

## Mattering and life satisfaction among the quarantined adults in Malaysia during the COVID-19 pandemic

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### ABSTRACT

This study aims to investigate the role of mattering, trait extraversion and perceived social inclusion in developing the sense of life satisfaction among adults who reside in Malaysia during the quarantine period amidst the Pandemic in March-June 2020. Previous studies indicated that mattering was a robust predictor of life satisfaction; however, the nature of the quarantine might have affected the perception of social inclusion among individuals with certain levels of extraversions. Therefore, we hypothesized a moderated mediation model; mattering will interact with trait extraversion in predicting life satisfaction, and the prediction is mediated by perceived inclusion. Three hundred and ninety participants were voluntarily recruited to respond to scales such as Life Satisfaction Inventory, State Self-Esteem Scale, General Mattering Scale and the extraversion facet in Big Five Inventory. The scales, demography questions, and informed consent were accessible by online link given to the participants through social media. The analysis was conducted by using PROCESS Macro model eight for statistical product and service solutions (SPSS) applying the Bootstrap analysis with 5000 samples and 95% confidence interval. The result suggested that the hypothesis was confirmed; perceived inclusion levels significantly mediated the association between mattering and life satisfaction among individuals with low and moderate levels of extraversion. However, full mediation only applied among the individuals with moderate extraversion, because among those with low extraversion, mattering was still a significant predictor of life satisfaction.

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## 1. INTRODUCTION

In general, life satisfaction refers to the way we show our emotions, feelings and how we feel about the outlook of the future, and it is considered as one important element of mental health; furthermore, it was suggested that life satisfaction is tightly associated with the sense of mattering [1-3]. Mattering is described as the perception that we are a significant part of the social environment around us [4] and it can be considered as a salient evaluative guide when one compares themselves with others [5]. Thus, the association to life satisfaction was due to the concept of hedonic well-being, where individuals tend to evaluate their level of life satisfaction by comparing themselves to others using tangible benchmarks such as wealth, income, or net worth [6]. Mattering was also reported to be a robust predictor of life satisfaction because it was still significant even after controlling for self-esteem [5], which previously was considered as a robust predictor of life satisfaction [7, 8].

Sociometer theory views self-esteem as dependent on the perceived quality of social relationships, in which it monitors the quality of the relationship via social cues to enable the individual to make relational changes when necessary plus maintaining their self-esteem at an acceptable level [8, 9]. Perceived social inclusion is defined as the subjective feeling of being included in society [10], or also known as state self-esteem [11], in order to create a distinction to Rosenberg's self-esteem, which is viewed more as a trait-like variable. The higher the perception of social inclusion, the higher the state self-esteem will be [12, 13]; in turn, this feeling leads to the perception that life is more satisfying [14]. Similarly, perceived social inclusion was reported to significantly predict life satisfaction when it was improved by the sense of mattering [14-16]. Which means, when an individual senses that they matter to people around them, their perceived social inclusion would improve, and that would subsequently improve their sense of life satisfaction.

However, most of the aforementioned studies were conducted in typical social environments, before the Coronavirus (COVID-19) pandemic took place. In the third week of March 2020, the government of Malaysia enforced a movement control order (MCO) in order to reduce the spread of the COVID-19, and the enforcement of MCO was conducted after only two days' notice. In the MCO, most people were not allowed to travel further than 10-kilometer radius of their respective residences, only essential industries were allowed to operate, and their business hours were strictly limited. In this situation, most adults in Malaysia worked and/or studied online from home, where online interaction replaced face-to-face meetings for many contexts, such as work, education, and even social gathering [17-20]. These changes might have altered individuals' sense of mattering [21], especially because most people tended to have less face-to-face communication and relied more on social media, where they tend to picture themselves in a different manner than they usually are in reality [22-24]. Because of that, we were motivated to investigate whether mattering holds the same robustness in predicting life satisfaction during this quarantine period.

