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## Applying E-Writing Therapy to Improve Mental Wellbeing among Malaysian University Students Following the COVID-19 Pandemic

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**Abstract.** The COVID-19 pandemic is a global crisis that has significantly impacted people's lives worldwide, particularly in terms of mental health and wellbeing. The implementation of frequent and restrictive movement control orders has resulted in prolonged online learning for university students. However, limited research has been conducted to test practical interventions aimed at alleviating the negative impact on the mental wellbeing of university students during the pandemic. This mixed-method research study aimed to investigate the usability of e-writing therapy as an intervention tool to improve the mental wellbeing of 40 university students in a public Malaysian higher education institution. A one-group pretest-posttest design was employed, and a mental wellbeing questionnaire based on the Patient Health Questionnaire (PHQ-9), Generalised Anxiety Disorder (GAD-7), and the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) was administered to the participants before and after the intervention. The results of paired-samples t-tests for each instrument indicated that there was no significant improvement in the students' mental wellbeing after the four-week intervention period. However, qualitative data obtained from the students' experiences with e-writing therapy revealed that it provided a flexible and personal safe space for emotional expression. It empowered them to address their mental health needs during the post-pandemic era, while minimising concerns about stigma, privacy and confidentiality, despite having certain challenges and concerns. Therefore, there is potential for e-writing therapy to be used as a

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complementary tool alongside conventional psychological interventions to address mental wellbeing issues among university students.

**Keywords:** mental wellbeing; e-writing therapy; pandemic; university students

## 1. Introduction

Mental health and wellbeing are crucial for the optimal functioning of all individuals, as a mentally fit state reflects physical health. However, the COVID-19 pandemic has presented a global crisis that has impacted people's lives worldwide. The prolonged struggle to overcome this highly contagious viral outbreak, along with movement control orders, has had a significant psychological and mental health impact on the public. Cullen et al. (2020) emphasised the importance of addressing "psychological and psychiatric needs" (p. 1) during a pandemic outbreak. Unfortunately, the focus on managing patients, vaccination programmes, and government policies often led to the neglect of mental health in practice and research (Bäuerle et al., 2020; Cullen et al., 2020).

Numerous studies have examined mental wellbeing following the onset of the pandemic, with healthcare workers being the most investigated group. University students, another vulnerable group, have also been significantly affected by the COVID-19 pandemic. Researchers have established that the mental health of university students has been impaired by the pandemic (Faisal et al., 2021; Jiang, 2020; Khan et al., 2020; Parfa, 2020; Savage et al., 2020; Son et al., 2020; Wei et al., 2020; Wang et al., 2020). These international findings align with research evidence in Malaysia, where studies by Sundarasan et al. (2020) and Wong et al. (2021) indicate that Malaysian students aged 19 to 25 display higher anxiety levels and a greater vulnerability to mental health issues than their counterparts.

The research data strongly emphasise the urgency of appropriate interventions for university students and the role of university management in supporting and developing students' mental resilience during the pandemic (Jiang, 2020; Son et al., 2020; Wong et al., 2021). However, limited studies have examined practical interventions to mitigate the negative impact of mental wellbeing among Malaysian university students in the post-pandemic era.

In addition to the increased mental health needs, the COVID-19 pandemic has revealed unforeseen needs in the field of counselling. Conventional consultation methods need to be adjusted to ensure the fulfilment of clients' and health professionals' needs through safe, flexible and effective approaches, given the risk of infection through direct contact. Taking advantage of the technological literacy of digital natives, e-counselling services for university students can provide accessible support anytime, anywhere, with or without the presence of a professional.

Considering the positive effects of writing therapy on physical and psychological health (e.g., Mugerwa & Holden, 2012), e-writing therapy is believed to be a suitable tool during the pandemic or in post-pandemic circumstances, reducing the reliance on face-to-face counselling sessions. Malaysia, like many other Asian countries, is often characterised as having a more conservative cultural and societal context. Individuals may feel constrained by social norms, cultural expectations or fear of judgement, which can limit their ability to freely express themselves. This indicates that there is a significant need for platforms that allow for personal expression in Malaysia where certain topics or emotions may not be easily shared with others.

However, even though writing therapy holds various advantages, its specific efficacy in promoting mental well-being among university students during the pandemic has not been empirically studied within the Malaysian context. Therefore, this article aims to evaluate the effectiveness of e-writing therapy as an intervention tool to improve the mental wellbeing of Malaysian university students following the COVID-19 pandemic. This proposed intervention serves as an online, asynchronous tool that empowers undergraduate students to address their mental health without concerns of stigma, privacy or confidentiality. Once tested, this tool could complement conventional counselling strategies to alleviate mental wellbeing issues in this high-risk group, particularly in the post-pandemic era. Furthermore, it would contribute to the development of a mentally strong and resilient generation of future leaders in Malaysia.

## **2. Literature Review**

### **Impact of the Pandemic Towards University Students in Malaysia**

As Malaysia has experienced significant changes from the beginning of the pandemic to the current post-COVID-19 circumstances, Shanmugam et al. (2020) emphasised that an increased possibility of mental health issues is expected to persist among the Malaysian population. These issues are multifaceted, stemming from financial difficulties, fears and uncertainties regarding public health, inconveniences and restrictions imposed by movement control orders, prolonged isolation, as well as stress and anxieties from various sources. A more recent study by Tan et al. (2023) reported a statistically significant impact of the COVID-19 pandemic on the mental health of the general Malaysian population.

Similarly, the COVID-19 pandemic has brought about unexpected and inevitable changes for university students, particularly undergraduate students who are primarily full-time students. In a study conducted by Son et al. (2020) on American college students, 71% reported higher levels of stress and anxiety caused by the pandemic. These adverse effects on students include concerns about their own health and the health of family members, difficulties with concentration and sleep, disruptions to social interactions and worries about their academic progress.

