taken from the 6-item De Jong Gierveld Loneliness Scale where loneliness can further group into emotional and social loneliness. [23] It asked the respondents to indicate the degree to which they agree with each statement. Answers given were 1 (Yes), 2 (More or less), 3 (No).

Examples of questions were, "I experience a general sense of emptiness", "I miss having people around me" and "There are enough people I feel close to". Total score was calculated and a higher score indicated loneliness is higher with the scale having a coefficient values of 0.87 and 0.90 in respect to emotional and social loneliness. [24] Fifth section was to assess the respondent's psychological well-being using shortened version of Ryff's (1995) Scales of Psychological Well-Being. [25] There were 18 items and had six aspects which were autonomy, environmental mastery, personal growth, positive relation with others, purpose in life and self-acceptance. Items were on a Likert-type scale and respondents had to indicate the extent to which they agree with each of the several self-referent statements. Choices of answers ranged from 1 (Strongly agree) to 7 (Strongly disagree). Examples of the items were, "I am good at managing the responsibilities of daily life", "Some people wander aimlessly through life, but I am not one of them" and "When I look at the story of my life, I am pleased with how things have turned out so far.". Total score was calculated for each subscale with reliability coefficient following Cronbach's alpha for each subscale where it was 0.75 for self-acceptance, 0.75 for positive relations with others, 0.57 for autonomy, 0.72 for environmental mastery, 0.77 for purpose in life, and 0.81 for personal growth. [26]

## 2.5. Data Processing and Data Analysis

Data collected was then transferred into Microsoft Excel and Epi Info software was used to analyse the data statistically. The qualitative data like gender, ethnicity, living arrangements and binge-watching behaviour were analysed to derive its frequency and percentage. Quantitative data such as age, television affinity, overall loneliness and overall psychological well-being were analysed to obtain mean and standard deviation. The level of significance in this study was set to 0.05. Odds Ratio (OR) was also calculated. The following statistical tests were used in the study as shown in Table 1:

**Table 1.** Statistical tests used to find out the association between independent and dependent variables.

Independent Variable	Dependent Variable	Statistical Test
Age	Television Affinity	Unpaired t-test
Gender		Unpaired t-test
Nationality		Unpaired t-test
Ethnicity		ANOVA
Residency		Unpaired t-test
Living arrangements		ANOVA
Loneliness	Television Affinity	Correlation
Psychological Well-Being		
Binge-watching behaviour	Television Affinity	Unpaired t-test
Age	Binge-watching behaviour	Chi-square test
Gender		
Nationality		
Ethnicity		
Residency		
Living arrangements		
Loneliness	Binge-watching behaviour	Logistic Regression
Psychological Well-Being		

## 2.6. Ethical Consideration

When distributing the online questionnaires, samples were given an informed written consent in the beginning with important and relevant details regarding the study. The choice to participate in the study was solely dependent on the sample's free will. Data collected from the samples were kept

private and confidential and was used only for the purpose of research. All the samples were anonymous throughout the study. In addition, this research was conducted after obtaining the ethical clearance and approval by the Research Ethics Committee, Faculty of Medicine, Manipal University College Malaysia.

**Table 2.** Sociodemographic characteristics of undergraduate students participated (n=219).

Variable	Frequency (n)	Percentage (%)
Age group		
≤21	95	43.4%
>21	124	56.6%
Mean (SD)	21.6 (2.0)	
Min-Max	17-28	
Gender		
Male	70	32.0%
Female	149	68.0%
Nationality		
Malaysian	194	88.6%
Non-Malaysian	25	11.4%
Ethnicity		
Malay	28	12.8%
Indian	114	52.1%
Chinese	40	18.3%
Others	37	16.9%
Field of Study		
MBBS	139	63.5%
BDS	42	19.2%
FiS	38	17.4%
Residency		
Urban	205	93.6%
Rural	14	6.4%
Living Arrangement		
Hostel	82	37.4%
Staying outside, alone	0	0%
Staying outside, with friends	123	6.4%
Staying at home, with family	14	56.2%

## 3. Results

A total of 225 online questionnaires consisting of 38 questions were distributed to undergraduate students of Manipal University College Malaysia (MUCM). These included Malaysian and International students of MUCM (MBBS, BDS, FIS) who provided informed consent by agreeing to participate in the study. The results in Table 2 shows the frequency and percentage of different variables such as age group, gender, ethnicity, field of study, residency and living arrangement. A total of 219 responses were received, giving a response rate of 97.33%. Of those who responded, the 43.4% were from the age group of 21 and

below, 56.6% were above 21 which cumulatively highlighted a mean value of 21.6. For the gender, 32.0% were male and 68.0% were female. Malaysians comprised of 88.6% whereas 11% were non-Malaysians. For ethnicity, 12.8% were to be Malay samples, 52.1% were Indians, 18.3% were Chinese and 16.9% were from other ethnic groups. For the field of study, 63.5% were MBBS students, 19.2% were BDS students whereas 17.4% were FIS students. Urban residents comprised 93.6% whereas rural residents who participated in this study comprised 6.4%. For the living arrangement, 37.4% lived in hostels, 6.4% were staying outside with friends and 56.2% stayed at home, with their family and none of the samples who participated in this study were staying alone outside the campus vicinity.