In the midst of such a quarantined environment, the contribution of mattering on perceived social inclusion and life satisfaction might be related to individuals' personality, especially their trait extraversion. The facets of extraversion from the Big-Five are excitement-seeking, assertiveness and warmth [25]; high extraversion is correlated to social activities and other behavior related to sociability [26, 27]. In the context of MCO, activity in social events was replaced by being active in social media [28]; thus, it can be assumed that the isolative nature of MCO would likely to alter people into more active or passive in social media based on their levels of extraversion. Thus, we hypothesized a moderated mediation model; mattering will interact with trait extraversion in predicting life satisfaction, and the prediction is mediated by perceived inclusion as in Figure 1.

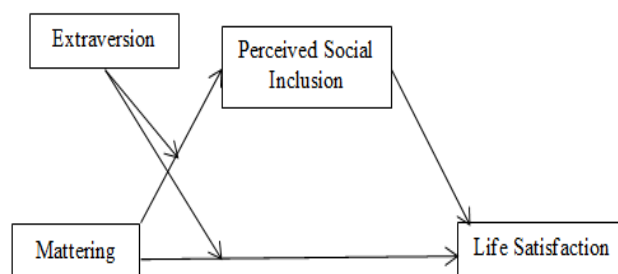


Figure 1. The hypothetical model of moderated mediation relationship

Furthermore, it is imperative to remember that by conducting this current study, we attempt to allow for an inference regarding the moderated mediation model among the variables. Nevertheless, this study was not designed to conclude any causal relationship among any variables involved.

## 2. RESEARCH METHOD

### 2.1. Participants

As reported in the site of the Department of Statistic Malaysia Official Portal, there are more than 824,400 working adults reside in the area of Kuala Lumpur [29], a cluster random sampling has been conducted by collecting data in specific urban area in Klang Valley. Data collection method and the scales have been approved by the ethics review board of the Psychology Department of our university. Referring to Krejcie and Morgan's table, a population larger than 100,000 should be represented by at least 384 samples, therefore we recruited 390 participants. The participants (213 female), consisted of full-time university students (n=142), full-time workers or self-employed (n=197), working students (n=46), and others (n=5)

with the age ranges between 18 and 61 ( $M=30.47$ ,  $SD=13.10$ ), were recruited through various social media such as Facebook, Instagram, WhatsApp, and LinkedIn, where they voluntarily click the link that brought them to the survey items. As many as 81.3% of our participants stayed with their family members during the MCO ( $n=318$ ). All of our participants have given their consent by clicking ‘yes’ in our informed consent form, which stated that they gave their respond to our scales voluntarily and anonymously, with options to cancel their participation at any time during the process when they feel any discomfort.

**2.2. Materials**

Basic demographic information such as age, gender, nationality, occupation was included. Items such as “How difficult is it to decide that it is time to quit for the day when you are working from home, compared with when you’re working in the office?” were also included. Life satisfaction was assessed by using Life Satisfaction Inventory [30]. The Life Satisfaction inventory is a self-reported measure that consists of five items (e.g. “During this MCO period, I am satisfied with my life”). Participants rate each item using a 7-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Internal reliability is  $\alpha=.87$  [30]. Perceived social inclusion was measured using state self-esteem scale (SSES) [31]. The SSES is a 20 items scale that includes the component of performance self-esteem (e.g. “During this MCO period, I feel confident about my abilities”), social self-esteem (e.g. “During this MCO period, I am worried about whether I am regarded as a success or failure”), and appearance self-esteem (e.g. “During this MCO period, I feel satisfied with the way my body looks right now”). Each item was self-reported using a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely). Internal reliability of the subscales ranges from 0.73 to 0.81 [32]. Mattering was measured using general mattering scale (GMS) [33]. The internal reliability of the scale ranges from .82 to .92 [4]. Extraversion was measured using the extraversion facet in big five inventory (BFI) [25]. Extraversion dimension is a 8-item self-reported measure on their own characteristics (e.g. “is talkative”). Participants rate the items using a 5-point Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly). Cronbach  $\alpha=0.87$  [34].

**3. RESULTS AND DISCUSSION**

We analyze the data by using PROCESS Macro model 8 for SPSS, applying the Bootstrap analysis with 5000 samples and 95% confidence interval. Firstly, we analyze the conditional direct effect, the association between mattering and life satisfaction at different levels of extraversion, controlling for the effect of perceived social inclusion

Table 1 suggested that when controlling for perceived social inclusion, mattering significantly predicts life satisfaction among individuals with low extraversion, where the p-value is less than 0.05 and the range between upper level and lower level of confident interval did not cross zero (both confident interval levels are positive). While among individuals with moderate and high levels of extraversion, mattering did not seem to predict the life satisfaction. Furthermore, using the same analysis method, we investigated whether the mediated moderation occurred as hypothesized, and Table 2 depicts the results.