In the Malaysian context, the Ministry of Higher Education announced in May 2020 that online lectures would continue in all universities until the end of the year. As of May 2021, after a one-year period, with the enforcement of MCO3.0,

most students were still studying online with minimal to no face-to-face contact with peers, instructors and the university community. Students, whether new or continuing, must adapt to the “new norms” in education, which involve learning virtually through online platforms (Al-Kumaim et al., 2021; Selvanathan et al., 2020).

A plethora of research has been conducted on the impact of mental health and wellbeing among Malaysian university students during the COVID-19 outbreak (e.g., Tze Wei et al., 2020; Wan Mohd Yunus et al., 2021; Wong et al., 2021). Wong et al. (2021) reported that over 55% of students in their study exhibited symptoms of depression and anxiety. The study further identified young people, particularly students, as a high-risk group prone to experiencing mental health symptoms. In contrast, Kamaludin et al. (2020) found that only 30% of university students demonstrated some level of anxiety due to the pandemic, which aligns with the findings of Sundarasan et al. (2020) where 30% of university students were found to have varying levels of anxiety.

The results in Malaysia present a contrast to international research evidence, which often indicates higher percentages (e.g., Son et al., 2020). This discrepancy may be attributed to differences in the timing of data collection, as different points in time may reflect varying severity levels of the COVID-19 outbreak in respective countries.

The researchers’ own experiences support the notion that a significant number of university students have faced psychological and mental challenges during the pandemic, impairing their learning. This is consistent with the study by Yassin et al. (2021), which highlighted that the pandemic has caused anxieties and psychological stress, making it difficult for students to focus on their studies. Additionally, the prolonged period of remote online learning, whether synchronous or asynchronous, has further burdened the psychological and mental health of university students. This aligns with the evidence from Sundarasan et al. (2020), which identified “remote online learning” as a key stressor contributing to anxiety. As emphasised by Kamaluddin et al. (2020), many students perceive themselves as lonely and in need of support, which they often do not receive. This prolonged negative self-perception can easily lead to mental illness if not addressed promptly (Kamaludin et al., 2020).

The review of available literature underscores the need for prompt action to support and empower students in the face of an uncertain crisis such as the pandemic. The effects of the pandemic have a lasting impact that extends into the post-pandemic period. A study conducted by Duan et al. (2022) reported that 63% of 1 445 college students in Wuhan, China experienced depression during the post-pandemic era. As recommended by Wong et al. (2021) and Kamaluddin et al. (2020), practical intervention strategies must be devised to address the psychological and mental needs of students during and after the COVID-19 period. This aligns with Jamshaid et al. (2023), who also emphasised the long-term psychological impact of the COVID-19 pandemic on international university students in the post-pandemic era.

## Writing Therapy

The COVID-19 pandemic has led to an increase in mental health issues beyond the capacity of conventional support services, and movement restrictions have limited access to face-to-face counselling services. The use of online platforms, including psychotherapy and counselling, has become crucial. Therefore, there is an urgent need for innovative methods and measures to address these challenges (Marković et al., 2020).

The pandemic has highlighted unforeseen needs in the field of counselling. Conventional consultation methods need to be adjusted to align with these needs and ensure the safety, flexibility and effectiveness of both clients and health professionals. In the post-pandemic era, there remains a need for flexible online counselling tools for university students, who are often technologically savvy and prefer accessible options (Marković et al., 2020). These tools should be easily accessible anytime, anywhere, with or without the presence of a professional.

Writing therapy, also known as expressive writing (EW), has been introduced as a tool to improve mental and physical health. Despite decades of research on its benefits, there are still gaps and discrepancies that need further exploration to understand its applicability in different counselling and psychotherapy contexts (Marković et al., 2020).

Writing therapy has shown various benefits for different client groups. Recent research has demonstrated improvements in depression levels for socially inhibited individuals, enhanced psychological health for patients with posttraumatic disorders and depression, reflective benefits for adolescents with depression, and reduced test anxiety among students. However, there are also studies where writing therapy did not significantly improve psychological wellbeing (Marković et al., 2020; Niles et al., 2014; Parfa, 2020). Interestingly, studies applying writing therapy as an intervention during the COVID-19 pandemic did not find statistically significant positive effects on alleviating psychological difficulties, although qualitative data reported positive benefits (e.g. Marković et al., 2020).

Nevertheless, writing therapy is considered an inexpensive and accessible tool that requires minimal input from experts. It can be easily applied online, which was particularly relevant during the pandemic, as emphasised by Bechard et al. (2021). Previous studies have explored the use of writing therapy through online platforms such as e-diaries, Facebook and other online portals. Considering its characteristics and flexibility, writing therapy is selected as the proposed e-intervention tool to improve university students' post-pandemic mental wellbeing.

In conclusion, this research study aims to address research gaps by implementing e-writing therapy as an intervention tool to improve the mental wellbeing of university students following the COVID-19 pandemic. It also explores the effectiveness and usability of e-writing therapy in the post-

pandemic context among undergraduates in Malaysia, considering the discrepancies found in previous studies.

### **3. Methodology**

This article represents a portion of the entire developmental process including needs analysis, product design, development, implementation, and evaluation (Richey & Klein, 2005). The following section focuses on and explains the implementation and evaluation of e-writing therapy among the selected research subjects.

#### **Research Procedures**

Upon ascertaining the need for an e-writing therapy intervention through an extensive literature review, undergraduate university students from a Malaysian public university were recruited online through email and texting applications as potential research subjects based on voluntary participation.

Through a specially designed website, participants were informed of the details of the research process, including how to carry out the entire e-writing therapy exercise. In addition, subjects were informed that the e-writing therapy is not a standalone intervention that functions as a mental health treatment for individuals with severe mental health issues. Rather, it is expected to act as a tool of prevention that will empower students as a high-risk group in managing mental health issues. It allows them to act on and be mindful of their own current state of mental wellbeing in a consistent, regular way. In the long run, this will in turn minimise their need for prescribed mental health treatment before developing more severe mental or psychological issues which will take a long time and complex therapies or treatment to overcome.

Upon ensuring that all participants had adequate understanding about the intervention tool through the research process, as well as their involvement and participation rights, informed consent was obtained from participants who agreed to sign up for the research.