**Table 3.** Descriptive Statistic of Television Affinity for Each Statements.

Statements	Frequency (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I would feel lost without television shows to watch	33 (15.1%)	48 (21.9%)	65 (29.7%)	57 (26.0%)	16 (7.3%)
I could easily do without television shows for several days	12 (5.5%)	34 (15.5%)	48 (21.9%)	86 (39.3%)	39 (17.8%)
Watching television shows is one of the more important things I do each day	32 (14.6%)	72 (32.9%)	57 (26.0%)	46 (21.0%)	12 (5.5%)
Television shows are very important in my life	34 (15.5%)	48 (21.9%)	65 (29.7%)	60 (27.4%)	12 (5.5%)
If the television/ streaming websites wasn't working, I would really miss it	19 (8.7%)	39 (17.8%)	51 (23.3%)	84 (38.4%)	26 (11.9%)

Table 3 shows descriptive statistics of television affinity for each statement derived from the second section of the questionnaire which had 5 items and used five-point Likert response scale items. The scale was adapted from Rubin and Rubin's (1982) Television Affinity. The respondents were given these statements and were required to rate on how strongly they felt about them by indicating a score ranging from 1 (strongly agree) to 5 (strongly disagree) for each statement. For the statement 'I would feel lost without television shows to watch', 15.1% of samples strongly disagreed, 21.9% of samples disagreed, 29.7% rated it neutral, 26.0% agreed to the statement, 7.3% rated strongly agreed. For the statement 'I could easily do without television shows for several days', 5.5% of the samples strongly disagreed, 15.5% disagreed to the statement, 21.9%

felt neutral towards the statement, 39.3% of the samples agreed with the statement whereas 17.8% strongly agreed to the statement. For the statement 'watching television shows is one of the more important things I do each day', 14.6% strongly disagreed to this statement, 32.9% samples disagreed, 26.0% felt neutral about this statement, 21.0% agreed to this statement, 5.5% of them strongly agreed to the statement. For the statement 'Television shows were very important in my life' 15.5% strongly disagreed, 21.9% disagreed, 29.7% felt neutral about the statement, 27.4% agreed whereas 5.5% strongly agreed. For the statement 'If the television/streaming websites wasn't working, I would really miss it', 8.7% strongly disagreed, 17.8% disagreed, 23.3% felt neutral, 38.4% of them agreed and 11.9% strongly agreed to the statement.

**Table 4.** Descriptive Statistic of Television Viewing Habits.

Statements on Television Viewing Habits	Frequency (n)	Percentage (%)
Average amount of hours spent watching television shows on weekdays		
Less than an hour	40	18.3%
1-2 hours	95	43.4%
2-4 hours	54	24.7%
More than 4 hours	30	13.7%
Average amount of hours spent watching television shows on weekends		
Less than an hour	23	10.5%
1-2 hours	36	16.4%
2-4 hours	91	41.6%
More than 4 hours	69	31.5%
Streaming Video-on-Demand		
Yes	181	82.7%
No	38	17.4%
Watch back-to-back episode in single sitting		
Yes	168	76.7%
No	51	23.3%
When do you most likely watch back-to-back episodes?		
Weekends	126	57.5%
Weekdays	6	2.7%
Any day of the week	87	39.7%
How often do you watch back-to-back episodes?		
Never	6	2.7%
Rarely	38	17.4%
Sometimes	111	50.7%
Most of the time	51	23.3%
All of the time	13	5.94%
View television program by myself		
Never	1	0.5%
Rarely	14	6.4%
Sometimes	45	20.6%
Most of the time	96	43.8%

Statements on Television Viewing Habits	Frequency (n)	Percentage (%)
All of the time	63	28.8%
Discuss favourite television programs with others		
Never	3	1.4%
Rarely	33	15.1%
Sometimes	108	49.3%
Most of the time	51	23.3%
All of the time	24	11.0%
I view my television-viewing habits as		
Not at all healthy	7	3.2%
Not healthy	36	16.4%
Neutral	125	57.1%
Healthy	38	17.4%
Very healthy	13	5.9%