Table 1. Conditional direct effect of mattering on life satisfaction

Extraversion levels	Effect	se	t	p	LLCI <sup>1</sup>	ULCI <sup>2</sup>
20.00	.058	.29	1.99	.04	.00	.12
24.00	.043	.23	1.88	.06	-.00	.09
29.00	.025	.03	.79	.43	-.04	.09

<sup>1</sup>Lower Level Confident Interval

<sup>2</sup>Upper Level Confident Interval

Table 2. Conditional indirect effect of mattering on life satisfaction

Extraversion levels	Effect	BootSE <sup>1</sup>	BootLLCI <sup>2</sup>	BootULCI <sup>3</sup>
20.00	.02	.01	.00	.04
24.00	.01	.01	.00	.03
29.00	.01	.01	-.01	.02

<sup>1</sup>Bootstrap Standard Error Estimate

<sup>2</sup>Lower Level of Bootstrap Confident Interval

<sup>3</sup>Upper Level of Bootstrap Confident Interval

As depicted in Table 2, perceived social inclusion significantly mediated the association between mattering and life satisfaction among participants with low and moderate extraversion levels, where the all the results of 5000 samples with 95% confident interval did not show any zero (both upper and lower levels of bootstrap confident interval are positive). Perceived social inclusion did not explain the same association

among individuals with higher extraversion levels, due to the range of bootstrap confident interval levels crossed zero; the lower level of bootstrap confident interval was negative and the upper level was positive.

The tables suggested that our hypothesis was supported; moderated mediation occurred. In other words, the life satisfaction among individuals who are highly extroverted was not predicted by mattering, either directly or indirectly Tables 1 and 2. On the other hand, perceived social inclusion fully mediated the association between mattering and life satisfaction among individuals with moderate levels of extraversion, because mattering was no longer a significant predictor when controlling for perceived social inclusion. Lastly, among individuals with lower score of extraversion levels, perceived social inclusion partially mediated the association between mattering and life satisfaction, because mattering was still a significant predictor when controlling for the mediator.

Our results suggested that the robustness of mattering in predicting the sense of life satisfaction only occurred among individuals with low extraversion. In other words, the more introverted individuals believe that they matter to other people around them, the more they feel that their life is satisfying. On the other hand, individuals with moderate levels of extraversion would only feel that their life is satisfying when they believe that they matter to others and that they are included as a member of the social circle of the people around them. Our results also indicated that the feeling of life satisfaction among the highly extroverted individuals is neither associated to their sense of mattering nor perceived social inclusion.

Previous studies, did not include individual differences, such as one which didn't include personality traits [5], while another study only include perceived social support [35], which significantly predicted mattering; therefore, mattering seemed to be a robust predictor of life satisfaction. Several academic works tested the significance of mattering when controlled for perceived social inclusion, and found that mattering lost its significance [4, 16]; thus, the fact that perceived social inclusion explains the link between mattering and life satisfaction had actually been reported in some of the previous studies. However, the findings of this current study might have closed some theoretical gaps. We showed statistical evidence that some psychological traits, such as extraversion did play its role in the development of life satisfaction; it alters how sense of mattering predicts the life satisfaction through perceived social inclusion.

#### 4. CONCLUSION

Despite what have been discussed in the previous section, findings of this study are not capable to explain why such phenomenon occurred, especially during the quarantine period amidst the pandemic. We can only assume that being quarantined have limited the direct social interaction and increase the inclination towards social media and digital communication. These factors might have played some roles in determining our results. Our study was limited due to the timeframe of data collection and demography factors. It is suggested for future study to broaden the scope by studying individuals from non-urban settings and include personality factors other than extraversion. Replication of this study after the pandemic is totally over is also highly suggested, in order to reconfirm the associations among the variables involved. Different methods, such as qualitative and experiment are also suggested in order to answer the 'why' questions and to establish causal relationship among the variables.

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