Prior to the intervention, an online mental wellbeing questionnaire with 30 questions was administered as a pretest to the research subjects to measure their mental wellbeing. All participants engaged in 20 minutes of continuous writing for three consecutive days each week, which was conducted over a four-week period, leading to 12 sessions. The exercise was done asynchronously, in their own preferred time, place and format. In the context of this study, participants were given the freedom to select any online writing platform on their electronic devices. Platforms used by research subjects for the intervention include Microsoft Word, Google Docs or writing applications on their devices such as Notepad, Notes and Penzu.

This enabled convenient, asynchronous, cost-effective access to the writing exercise by empowering students to take charge in regulating their mental health conditions under varying stress factors impacting them.

Research subjects were required to submit their weekly entries through Google Forms to track their participation, which were kept confidential and used for the purpose of this research only. Weekly reminders through text messages were sent to the participants.

The e-writing therapy exercise was conducted based on the following instructions:

*During the next 20 minutes, write about any experiences and thoughts on your life during / post-pandemic on your chosen online platform. Write everything that comes to your mind, try to follow your thoughts as they come to you. Describe your thoughts and feelings that you may not have said or told anyone. As you write, examine your moods and deeper thoughts about the experience. Make sure you let yourself go and come into contact with your emotions and deeper thoughts. Feel free to write everything that comes to your mind. Don't read back, delete or change your text; just write your thoughts, and don't stop for 20 minutes.*

The instructions for the intervention were developed by adapting existing writing therapy models, specifically drawing from Procaccia et al. (2021) and Marković et al. (2020). These studies focused on evaluating the effectiveness of Expressive Writing (EW) during the COVID-19 pandemic, one involving Italian medical healthcare workers, and the other targeting the general public, both conducted in response to the pandemic's impact.

Upon completion of the four-week intervention, participants' mental wellbeing was measured again through the same pretest questionnaire. In addition, an open-ended qualitative questionnaire was also administered online to research subjects. Collecting both quantitative and qualitative data ensured comprehensive data analysis about the practicality of this intervention as a tool to improve students' mental wellbeing during the post-pandemic era, both statistically as well as gaining detailed perspectives based on user experience. Furthermore, evaluating the usability of the e-writing therapy intervention solely based on quantitative measures reflected through mental wellbeing scores is inadequate as the scores could be affected by many other external factors.

### **Research Subjects**

Out of 62 voluntary participants who signed up as research subjects, 40 successfully completed the four-week e-writing therapy intervention. Criteria for participation included: a) an active undergraduate student, b) comfortable in self-expression through writing, and c) owns an electronic device with basic internet access.

The demographic profile of the research subjects is shown in Table 1.

**Table 1: Demographic profile of participants**

| Demographic Data      | Categories        | Frequency ( <i>n</i> =40) |
|-----------------------|-------------------|---------------------------|
| <b>Age</b>            | 18                | 4                         |
|                       | 19                | 8                         |
|                       | 20                | 5                         |
|                       | 21                | 8                         |
|                       | 22                | 7                         |
|                       | 23                | 5                         |
|                       | 24                | 3                         |
| <b>Gender</b>         | Male              | 5                         |
|                       | Female            | 35                        |
| <b>Level of Study</b> | Diploma           | 10                        |
|                       | Bachelor's Degree | 30                        |

### Instrument

Quantitative data of the research were gathered through an online questionnaire to measure the research subjects' mental wellbeing before and after the e-writing therapy intervention. Questions were adapted and organised into three parts based on three mental wellbeing questionnaires as shown in Table 2, namely the Patient Health Questionnaire (PHQ-9), Generalised Anxiety Disorder (GAD-7), and the WEMWBS (University of Warwick, 2006).

**Table 2: Questionnaire employed in the study**

| Questionnaire | References                           | Number of Items | Description   |
|---------------|--------------------------------------|-----------------|---|
| Part A        | Patient Health Questionnaire (PHQ-9) | 9               | Measures the frequency of depressive symptoms over the past two weeks using the scale of "0" (not at all) to "3" (nearly every day).  |
| Part B        | Generalised Anxiety Disorder (GAD-7) | 7               | Assesses symptoms of generalised anxiety disorder over the past two weeks. Respondents rate each item on a scale ranging from "0" (not at all) to "3" (nearly every day).   |
| Part C        | WEMWBS                               | 14              | Assesses an individual's subjective wellbeing, psychological functioning and overall positive affect over the past two weeks. Each item on the WEMWBS is rated on a 5-point Likert scale, ranging from "1" (none of the time) to "5" (all of the time). |

All three questionnaires are self-report questionnaires that have been widely used worldwide. The PHQ-9 and the GAD-7 were reported to demonstrate adequate formal psychometric properties (American Psychological Association, 2020; Pranckeviciene et al., 2022; Richardson et al., 2017). Both the PHQ-9 (Sun et al., 2020) and the GAD-7 (Dhira et al., 2021) has been found to exhibit strong internal consistency and demonstrate good convergent validity.



On the other hand, an open-ended questionnaire was employed online to collect detailed qualitative perspectives about user experience of the e-writing therapy intervention upon participants' completion of the 4-week sessions. An open-ended questionnaire was selected instead of interviews to ensure the anonymity and privacy of the participants at the highest level. Validated by three content experts, questions include detailed description of experience, benefits and challenges faced by participants while conducting the e-writing therapy intervention.

### Data Analysis

A paired-samples *t*-test was conducted on the quantitative data gathered to determine the effectiveness of the e-writing therapy intervention in improving students' mental wellbeing using SPSS version 26.

Furthermore, the qualitative data collected from participants through the open-ended questionnaire underwent thematic analysis to identify emerging patterns. Text segments with similar patterns were coded and categorised, and these codes were then organised, modified and grouped into relevant categories. Finally, the categories were rephrased into themes, which are discussed in the following sections. To facilitate the analysis process, matrix tables were created to systematically organise the data according to the assigned codes, allowing for the identification of similarities, differences and other significant patterns.