Table 4 shows the descriptive statistics of Television Viewing Habits. This table was derived from the third section of the questionnaire which was related to television viewing habits where the question sets used were the modified version of Katherine's (2015) Television Viewing Habits Questionnaire. Questions included, such as the average hour spent watching television shows during weekdays and weekends, where 18.3% of the samples spent less than an hour, 43.4% spent 1-2 hours, 24.7% spent 2-4 hours and 13.7% spent more than 4 hours. For average number of hours spent watching television shows on weekends, 10.5% spent less than an hour, 16.4% spent 1-2 hours, 41.6% spent 2-4 hours and 31.5% spent more than 4 hours. 82.7% of the samples streamed video-on-demand whereas 17.4% of them did not do so. For the statement 'Do you watch back-to-back episodes of any shows in a single sitting?', 76.7% of them watched back-to-back episodes in a single sitting whereas 23.3% participants did not watch back-to-back episodes in a single sitting. For the statement on 'How often do you watch back-to-back episodes of a favourite television program?', 2.7% never watched back-to-back episodes, 17.4% rarely watched back-to-back episodes, 50.7% of the samples sometimes watched back-to-back episodes, 23.3% of them watched back-to-back episodes most of the time whereas 5.94% watched back-to-back episodes all time. For the statement 'I normally view television programs by myself', 0.5% of participants never watch by themselves, 6.4% of samples rarely watched television programmes by themselves and 20.6% of the samples sometimes viewed television programmes by themselves. 43.8% of the samples viewed television programmes by themselves most of the time and 20.6% watched television programmes by themselves all the time. For the statement on whether the samples discuss the favourite television programs with others, 1.4% of them never discussed, 15.1% rarely discussed, 49.3% sometimes discussed, 23.3% discussed most of the time whereas 11.0% discussed all the time. For the statement, 'I view my television-viewing habits as', 3.2% them viewed it as not at all healthy, 16.4% of them viewed it as not healthy, 57.1% of

the samples viewed it as neutral, 17.4% of them viewed it as healthy and 5.9% of them viewed it as very healthy.

**Table 5.** Descriptive Statistic of Loneliness and Psychological Well-Being.

Variables	Mean (SD)	Min- Max
Loneliness		
Emotional Loneliness	1.9 (1.0)	0.0-3.0
Social Loneliness	1.8 (1.2)	0.0-3.0
Overall Loneliness	3.7 (1.8)	0.0-6.0
Psychological Well-Being		
Autonomy	14.2 (3.7)	5.0-21.0
Environmental Mastery	13.3 (3.5)	3.0-21.0
Personal Growth	16.5 (3.1)	8.0-21.0
Positive Relation with Others	14.0 (3.4)	5.0-21.0
Purpose in Life	14.1 (3.5)	5.0-21.0
Self-Acceptance	14.8 (3.5)	4.0-21.0
Overall Psychological Well-Being	86.8 (13.4)	57.0-116.0
Television Affinity	15.2 (3.3)	5.0-25.0

Table 5 shows the data of descriptive statistics of loneliness and psychological well-being using correlation tests derived from the fourth section of questionnaire. The set of questions were taken from the 6-item De Jong Gierveld Loneliness Scale where loneliness can further be grouped into emotional and social loneliness. The variables included in the questionnaire were loneliness, psychological well-being and television affinity. There were 2 sub variables under loneliness which included emotional loneliness where there was a mean score of 1.9 (SD=1.0) and social loneliness with a mean score 1.8 (SD=1.2). The overall loneliness had a mean score of 3.7 (SD=1.8). The second variable was psychological well-being and sub variables included autonomy with a mean score of 14.2 (SD=3.7), environmental mastery that had a mean score of 13.3 (SD=3.5), personal growth with a mean score 16.5 (SD=3.1), positive relation with others that had a mean score of 14.0 (SD=3.4), purpose in life with a mean score of 14.1 (SD=3.5), self-acceptance with a mean score 14.8 (SD=3.5) and overall psychological well-being with a mean score 86.8 (SD=13.4). The third variable was television affinity with a mean score of 15.2 (SD=3.3).

**Table 6.** The association between gender, age, nationality, ethnicity, residency, living arrangement and television affinity using unpaired t-test and ANOVA test.

Independent Variables	Television Affinity Mean (SD)	Mean Difference (95% CI)	P value
Gender			
Male	15.0 (3.2)	0.2 (-0.7,1.2)	0.613
Female	15.3 (3.3)		
Age			
≤21	14.8 (3.4)	-0.7 (-1.5, 0.2)	0.131
>21	15.5 (3.1)		
Nationality			
Malaysian	15.4 (3.2)	1.8 (0.4, 3.1)	0.009
Non-Malaysian	13.6 (3.6)		
Ethnicity			
Malay	15.8 (3.3)	-	0.131
Indian	15.6 (3.1)		
Chinese	14.4 (3.1)		
Others	14.4 (3.8)		
Residency			
Urban	15.2 (3.3)	0.6 (-1.1, 2.4)	0.483
Rural	15.8 (3.5)		
Living Arrangement			
Hostel	15.7 (3.0)	-	0.107
Staying outside, alone	0		
Staying outside, with friends	15.6 (2.2)		
Staying at home, with family	14.8 (3.5)		

Table 6 shows the association between gender, age, nationality, ethnicity, residency, living arrangement and television affinity using unpaired T- test and ANOVA test. Females had a mean score of 15.3 (SD= 3.3), slightly higher than males with a mean score of 15.0 (SD= 3.2). The mean difference was 0.2 with 95% CI range from -0.7 to 1.2. The p-value was 0.613 thus showing that there was no significant association between gender and television affinity. Samples who were 21 years old and below had a mean score of 14.8 (SD= 3.4) while those above 21 years old had a mean score of 15.5 (SD= 3.1). The mean difference was -0.7 with 95% CI range of -1.5 to 0.2. The p-value 0.131 showed that there was no significant association between age and television affinity. Malaysians had a mean score of 15.4 (SD= 3.2), whereas non-Malaysians had a mean score of 13.6 (SD= 3.6). The mean difference was 1.8 with 95% CI range of 0.4 to 3.1. The p-value showed that there was significant association between nationality and television affinity. The Malay ethnic group had a mean score

of 15.8 (SD= 3.3), Indians had a mean score of 15.6 (SD=3.1), Chinese had a mean score of 14.4 (SD=3.1) and the other ethnic groups had a mean score of 14.4 (SD= 3.8). The p-value was 0.131 thus showing that there was no significant association between ethnicity and television affinity. The samples who were from urban areas had a mean score of 15.2 (SD= 3.3) while those who were from rural areas had a mean score of 15.8 (SD= 3.5). The mean difference was 0.6 with 95% CI range from -1.1 to 2.4 and the p-value was 0.483, showing that there was no significant association between residency and television affinity. Lastly, the samples who stayed in hostel had a mean score of 15.7 (SD= 3.0), those who stayed outside alone had a mean score of 0, those who stayed outside with friends had a mean score of 15.6 (SD= 2.2) and those who stayed at home with family had a mean score of 14.8 (SD= 3.5). The p-value was 0.107 thus indicating that there was no significant difference between living arrangement and television affinity.

**Table 7.** Correlation between emotional loneliness, social loneliness, overall loneliness, six aspects of psychological well-being and television affinity using correlation.

Independent variable	Dependent variable	Correlation coefficient (r)	P-value
Overall Loneliness		0.14	0.024
Emotional Loneliness	Television affinity	0.20	0.002
Social Loneliness		0.00	0.440
Overall Psychological Well-Being		- 0.25	0.000
Autonomy		0.00	0.676
Environmental Mastery		- 0.20	0.005
Personal Growth	Television affinity	- 0.17	0.006
Positive Relation with Others		- 0.10	0.284
Purpose in Life		- 0.22	0.001
Self-Acceptance		- 0.25	0.000



Table 7 shows the association between loneliness, psychological well-being and television affinity. The association between overall loneliness and television affinity was a positive one with r-value of 0.14. This association was significant (P value < 0.05). For loneliness, it can be subdivided into emotional loneliness and social loneliness. For emotional loneliness, the r value was 0.20 showing a positive association, whereas there was no association between social loneliness and television affinity, with r value 0.00. P value for emotional loneliness was 0.02, which meant it was significant. However, the P value for social loneliness (P value: 0.440) was not significant as it was greater than 0.05. Next, the study about the association between overall psychological well-being and television affinity had a negative association with r value of -0.25 and was significant

(P value < 0.05). In psychological well-being, it was divided into six aspects which were autonomy, environmental mastery, personal growth, positive relation with others, purpose in life and self-acceptance. The r value was found to be uncorrelated between autonomy with television affinity whereas other aspects (environmental mastery, personal growth, positive relation with others, purpose in life and self-acceptance) were negatively correlated with television affinity. Moreover, P value was not significant (P value >0.05) between autonomy and positive relative with others with television affinity, which was 0.676 and 0.284 respectively. However, there was significant association between environmental mastery, personal growth, purpose in life and self-acceptance with television affinity as all the P values for those were less than 0.05.

**Table 8.** Association between binge-watching behaviour and television affinity using unpaired t-test.

Variables	Television Affinity Mean (SD)	Mean Difference (95% CI)	P value
Binge-watching behaviour			
Yes	15.8 (3.2)	-2.4 (-3.4, -1.4)	0.000
No	13.4 (2.7)		

Table 8 shows the association between binge-watching behaviour and television affinity using unpaired T-test. The samples who admitted binge-watching behaviour had a mean score of 15.8 (SD= 3.2) which was higher than those who denied binge-watching behaviour with a mean score of 13.4

(SD= 2.7). The mean difference between these two variables was -2.4 with 95% CI range from -3.4 to -1.4. The P value was 0.00 which meant there was significant association between binge-watching behaviour and television affinity.

**Table 9.** Results of Chi-square test to find out the association between gender, age, nationality, ethnicity, residency, living arrangement and binge-watching behaviour.