## 4. Findings

### Quantitative Findings

Three different sets of mental wellbeing questionnaires were administered to the research subjects before and after the intervention, including 1) Patient Health Questionnaire (PHQ-9), 2) Generalised Anxiety Disorder (GAD-7), and 3) WEMWBS. As tabulated in Table 3, results from pretest and posttest for each set of instruments indicated no significant improvement in students' mental wellbeing scores after the four-week intervention period:  $t_{(39)} = 1.12, p = .27$ ;  $t_{(39)} = 1.30, p = .20$ ; and  $t_{(39)} = -1.45, p = .15$  respectively.

**Table 3: Pre- and post-intervention mental wellbeing scores via paired-samples t-test**

| Instrument | Test     | <i>n</i> | Mean  | SD    | <i>T value</i> | <i>df</i> | <i>P value</i> |
|------------|----------|----------|-------|-------|----------------|-----------|----------------|
| PHQ-9      | Pretest  | 40       | 9.73  | 6.05  | 1.12           | 39        | .27            |
|            | Posttest |          | 8.80  | 5.47  |                |           |                |
| GAD-7      | Pretest  | 40       | 7.15  | 5.05  | 1.30           | 39        | .20            |
|            | Posttest |          | 6.38  | 4.59  |                |           |                |
| WEMWBS     | Pretest  | 40       | 46.00 | 10.49 | -1.45          | 39        | .15            |
|            | Posttest |          | 47.90 | 11.13 |                |           |                |

### Qualitative Findings

In order to gain deeper insights into participants' experiences during the intervention, qualitative data on the usability of e-writing therapy in improving university students' mental wellbeing were collected through an open-ended questionnaire. Upon analysis, three different themes were formulated, namely 1) personal safe space; 2) emotional outlet; and 3) flexibility within structure. For

each aspect, both positive and negative perspectives are outlined based on benefits and challenges encountered by participants during the intervention period.

#### *Personal safe space*

Feedback from e-writing therapy users revealed that the tool provided them with a personal private space to express themselves without the fear of judgement or opinion from others. This is supported by multiple excerpts below:

*Writing therapy feels like I'm writing a letter to someone unknown who always listens to me and never judges. (Participant 12, Question 2, Line 1)*

*I feel very calm as I write each session. It was as if I was talking to someone who really understood me. I have written many stories about my background that many people don't know. My background is a secret that I don't want my friends to know but I hope I can tell them. With this [tool], I can at least express my feelings and share secrets... (P17, Q1, L1-5)*

*As I write, I feel a feeling of satisfaction... even though I told many people about my feelings, the response given did not satisfy me. With that I prefer to express my feelings...while monologuing with myself. (P19, Q1, L3-5)*

*I could write down everything without feeling anxious, scared or fearful that other people might invalidate my feelings. Since it is only between me and myself so I really felt at ease. (P32, Q2, L1-2)*

*I felt I had an outlet to let my thoughts free without worrying that I would be judged or [worry if] people not get my peculiar way of viewing things. (P09, Q1, L2-4)*

*It feels like you're in [a] comfort zone where you're letting the most honest feelings when you're writing it. It's no doubt that you won't be uncomfortable to talk about your problems on the paper since it's between you and the keyboard. (P59, Q2, L1-2)*

*I was able to freely express myself without having to face anyone since I don't really like making eye contact when talking about my problems... It also gave me the opportunity to feel safe and comfortable in my own safe space. (P60, Q2, L1-3)*

*I felt like I was communicating with myself when I write my thoughts, ideas and emotions. I have become the active listener for myself. (P57, Q1, L1-2)*

*This writing therapy is a "me time" for me with myself. During the 4 weeks, I felt like I gave myself more space and time than ever before. (P30, Q1, L3-4)*

Despite the clear positive benefits, some concerns about uncertainty, anonymity, and privacy on the use of e-writing therapy emerged when participants were asked about potential application of the intervention in future:

*I'm not keen on saving documents on my gadgets that have my feelings being expressed. Maybe I will use anonymous accounts to write about my feelings without leaving any information that will date back to me. (P04, Q5, L1-2)*

*I feel paranoid where I think that those who read my writing may judge me and think that I'm pathetic and make my problems a big deal. (P12, Q3, L1-2)*

### *Emotional outlet*

Participants also pointed out that the e-writing therapy acted as an appropriate emotional outlet for self-reflection, improving their mindfulness as they process and organise their thoughts and emotions in the process. This is evident in participants' responses below:

*Due to this writing therapy, I was able to allocate some time every week and self-reflect emotionally. It also enables me to build up the habit of tracking my daily emotions... (P10, Q1, L1-3)*

*Reflective, calmer, mindful. (P24, Q1, L1)*

*I feel like I can express my feelings calmly without having to hurt myself. (P52, Q1, L1-2)*

*It helps me to keep my emotions in check. (P08, Q2, L3-6)*

*First, helped me understand why I'm feeling a certain emotion. Second, made me understand that it is important to validate my emotions. Third, after I finish writing about myself, my head would be in a calm state. Finally, it helped me to sleep in peace. (P49, Q2, L1-3)*

*I was avoided from bottling up my emotions. (P57, Q2, L3)*

*This experience had helped me in recognising some hidden emotions which I have been suppressing all this while. It alarms me to look deeper into some matter as well as not bottle up emotions, even expressing them through words helps a lot. (P10, Q4, L1-3)*

*It helps clearing out the burden in my heart. (P36, Q4, L1)*

*The writing therapy helped me validate my emotions... So, when I am facing problems and just have a bad day, I would just shut down and take care of myself first by writing. (P49, Q4, L1-3)*

*This experience has help me reflect a lot and gave me the time to truly let go of my anger or hatred. It has helped me to slowly learn to make peace with myself, and let go of the past that had hurt me for a long time. It became a reminder to me that it's okay to feel what I felt, but I shouldn't hold on to it for a long time because it will only cause pain. This experience has really help me feel better. (P60, Q4, L1-4)*