Independent Variables	Binge-watching TV shows		Odds Ratio (95% CI)	Chi-square	P value
	Yes n (%)	No n (%)			
Gender					
Male	52 (74.3%)	18 (25.7%)	Reference		
Female	116 (77.8%)	33 (22.1%)	1.22 (0.63, 2.36)	0.339	0.560
Age					
≤21	73 (76.8%)	22 (23.2%)	1.01 (0.54, 1.91)	0.002	0.968
>21	95 (76.6%)	29 (23.4%)	Reference		
Nationality					
Malaysian	147 (75.8%)	47 (24.2%)	Reference		
Non-Malaysian	21 (84.0%)	4 (16.0%)	1.68 (0.55, 5.14)	0.839	0.360
Ethnicity					
Malay	22 (78.6%)	6 (21.4%)	1.77 (0.58, 5.41)	1.003	0.317
Indian	92 (80.7%)	22 (19.3%)	2.01 (0.90, 4.52)	2.939	0.086
Chinese	27 (67.5%)	13 (32.5%)	Reference		
Others	27 (73.0%)	10 (27.0%)	1.30 (0.49, 3.47)	0.275	0.600
Residency					
Urban	156 (76.1%)	49 (23.9%)	Reference		
Rural	12 (85.7%)	2 (14.3%)	1.88 (0.41, 8.71)	0.678	0.410
Living Arrangement					
Hostel	64 (78.1%)	18 (22.0%)	2.70 (1.16, 6.25)	5.637	0.018
Staying outside, alone	0	0	-	-	-
Staying outside, with friends	12 (85.7%)	2 (14.3%)	2.02 (0.43, 9.54)	0.819	0.365
Staying at home, with family	92 (74.8%)	31 (25.2%)	Reference		

Table 9 shows the association between gender, age, nationality, ethnicity, residency, living arrangement and binge-watching behaviour using the Chi-Square Test. A total of 70 males responded to this survey with 52 (74.3%) agreed to binge-watching and 18 (25.7%) stating otherwise. Next, a total of 139 females participated in this study where 116 (77.8%) females agreed to binge-watching and 33 (22.1%) not agreeing to such. There was an OR of 1.22 (0.63, 2.36) with a Chi-square value of 0.339 and a p-value of 0.560, therefore there was no significance between gender and binge-watching behaviour. Moving on to age, a total of 95 individuals at or below the age of 21 responded in this survey with 73 (76.8%) agreed to binge-watching and 22 (23.2%) stating otherwise. Next a total of 124 individuals above the age of 21 participated in this study were 95 (76.6%) agreed to binge-watching and 29 (23.4%) not agreeing to such. There was an OR of 1.01 (0.54, 1.91) with a Chi-square value of 0.002 and a p-value of 0.968, therefore there was no significance between the age groups and binge-watching behaviour. Next is the nationality, a total of 194 Malaysians participated in this survey with 147 (75.8%) agreeing to binge-watching and 47 (24.2%) stating otherwise. Next a total of 25 non-Malaysians participated in this study where 21(84.0%) agreed to binge-watching and 4(16.0%) not agreeing to such. There was an OR of 1.68 (0.55, 5.14) with

a Chi-square value of 0.839 and a p-value of 0.360, therefore there was no significance between nationalities and binge-watching behaviour. Moving forward to the association of ethnicity to binge-watching behaviour, there was no significant relation between both variables as each race has a Chi-square value below 3.841 where Malay was 1.003, Indians at 2.939 and other ethnicities at 0.275. Not only that but the P value was at 0.317, 0.086 and 0.600 following the mentioned groups respectively. In regard to residency, a total of 205 samples who were urban residents participated in this study where 156 (76.1%) agreed to binge-watching and 49 (23.9%) not agreeing to such. There was an OR of 1.88 (0.41, 8.71) with a Chi-square value of 0.678 and a p-value of 0.410, therefore there was no significance between the residency and binge-watching behaviour. For the living arrangement, among the four living arrangements (hostel/ staying alone/ staying with friends/ staying with family) samples who live in the hostel showed a significant association with binge-watching due to the P value being 0.018 and had a Chi-square value of 5.637 which was more than the set value of 3.841. Apart from that, the other three forms of living arrangements were not significantly related to binge-watching due to their P values being more than 0.05 and Chi-Square values being less than 3.841.

**Table 10.** Association between emotional loneliness, social loneliness, overall loneliness, six aspects of psychological well-being and binge-watching behaviour using logistic regression test.

Independent variable	Dependent variable	Odds Ratio (95% CI)	Standard Error	P-value
Overall Loneliness		1.29 (1.19, 1.40)	0.0403	0.000
Emotional Loneliness	Binge-watching behaviour	1.64 (1.41, 1.91)	0.0775	0.000
Social Loneliness		1.53 (1.32, 1.77)	0.0743	0.000
Overall Psychological Well-Being		1.01 (1.01, 1.02)	0.0018	0.000
Autonomy		1.09 (1.06, 1.11)	0.0116	0.000
Environmental Mastery		1.08 (1.06, 1.11)	0.0116	0.000
Personal Growth	Binge-watching behaviour	1.07 (1.05, 1.09)	0.0095	0.000
Positive Relation with Others		1.09 (1.07, 1.11)	0.0115	0.000
Purpose in Life		1.09 (1.06, 1.11)	0.0113	0.000
Self-Acceptance		1.08 (1.06, 1.10)	0.0108	0.000

Table 10 shows the association between loneliness, psychological well-being and binge-watching behaviour. Loneliness was divided into 2 parts which were the emotional loneliness and social loneliness, which both combined gave us the overall loneliness. Loneliness had an association with binge-watching behaviour due to the P value for the subscales being at a value of 0.000 which was less than 0.05. The same can be said for Psychological Well-Being, which was subdivided into autonomy, environmental mastery, personal growth, positive relation with others, purpose in life and self-acceptance, due to the P value being at 0.000. There was a significant association between psychological well-beings and binge-watching behaviour.