One respondent beautifully described the role of e-writing therapy in emotional regulation:

*By writing, it gives me relief. It's like breathing fresh air again, it's like a therapy to heal the wounds in the soul. (P50, Q4, L1-3)*

Undeniably, the e-writing therapy intervention played the role of helping participants to express, regulate and validate their emotions in the process. However, it also saw several participants struggling to deal with some "ugly past" or undesired emotions that came along the process:

*Throughout this writing therapy journey, there are times where I'll feel extreme sadness due to reflection on some past life events. It evokes a depressive mood, causing me to feel down and moody and thus finding myself reluctant to keep on writing. (P10, Q3, L6-8)*

*The challenge while writing is when I was being influenced by emotions. It happened during 3... stressful weeks. When I write I tend to exaggerate to the point of relating bad assumptions that have not and will not happen. (P18, Q3, L1-3)*

Nevertheless, these participants' responses clearly indicated how emotions and thoughts were progressively and successfully processed from the beginning of the intervention till the end:

*Sometimes it does make you cry a bit but after crying you feel a lot better after expressing your problems. (P38, Q4, L1-2)*

*At first, I was not sure whether to continue writing because of many past experiences that haunted me. But after entering the second week... I began to see how many things I had been through and here I am standing still. Entering the third week I started to be confident, I wrote how I went through the "dark life" I was going through, how miserable it feels but I keep all of that to focus on what lies ahead. In the final week I began to describe how I knew what I was about to go through was not all sweet and all bitter. (P61, Q1, L1-5)*

*At first, I felt a little awkward to write about what I feel. I used to write about my days in a diary when I was younger, but as I grow up, I barely even write anything anymore. Growing older makes me tend to keep a lot of things to myself. I don't share my feelings and thoughts even on papers. However through this 4-week journey, I was able to give a try at writing out my feelings again. (P08, Q1, L1-4)*

*To be honest, this is a new way for me to express my feelings. At first, I had a lot of doubts to participate in this therapy since I'm not used to write down my feelings and I couldn't believe that the issues I'm dealing would get any better just by writing it down but suprisingly it did. It really works for me since...I often avoid to express my thoughts or feelings to other people [due to] fear... I think that this is one of the best way for people to express their feelings especially for an introvert person like me. (P32, Q1, L1-6)*

Several participants also described their challenges in their expression of emotions during the intervention:

*The challenging part is I need to find the perfect words to represent my feelings and thoughts. I need to have the correct terms for every emotion that I used in the writing. (P03, Q3, L1-4)*

*I explain it very well in my head but when I need to actually let it out, I found it really hard to do so. (P05, Q3, L1)*

*Sometimes I don't know how to describe and put into words to write down what I feel. (P09, Q3, L1)*

*I found it challenging to organise the paragraph and how to talk about the issues. Also, it is a bit difficult to express since I may not know the proper word or term to use. (P60, Q3, L1-2)*

#### *Flexibility within Structure*

Findings implied that e-writing therapy provided them with sufficient amount of flexibility in expressing themselves within a preset structure of reference that guided them on the duration and management of their writing routines. This allowed users of the intervention to develop the consistency of employing the e-writing therapy while being able to conduct the exercise anywhere and anytime, with no restriction on the content they wrote, as highlighted in the following excerpts:

*It is not a burden for me to write just three times continuously in a week. Just nice. The suggested time 20 minutes is also perfect for me to find ideas about what should I write... (P50, Q1, L1-3)*

*There was a lot of flexibility - I didn't have to necessarily write things that made sense. I just had to write whatever was on my mind (P04, Q2, L1-2)*

*I like the fact that I can choose to write in English if I want to. I am more comfortable in using English because my thoughts are mostly in English, rather than in Malay language. I also prefer the fact that I can do this online instead writing in front of someone. (P08, Q2, L3-5)*

*I like the consistency [to be able to write] for 4 weeks. (P23, Q2, L1)*

*Writing therapy can be done everywhere, whenever you feel stressed out, you can do the therapy on the spot. (P38, Q2, L1)*

*Limitless writing while spilling everything regarding my feelings and interest. (P58, Q2, L1)*

*I am free to write what I think and what I want to say. (P44, Q2, L1)*

Although given some degree of freedom, some participants reported their struggle in keeping their consistency while conducting the e-writing therapy in

accordance with the suggested duration of intervention given, as shown in the excerpts below:

*I like that I am not tied to any style [of writing]. But I don't like it because I have to do it 3 days in a row. (P53, Q2, L1-2)*

*Sometimes I do feel forced to write because it has to be written in few days straight. (P01, Q1, L2)*

*Determination to write [for] three days continuously [is a challenge]. (P25, Q3, L1)*

*I find the duration a little bit challenging to be done continuously for 3 days. (P57, Q3, L2-3)*

Additionally, there were also participants who pointed out the challenge of not knowing what to write within the specific time limit during the process of e-writing therapy:

*I don't know what to write... I need to take more than 20 minutes to think about what to write. (P31, Q3, L1-2)*

*My life is quite mundane and repetitive, so I honestly don't have much things to write about. Most of the times I also feel calm than sad, so again, I don't know what to really write rather than just repeating the same thoughts. However, after getting myself familiar with this writing therapy, I feel much more relaxed to write about my days even if it's repetitive and boring. (P08, Q3, L1-4)*

*The first thing I find challenging is the excess of items to be recorded in my writing therapy, [or] the lack thereof. So I believe it really depends on one's life events; whether you're having a cool, decent, calm day or vice versa. Sometimes, there are days where I find it hard to think of any suitable ideas/items/explanations to be included in the written record. However, there are other times where there is just too much to be written down in which I'll end up using more than the predetermined time limit. (P10, Q3, L1-5)*

*Sometimes I feel demotivated to write, especially on those days where I don't feel any emotions at all. I would just feel like, this is just another daily routine of mine. I don't feel any feelings, hence the difficulty in writing. (P36, Q3, L1-3)*

However, as users grew in their familiarity with the structure of e-writing therapy, findings indicated gradual positive progress in employing the therapy within the specified time frame:

*I felt that writing within 20 minutes was quite challenging at first, because it was difficult for me to express my feelings and emotions and to use up 20 minutes to write it. The first week was very difficult. But [for] the second week, I made progress because I wrote faster and I felt relieved. During the third and fourth week, everything was easier - I was able to maximise those 20 minutes even though there were days when I still have difficulty writing. (P22, Q3, L3-7)*

*In the first week, it was very difficult for me to concentrate to write within 20 minutes. But after 4 weeks of writing, slowly I was able to adapt. I started to be able to focus and follow the flow with what I wanted to write. (P61, Q3, L1-3)*

## 5. Discussion

Based on the quantitative results obtained from the users of e-writing therapy, no statistically significant positive effects on participants' mental wellbeing were observed before and after implementing the intervention. This aligns with the findings of previous research studies by Marković et al. (2020) and Parfa (2020), which also explored the use of online writing therapy as an intervention tool during the COVID-19 pandemic. Notably, research findings of this study are also aligned to the study of Marković et al. (2020) where its qualitative data also reported positive benefits of writing therapy for the users involved. The qualitative findings gathered in this study resonate with the research conducted by Mikocka-Walus et al. (2020), reaffirming the numerous advantages of the writing therapy intervention. These benefits include its cost-effectiveness, ease of online application, capacity to facilitate social seclusion, and the potential for wide distribution both locally and internationally, making it a valuable resource in handling future calamities.

In contrast, a study by Robertson et al. (2023) found that COVID-focused online EW reduced symptoms of anxiety and distress, but not depression. Additionally, online EW was found to be effective in alleviating psychological distress among asymptomatic COVID-19 patients in the study by Zheng et al. (2023). Moreover, concurring with the findings in the study of Tay et al. (2022), qualitative findings for this research also asserted the role of the writing therapy intervention as a platform for self-reflection even during the post-pandemic era.

The discrepancies in these findings regarding the evaluation of online writing therapy intervention tools may be attributed to the different samples used and the varying circumstances in which the studies were conducted. However, these discrepancies do not diminish the potential of e-writing therapy as a platform to help improve the overall psychological wellbeing among Malaysian undergraduate university students.

## 6. Conclusion

This research was conducted in response to the need for empirically tested alternatives to conventional psychotherapy and counselling sessions in light of the aftermath of the COVID-19 pandemic through application of an e-intervention tool among Malaysian undergraduate university students.

While quantitative findings from the study did not show statistically significant positive effects of e-writing therapy in improving the mental wellbeing of the 40 research subjects, qualitative findings strongly emphasised the potential of e-writing therapy as a powerful intervention technique in the post-COVID-19 pandemic era. Participants' feedback revealed that it provided a safe, flexible and consistent means of expressing and regulating emotions for university students despite several challenges.

Despite inconclusive statistical evidence, the potential of e-writing therapy as an intervention for university students in the post-COVID-19 era should not be underestimated. Moreover, it is crucial to acknowledge that mental wellbeing is a complex construct that should not be measured or reflected solely through psychological scales and statistics alone.

Several limitations in this study include quantitative assessment of participants' mental wellbeing in this study that was based on self-report questionnaires. It is also important to note that the assessment was administered during a turbulent and uncertain period, where university students were still undergoing online studies in isolation from their usual academic communities. Furthermore, future studies can provide more robust evidence by increasing the number of participants, extending the intervention period and exploring the development of a standardised online platform specifically designed for e-writing therapy.

Relying solely on conventional face-to-face counselling sessions in universities may not be sufficient, and there is a need to complement these services with online psychological interventions. By actively supporting and promoting the use of e-writing therapy, it is crucial for higher education institutions in Malaysia and around the world to empower students to take proactive steps towards improving their psychological and mental wellbeing.

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## 8. References

- Al-Kumaim, N. H., Mohammed, F., Gazem, N. A., Fazea, Y., Alhazmi, A. K., & Dakkak, O. (2021). Exploring the impact of transformation to fully online learning during COVID-19 on Malaysian university students' academic life and performance. *International Journal of Interactive Mobile Technologies*; 15(5). <https://doi.org/10.4018/IJICTE.2021010102>
- Allen, S. F., Wetherell, M. A., & Smith, M. A. (2020). Online writing about positive life experiences reduces depression and perceived stress reactivity in socially inhibited individuals. *Psychiatry Research*, 284. <https://doi.org/10.1016/j.psychres.2019.112697>
- Bäuerle, A., Graf, J., Jansen, C., Dörrie, N., Junne, F., Teufel, M., & Skoda, E. M. (2020). An e-mental health intervention to support burdened people in times of the COVID-19 pandemic: CoPE It. *Journal of Public Health*, 42(3), 647–648. <https://doi.org/10.1093/pubmed/fdaa058>
- Bechard, E., Evans, J., Cho, E., Lin, Y., Kozhumam, A., Jones, J., Grob, S., & Glass, O. (2021). Feasibility, acceptability, and potential effectiveness of an online expressive writing intervention for COVID-19 resilience. *Complementary Therapies in Clinical Practice*, 45, 1-8. <https://doi.org/10.1016/j.ctcp.2021.101460>
- Cullen, W., Gulati, G., & Kelly, B. D. (2020). Mental health in the COVID-19 pandemic. *QJM: An International Journal of Medicine*, 113(5), 311–312. <https://doi.org/10.1093/qjmed/hcaa110>
- Dhira, T. A., Rahman, M. A., Sarker, A. R., & Mehareen, J. (2021). Validity and reliability of the Generalized Anxiety Disorder-7 (GAD-7) among university students of