## 4. Discussion

This cross-sectional study was conducted among the students of Manipal University College Malaysia with a final sample size of 219. The objectives of this study is to fulfil the following criteria which are as follows: 1) To find the association between gender, age, nationality, ethnicity, residency, living arrangement and television affinity. 2) To find the association between loneliness, psychological well-being and television affinity. 3) To find the association between binge-watching behaviour and television affinity. 4) To find the association between gender, age, nationality, ethnicity, residency, living arrangement and binge-watching

behaviour. 5) To find the association between loneliness, psychological well-being and binge-watching behaviour.

Whilst conducting this study, the researchers were interested in discovering a relationship between binge-watching and also the Television Viewing Habits of the samples. Hence, whilst preparing the questionnaire, questions were obtained from previous researches conducted on this topic with the objective of determining the association. [22] From the results obtained, a total of 76.7% of the 219 samples are indulgent in binge-watching due to them agreeing to watching multiple episodes in a single setting, which fits the definition of binge-watching. Not only that, but the average sample tends to have a higher amount of hours spent watching TV, regardless if it is the weekend or weekday. A total of 81.3% watch television more than 1 hour per day during the weekday and 89.3% watch television more than one hour per day during the weekend. Most of the samples also tend to have a preference of time when it comes to binge-watching, with 57.5% over the weekend and 39.7% on any day of the week. Another point to note is how most of the samples tend to binge-watch television shows by themselves. This is evidently seen as 72.6% of the samples admit to doing so either most or all the time. 57.1% of the samples also have a neutral perspective of their TV Viewing Habits. A similar research study was done at the University of Twente which yielded the results of the same ideology. [1]

The researchers were then determined to establish the correlation between Psychological Well-Being and loneliness to TV Affinity. Once the study was conducted and results obtained, a mean value of 15.2 was observed between TV Affinity and Psychological Well-Being and Loneliness, which in between a minimum score of 5 and maximum score of 25, is considered to have a moderate level of correlation present. The data obtained is consistent with previous studies and research done of the same. [25]

In this research, the researchers found that there was no significant association between age, gender, ethnicity, residency and living arrangement with Television Affinity. However, a significant association is observed from the results between the ethnicity and also Television Affinity, which coincides with the results of previous studies. [27]

Not only that, based on the study results, the researchers found that there was a significant positive association between overall loneliness (emotional and social loneliness) and television affinity. The higher the samples scored in the De Jong Gierveld Loneliness Scale, the more often they reported having television affinity. However, when the scores were scrutinized the data highlighted that only emotional loneliness was significantly associated with television affinity whereas social loneliness was not significantly

associated with television affinity. A study by Page, Hammermeister, Scanlan, and Allen in 1996 found that adolescents had higher score in loneliness scale in heavy television viewers (5 or more hours per day) than that in both moderate (2 to 4 hours per day) and light (less than 2 hours per day) viewers. [22] Other than that, this research was also conducted to find the association between loneliness and binge-watching behaviour. From the results, there is a significant positive association between overall loneliness and binge-watching behaviour. In other words, the higher the scores obtained, the more likely the samples were to have binge-watching. Research conducted by Yoon Hi Sung, Eun Yeon Kang and Wei-Na Lee from the University of Texas at Austin found that the more lonely the study participants were, the more likely they were to binge-watch TV, using this activity to move away from the negative feelings. [28]

In regard to the relationship between psychological well-being and television affinity, the researchers found that there was a significant negative association between Environmental Mastery, Purpose In Life, Self-Acceptance and Television Affinity. Those who had lower scores in these three sub-categories of psychological well-being mentioned previously had higher television affinity. A study conducted in the United States in 2016 also reported a negative significant association where samples with more hours of screen time per day including TV were significantly associated with lower psychological well-being. [29] Another study done by Mark Hamer et al. reported that there was significant association between television-screen-based-activity and mental well-being where samples who spent more than an hour watching television had poorer mental well-being. [30] As for the association between psychological well-being and binge-watching behaviour, it was highlighted in this study that, there was a significant positive association between the psychological well-being and the binge-watching behaviour. So, those who had higher scores of psychological well-being or good mental well-being were more likely to binge-watch. This result was similar to a study carried out in 2018 where it showed positive significant association between psychological well-being with feelings of autonomy and binge-watching behaviour. [5] Furthermore, a study conducted in the Netherlands showed a significant positive correlation between watching video stream content to binge watch and positive psychological effects like feeling happier and relaxed. [1]

From this study, the researchers found that there was a positive significant association between binge-watching behaviour and television affinity. Samples who had higher binge-watching behaviour have high television affinity than those who do not. According to the study highlighted by Katherine S. Wheeler, the results showed that binge-watching

behaviours were positively associated with television affinity, instrumental TV viewing motives, and ritualistic TV viewing motives. [22] It was also found that loneliness reported a greater tendency of binge-watching due to para social breakup causing them greater distress which led to binge-watching.