- Bangladesh. *PloS One*, 16 (12), 1-16.  
<https://doi.org/10.1371/journal.pone.0261590>
- Dinastuti, D. (2018). Expressive writing in Indonesian context. *Jurnal Ilmiah Psikologi MANASA*, 7(1), 1-15.  
<https://ejournal.atmajaya.ac.id/index.php/Manasa/article/view/144>
- Duan, H., Gong, M., Zhang, Q., Huang, X., & Wan, B. (2022). Research on sleep status, body mass index, anxiety and depression of college students during the post-pandemic era in Wuhan, China. *Journal of Affective Disorders*, 301, 189-192.  
<https://doi.org/10.1016/j.jad.2022.01.015>
- Faisal, R. A., Jobe, M. C., Ahmed, O., & Sharkar, T. (2021). Mental health status, anxiety, and depression levels of Bangladeshi university students during the COVID-19 pandemic. *International Journal of Mental Health and Addiction*, 20(3), 1500-1515.  
<https://doi.org/10.1007/s11469-020-00458-y>
- Hirai, M., Dolma, S., Vernon, L. L., & Clum, G. A. (2020). A longitudinal investigation of the efficacy of online expressive writing interventions for Hispanic students exposed to traumatic events: competing theories of action. *Psychology and Health*, 35(12), 1459-1476. <https://doi.org/10.1080/08870446.2020.1758324>
- Jiang, R. (2020). Knowledge, attitudes and mental health of university students during the COVID-19 pandemic in China. *Children and Youth Services Review*, 119, 1-4.  
<https://doi.org/10.1016/j.childyouth.2020.105494>
- Jamshaid, S., Bahadar, N., Jamshed, K., Rashid, M., Afzal, M. I., Tian, L., Umar, M., Feng, X., Khan, I., & Zong, M. (2023). Pre- and post-pandemic (COVID-19) mental health of international students: Data from a longitudinal study. *Psychology Research and Behavior Management*, 16, 431-446.  
<https://doi.org/10.2147/PRBM.S395035>
- Kamaludin, K., Chinna, K., Sundarasan, S., Khoshaim, H. B., Nurunnabi, M., Baloch, G. M., Sukayt, A., & Hossain, S. F. A. (2020). Coping with COVID-19 and movement control order (MCO): Experiences of university students in Malaysia. *Heliyon*, 6(11), 1-7. <https://doi.org/10.1016/j.heliyon.2020.e05339>
- Khan, A. H., Sultana, M. S., Hossain, S., Hasan, M. T., Ahmed, H. U., & Sikder, M. T. (2020). The impact of COVID-19 pandemic on mental health & wellbeing among home-quarantined Bangladeshi students: A cross-sectional pilot study. *Journal of Affective Disorders*, 277, 121-128. <https://doi.org/10.1016/j.jad.2020.07.135>
- Lee, S. W., Kim, I., Yoo, J., Park, S., Jeong, B., & Cha, M. (2016). Insights from an expressive writing intervention on Facebook to help alleviate depressive symptoms. *Computers in Human Behavior*, 62, 613-619.  
<https://doi.org/10.1016/j.chb.2016.04.034>
- Marković, V. M., Bjekić, J., & Priebe, S. (2020). Effectiveness of expressive writing in the reduction of psychological distress during the COVID-19 pandemic: A randomized controlled trial. *Frontiers in Psychology*, 11.  
<https://doi.org/10.3389/fpsyg.2020.587282>
- Metsäranta, K., Kurki, M., Valimaki, M., & Anttila, M. (2019). How do adolescents use electronic diaries? A mixed-methods study among adolescents with depressive symptoms. *Journal of Medical Internet Research*, 21(2).  
<https://doi.org/10.2196/11711>
- Mikocka-Walus, A., Olive, L., Skvarc, D., Beswick, L., Massuger, W., Raven, L., Emerson, C., & Evans, S. (2020). Expressive writing to combat distress associated with the COVID-19 pandemic in people with inflammatory bowel disease (WriteForIBD): A trial protocol. *Journal of Psychosomatic Research*, 139.  
<https://doi.org/10.1016/j.jpsychores.2020.110286>
- Mugerwa, S., & Holden, J. D. (2012). Writing therapy: A new tool for general practice? *British Journal of General Practice*, 62(605), 661-663.  
<https://doi.org/10.3399/bjgp12X659457>