From this study it was also found that there was no significant association between age, gender, ethnicity, residency, nationality and binge-watching behaviour whereas students who stayed at the hostel are more likely to binge-watch than those staying at home. According to an article by Azza Abdel-Azim Mohamed, a study was conducted to investigate binge-watching among a sample of Arab residents in the United Arab Emirates. [31] The findings revealed that binge-watching is more significant among younger age groups. This correlates to the findings with this research as the sample population comprised of young people in this age group. According to a research article on understanding the phenomenon of binge-watching by Jolanta A. Starosta, it was stated that people who expressed a higher tendency in binge-watching are seen in people who experienced loneliness to a higher degree. [32] These findings are relatable to the current study as samples who are living alone are more prone to loneliness and are easily immersed in binge-watching tendency as immersion and transportation into the narrative being the underlying mechanisms of binge-watching.

The findings of this study have to be seen in light of some limitations. Limited access to information is one of the limitations faced in this study. In this study, the samples only comprised of students of MUCM, and it cannot be generalized to other settings. This study was conducted in one institution; therefore, the findings cannot be applicable to other institutions with different environments. The triangulation of data with an additional instrument could have added more clarity to the content that has been researched. Lastly, the study design for the research is a cross-sectional design. There is a limitation of being unable to study about the temporal effects. [33-34]

There are a few recommendations. To the future researchers, they may explore the correlation of anxiety and depression with binge-watching behaviour. They may also build upon findings of this research by addressing the unanswered aspects. Next, they could replicate this research in a different setting as they would be able to generate a different set of data. Future researchers may also investigate the effects of binge-watching or emergence of a new theory that leads to binge-watching. [35] As for the population, they could learn how to improve loneliness. For example, they could seek for professional help, nurture existing relationships or find a hobby. [36] They should encounter actively in this area of concern and find suitable ways to avoid binge-watching

behaviour as it is not a healthy habit in the long run.

## 5. Conclusion

In recent years, there is a shift in audience viewership from satellite TV to watching TV shows from streaming services such as Netflix, YouTube and so on. In the present research, the researchers investigated the relationship between loneliness, psychological well-being, TV affinity and binge-watching behaviour among MUCM students. Based on the study conducted, in regard to the relationship between psychological well-being and TV affinity, the researchers found that there was a significant negative association between overall psychological well-being and TV affinity whereas there was significant positive association between loneliness and TV affinity. Furthermore, it was also found that psychological well-being and loneliness had significant association with binge-watching behaviour. This research has helped to comprehend the need for an understanding of this relationship which is especially useful considering the relevance of today's society in viewing streaming programmes which later might lead to binge-watching behaviours. This current research has provided an idea where future research can arise so that we can expand the knowledge of interaction between psychological well-being and TV viewing habits. A further exploration of this research could help to explore the interaction between psychological elements and TV viewing behaviours. This information could bring to light on how television viewing habits especially in the rising trend of binge viewing habits among the recent generation along with the rising mental health issues. The recent trend of binge viewing behaviour might affect the mental health in negative ways and more people might use streaming sites as a form of escapism. By understanding this information, it can lead to a better understanding of healthier practices of everyday activities as opposed to binge-watching television.

## Appendix

Association between binge-watching behaviour and psychological well-being among undergraduate students of Manipal University College Malaysia (MUCM)

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Co-investigators: Ms. Joveena Preet Kaur Gill, Ms. Mariam binti Jaffridin, Ms. Tan Jolin, Ms. Mithirane Ramesh

You are invited to take part in a research project which aims to determine the association between binge-watching behaviour and psychological well-being among

undergraduate students of Manipal University College Malaysia (MUCM).

It will ask for your basic information without breaking anonymity. It will also ask you about your watching habits and affinity for television and/or streaming shows without breaking anonymity. It will also ask about your psychological wellbeing without breaking anonymity. The data will be collected by using a self-administered questionnaire and this will take about 10-15 minutes.

Participation in this study is completely voluntary, and you have the right to deny and/or withdraw from the study at any time, without providing any reason, and this will not have any negative impact on you. Any information you provide is anonymous. The results of the study will be reported as a total picture and not individually.

Consent:

By filling up the details below, I give my consent to participate in the study as titled above of my own free will. I further understand that I have the freedom to choose not to participate in the study. No reward or inducement has been offered to me to participate as a volunteer in the study.