- Niles, A. N., Haltom, K. E. B., Mulvenna, C. M., Lieberman, M. D., & Stanton, A. L. (2014). Randomized controlled trial of expressive writing for psychological and physical health: the moderating role of emotional expressivity. *Anxiety, Stress, and Coping, 27*(1), 1-17. <https://doi.org/10.1080/10615806.2013.802308>
- Parfa, N., & Olle, O. (2020). *A challenge or a threat : Exploring expressive writing as a reframing tool to cope with the transition to online learning* [Master's thesis, UMEA University]. UME DiVA Portal. <https://www.diva-portal.org/smash/get/diva2:1525682/FULLTEXT01.pdf>
- Pascoe, P. E. (2016). Using patient writings in psychotherapy: Review of evidence for expressive writing and cognitive-behavioral writing therapy. *American Journal of Psychiatry Residents' Journal, 11*(3), 3-6. <https://doi.org/10.1176/appi.ajprj.2016.110302>
- Pranckeviciene, A., Saudargiene, A., Gecaite-Stonciene, J., Liaugaudaite, V., Griskova-Bulanova, I., Simkute, D., Naginiene, R., Dainauskas, L. L., Ceidaite, G., & Burkauskas, J. (2022). Validation of the Patient Health Questionnaire-9 and the Generalized Anxiety Disorder-7 in Lithuanian student sample. *PloS One, 17*(1), 1-18. <https://doi.org/10.1371/journal.pone.0263027>
- Procaccia, R., Segre, G., Tamanza, G., & Manzoni, G. M. (2021). Benefits of expressive writing on healthcare workers' psychological adjustment during the COVID-19 pandemic. *Frontiers in Psychology, 12*, 1-10. <https://doi.org/10.3389/fpsyg.2021.624176>
- Richardson, T., Wrightman, M., Yeebo, M., & Lisicka, A. (2017). Reliability and score ranges of the PHQ-9 and GAD-7 in a primary and secondary care mental health service. *Journal of Psychosocial Rehabilitation and Mental Health, 4*, 237-240. <https://doi.org/10.1007/s40737-017-0090-0>
- Savage, M. J., James, R., Magistro, D., Donaldson, J., Healy, L. C., Nevill, M., & Hennis, P. J. (2020). Mental health and movement behaviour during the COVID-19 pandemic in UK university students: Prospective cohort study. *Mental Health and Physical Activity, 19*, 1-6. <https://doi.org/10.1016/j.mhpa.2020.100357>
- Selvanathan, M., Hussin, N. A. M., & Azazi, N. A. N. (2020). Students learning experiences during COVID-19: Work from home period in Malaysian higher learning institutions. *Teaching Public Administration, 41*(1), 13-22. <https://doi.org/10.1177/0144739420977900>
- Shanmugam, H., Juhari, J. A., Nair, P., Chow, S. K., & Ng, C. G. (2020). Impacts of COVID-19 pandemic on mental health in Malaysia: A single thread of hope. *Malaysian Journal of Psychiatry, 29*(1), 78-84. [https://journals.lww.com/mjp/Abstract/2020/29010/Impacts\\_of\\_COVID\\_19\\_Pandemic\\_on\\_Mental\\_Health\\_in.10.aspx](https://journals.lww.com/mjp/Abstract/2020/29010/Impacts_of_COVID_19_Pandemic_on_Mental_Health_in.10.aspx)
- Shen, L., Yang, L., Zhang, J., & Zhang, M. (2018). Benefits of expressive writing in reducing test anxiety: A randomized controlled trial in Chinese samples. *PLOS ONE, 13*(2). <https://doi.org/10.1371/journal.pone.0191779>
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research, 22*(9), 1-14. <https://doi.org/10.2196/21279>
- Sun, Y., Fu, Z., Bo, Q., Mao, Z., Ma, X., & Wang, C. (2020). The reliability and validity of PHQ-9 in patients with major depressive disorder in psychiatric hospital. *BMC Psychiatry, 20*, 1-7. <https://doi.org/10.1186/s12888-020-02885-6>
- Sundarasan, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G. M., Khoshaim, H. B., Hossain, S. F., & Sukayt, A. (2020). Psychological impact of COVID-19 and lockdown among university students in Malaysia: Implications and policy recommendations. *International Journal of Environmental Research and Public Health, 7*(17), 1-13. <https://doi.org/10.3390/ijerph17176206>

- Tan, E. S. S., Chin, S. A. F. X., Sathapan, M. S. P., Dewi, A. D., Amini, F., Bustami, N. A., Tan, P. Y., Ho, Y. B., & Tan, C. K. (2023). Mental health and the COVID-19 pandemic: Observational evidence from Malaysia. *International Journal of Environmental Research and Public Health*, 20(5), 1-14.  
<https://doi.org/10.3390/ijerph20054046>
- Tay, H. Y., Yu, C., Wong, C. S., & Prihadi, K. D. (2022). Expressive writing during the COVID-19 pandemic: Themes of mixed expressive writing. *International Journal of Public Health Science*, 11(1), 195-203. <https://doi.org/10.11591/ijphs.v11i1.21101>
- Tee, Y. Q., Mohamed, A., & Alias, N. (2014). Application of Fuzzy Delphi Method in exploring Facebook as a tool for writing therapy among young adults. *Malaysian Online Journal of Educational Technology*, 2(3), 1-10.  
<https://eric.ed.gov/?id=EJ1086401>
- University of Warwick. (2006). *Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)*.  
<https://warwick.ac.uk/wemwbs/using/register/resources>
- Wei, T. T., Yee, Y. X., Baskaran, K., Subramaiam, T. D. N., & Partheeban, G. (2020). Self-reported compliance and mental health concerns towards COVID-19 pandemic: Malaysian undergraduate student's perspective. *International Journal of Biomedical and Clinical Sciences*, 5(3), 204-216.  
<http://www.aiscience.org/journal/paperInfo/ijbcs?paperId=4995>
- Wan Mohd Yunus, W. M. A., Badri, S. K. Z., Panatik, S. A., & Mukhtar, F. (2021). The unprecedented movement control order (lockdown) and factors associated with the negative emotional symptoms, happiness, and work-life balance of Malaysian university students during the Coronavirus disease (COVID-19) pandemic. *Frontiers in Psychiatry*, 11, 1-15.  
<https://doi.org/10.3389/fpsy.2020.566221>
- Wang, X., Hegde, S., Son, C., Keller, B., Smith, A., & Sasangohar, F. (2020). Investigating mental health of US college students during the COVID-19 pandemic: Cross-sectional survey study. *Journal of Medical Internet Research*, 22(9), 1-11.  
<https://doi.org/10.2196/22817>
- Wong, L. P., Alias, H., Md Fuzi, A. A., Omar, I. S., Mohamad Nor, A., Tan, M. P., Baranovich, D. L., Saari, C. Z., Hamzah, S. H., Cheong, K. W., Poon, C. H., Ramoo, V., Che, C. C., Myint, K., Zainuddin, S., & Chung, I. (2021). Escalating progression of mental health disorders during the COVID-19 pandemic: Evidence from a nationwide survey. *PLOS ONE*, 16(3), 1-14.  
<https://doi.org/10.1371/journal.pone.0248916>
- Yassin, A. A., Razak, N. A., Saeed, M. A., Al-Maliki, M. A. A., & Al-Habies, F. A. (2021). Psychological impact of the COVID-19 pandemic on local and international students in Malaysian universities. *Asian Education and Development Studies*, 10(4), 574-586. <https://doi.org/10.1108/AEDS-05-2020-0098>
- Zheng, X., Qu, J., Xie, J., Yue, W., Liang, X., Shi, Z., Bai, J., Sun, Z., Cheng, F., Li, X., & Liu, C. (2023). Effectiveness of online expressive writing in reducing psychological distress among the asymptomatic COVID-19 patients in Fangcang Hospitals: A quasi-experiment study. *Frontiers in Psychology*, 13, 1-10.  
<https://doi.org/10.3389/fpsyg.2022.1042274>