I agree (box to be ticked here)

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	I would feel lost without television shows to watch	1	2	3	4	5
2.	I could easily do without television shows for several days	1	2	3	4	5
3.	Watching television shows is one of the more important things I do each day	1	2	3	4	5
4.	Television shows are very important in my life	1	2	3	4	5
5.	If the television/ streaming websites wasn't working, I would really miss it	1	2	3	4	5

### Section 3: Television Viewing Habits Questionnaire

1. On average, how many hours do you spend watching television on weekdays?

- Less than 1 Hour  
 1 - 2 hours  
 2 - 4 hours  
 More than 4 hours

2. On average, how many hours do you spend watching television over the weekends?

- Less than 1 Hour  
 1 - 2 hours  
 2 - 4 hours  
 More than 4 hours

3. Do you stream television shows or movies from Netflix, Hulu, Amazon Instant Video, or similar forums?

- Yes  
 No

Thank you so much for your participation.

### Section 1: Demographic Profile

Please mark your answers (✓):

- Age: \_\_\_ year old
- Gender: Male ( ) Female ( )
- Nationality: Malaysian ( ) Non-Malaysian ( )
- Ethnicity: Malay / Chinese / Indian / Others
- Field of study: MBBS / BDS / FiS
- Residency: Urban ( ) Rural ( )
- Who are you staying with?  
Hostel ( )  
Staying outside, alone ( )  
Staying outside, with friends ( )  
Staying at home, with family ( )

### Section 2: Television Affinity Scale

Circle one response below each statement to indicate how much you agree or disagree.

4. Do you watch back-to-back episodes of any shows in a single setting?

- Yes  
 No

5. When are you most likely to watch back-to-back episodes of a favourite television program?

- Weekends  
 Weekdays  
 Any day of the week

6. How often do you watch back-to-back episodes of a favourite television program?

- Never  
 Rarely  
 Sometimes  
 Most of the time  
 All of the time

7. I normally view television programs by myself

- Never
- Rarely
- Sometimes
- Most of the time
- All of the time

8. I discuss my favourite television programs with others

- Never
- Rarely
- Sometimes
- Most of the time
- All of the time

9. I view my television-viewing habits as

- Not at all healthy
- Not healthy
- Neutral
- Healthy
- Very healthy

More or less

No

3. I often feel rejected.

- Yes
- More or less
- No

4. There are plenty of people I can rely on when I have problems.

- Yes
- More or less
- No

5. There are many people I can trust completely.

- Yes
- More or less
- No

6. There are enough people I feel close to.

- Yes
- More or less
- No

*Section 4: Loneliness (De Jong Gierveld Loneliness Scale)*

1. I experience a general sense of emptiness.

- Yes
- More or less
- No

2. I miss having people around me.

- Yes

*Section 5: Psychological Well-Being*

Circle one response below each statement to indicate how much you agree or disagree.

1 = strongly agree; 2 = somewhat agree; 3 = a little agree; 4 = neither agree or disagree; 5 = a little disagree; 6 = somewhat disagree; 7 = strongly disagree

1	I like most parts of my personality	1	2	3	4	5	6	7
2	When I look at the story of my life, I am pleased with how things have turned out so far	1	2	3	4	5	6	7
3	Some people wander aimlessly through life, but I am not one of them	1	2	3	4	5	6	7
4	The demands of everyday life often get me down	1	2	3	4	5	6	7
5	In many ways, I feel disappointed about my achievements in life	1	2	3	4	5	6	7
6	Maintaining close relationships has been difficult and frustrating for me	1	2	3	4	5	6	7
7	I live life one day at a time and don't really think about the future	1	2	3	4	5	6	7
8	In general, I feel I am in charge of the situation in which I live	1	2	3	4	5	6	7
9	I am good at managing the responsibilities of daily life	1	2	3	4	5	6	7
10	I sometimes feel as if I've done all there is to do in life	1	2	3	4	5	6	7
11	For me, life has been a continuous process of learning, changing, and growth	1	2	3	4	5	6	7
12	I think it is important to have new experiences that challenge how I think about myself and the world	1	2	3	4	5	6	7
13	People would describe me as a giving person, willing to share my time with others	1	2	3	4	5	6	7
14	I gave up trying to make big improvements or changes in my life a long time ago	1	2	3	4	5	6	7
15	I tend to be influenced by people with strong opinions	1	2	3	4	5	6	7
16	I have not experienced many warm and trusting relationships with others	1	2	3	4	5	6	7
17	I have confidence in my own opinions, even if they are different from the way most other people think	1	2	3	4	5	6	7
18	I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6	7

## Acknowledgements

We would like to thank and express our utmost sincere gratitude to our lecturers who guided us through this study patiently, Professor Dr Htoo Kyaw Soe, Associate Professor Dr Sujata Khobragade and Assistant Professor Dr Mila Nu Htay from the Department of Community Medicine, MUCM Muar Campus, the Dean of the Faculty of Medicine, MUCM who is also the Head of Department for Community Medicine MUCM, Professor Dr Adinegara Lutfi Abas, as well as the Research Ethics Committee, Faculty of Medicine, Manipal University College Malaysia, Melaka, Malaysia for approving our study. Lastly, we would also like to thank all the volunteers who have agreed to participate in our study.

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