

# Assessing the Effects of Books on Psychological Wellbeing in Malaysia

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*There are various benefits of having books at home as it supports cognitive growth to later succeed academically by enhancing literacy, numeracy and technological skills. However, there are not many studies examining the relationship between the number of books available at home and how it is affecting an individual's psychological well-being. The aim of this study is to examine this relationship among Malaysians. A total of 1306 survey was distributed to residents living in the western part of Malaysia in an attempt to measure the psychological well-being and the number of books at the respondents' home. After analyzing the responses, it was found that respondents with very few to no books were related to experiencing anger more frequently than the other two groups with 11-100 and 100 and more books. We also found similar linkages for depression, stress, and worry. Interestingly, we found that the positive psychological well-being items revealed that the group with more than 51 books or more were related to experiencing more enjoyment rather than those with a lesser number of books. The finding of the present study reinforces the importance of books in one's life, particularly the psychological state and experiences.*

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**Keywords:** anger, books, depression, happiness, psychological well-being, stress, worry

## INTRODUCTION

Books bring numerous advantages to one's life through reading activities. Early in life, children engage in reading both at home and in schools. The results of engagement with books, as previous studies have shown, bring a variety of benefits in supporting the cognitive development, especially literacy skills across cultures (Joshi & Aaron, 2006; McBride-Chang, 2004). In addition, difficulties in reading can also contribute to learning disabilities (Nation, 2019). Due to its importance, several researchers have investigated reading and its processes, see for a review the component model of reading (Aaron, Joshi, Boulware-Gooden, & Bentum, 2008; Aaron, Joshi, & Quatroche, 2008; Li et al., 2020) and the home literacy model of Senechal and LeFevre (2002). Beside the cognitive domain, reading can also support readers to deal with the daily emotional challenges they experience affecting their psychological well-being. This aspect or benefit of reading is less explored.

According to Evans et al. (2010), bookish homes significantly influence the educational success of school children across different cultures and countries. The scholarly culture theory, earlier named as cultural capital, suggests that reading is a normal part of the lifestyle (de Graaf, 1986). A home that values scholarly culture involves in activities such as reading for pleasure, acting out stories, playing word games, and other literary- and literacy-related activities as a way of life (Evans et al., 2014). Furthermore, Evans et al. (2014) explained that the word “culture” in this theory refers to the routine practice involving interactions with books and activities related to reading. Thus, the scholarly culture holds that books are an integral part of life which brings opportunities for the children in the homes to read for pleasure, thereby, gathering new information and vocabulary critical to their educational success.

The scholarly culture theory has also been tested recently on adults across 31 societies; provided evidence how books enhance adult literacy, numeracy, and technology skills (Sikora et al., 2019) and occupational success (Evans et al., 2015). Interestingly, these studies found that the home library size (i.e., the number of books available at home) had a significant direct effect on all cognitive skills evaluated. These studies also showed that even a few books count significantly more beneficial in adolescent’s success than no books at all.

To our knowledge, the scholarly culture, to date, has not accounted for psychological development in childhood nor psychological well-being in adulthood. Besides cognitive development, the psychological well-being of an individual is critical to one’s development and success. Importantly, psychological well-being can interfere with learning attainment; hence, resulting in learning difficulties. Therefore, in this study, we examined the correlational linkages between books and psychological well-being among Malaysian adults.

### ***Psychological Wellbeing***

Robertson (2018) explained that psychological well-being, at the basic level, is similar to positive mental status, such as happiness or satisfaction. Mental health problems are on the rise globally. For example, World Health Organization (WHO) (2019) reported that the prevalence of mental disorders continues to grow significantly: 264 million people are affected by depression which is characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, tiredness, and poor concentration. In Malaysia, where this study was conducted, the National Health and Morbidity Survey (2017) reported 29% of the population is affected by depression and anxiety disorder (National Institute of Health [NIH], 2017). Specifically, 1 in 5 adults are depressed, 2 in 5 feel anxious, and 1 in 10 are stressed. Besides, the survey also reported a mounting crisis in adolescent suicidal behavior, 10% of the population reported to have entertained the idea of suicide, compared to only 7.9% in 2012.

Despite being on the rise, these mental health problems come with grievance consequences. For example, WHO (2019) reported that depression is one of the main causes of disability. Even mild stress or pressure can have a significant negative effect on one’s well-being. Among young adults, stress is usually the reason for the decline in academic attainment, low self-efficacy, and poor social relationships (Rizzolo et al., 2009). Furthermore, Rizzolo et al. (2009) claimed that the inability to

cope with stress can lead to a variety of potential consequences at both personal and professional levels among working adults.

These mental health conditions can be treated through intervention programs, and better yet, the cases can be reduced through prevention programs. To work efficiently, such programs require sufficient and proper infrastructures, workforce, and funding. In Malaysia, there are only four specialized psychiatric hospitals. Additionally, the condition of mental health problems or disorders in Malaysia was not well established and the data are not well-updated (NIH, 2017). Therefore, other programs can be considered to help reduce the risks of declining psychological well-being.

In this study, we evaluate the correlational relationships between reading—measured by access to books as the indicator—with psychological experiences. Specifically, the study traced whether book ownership is significantly related to one's likeliness to experience stress and depression.

### ***Reading as an Intervention to Reduce Stress***

Non-medical strategies are alternatives to improve mental health and well-being. Among the common strategies that have been promoted include physical activities such as exercising and yoga. Other highly recommended approaches are meditation and reading. A clinical research on patients recovering from critical illness (Jones et al., 2010) who are at risk of developing Post Traumatic Stress Disorder (PTSD) found evidence that the intervention of reading a diary written during intensive care unit (ICU) admission reduced the incidence of new cases of PTSD as compared to the control patients (5% versus 13%). The study on 352 patients concluded that the provision of an ICU diary is effective in aiding psychological recovery and reducing the incidence of new PTSD.

Another clinical study by Dowrick et al. (2012) experimented on a strategy named Get into Reading (GiR), a shared-reading of serious literature among people with depression, at a mental health drop-in center. At the end of the 12-month program, the participants reported more relaxed as a result of consistently reading narrative stories and more focused with a higher concentration level associated with reading poetry.

Non-clinical research has also traced pieces of evidence of linkages between reading and mental health. A study among undergraduates in Medical Therapy (reported among the most stressful academic programs) revealed that reading, yoga, and humor, when conducted regularly as an intervention, significantly reduced stress (Rizzolo et al., 2009). In addition, Jin (1992) found that after a group of 24 healthy adults participated in a stressful task then read for 60 minutes, they experienced a significant reduction in anxiety, heart rate, and blood pressure. Moreover, the National Literacy Trust reported that the effect of reading for pleasure can benefit readers with a positive attitude and self-confidence (Clark & Akerman, 2006).

### ***The Scholarly Culture Theory and Home Literacy Environment***

The scholarly culture hypothesizes that reading activates cognitive skills that improve school performance; therefore, children who grow up in book-oriented homes are encouraged to read and have discussions about reading as a way of life (Ev-

ans et al., 2014). The word “culture” in this theory, as explained by Evans et al. (2010) refers to an everyday routine or practice in which a family with a home full of books are likely to engage in reading for pleasure and talk about books on an everyday basis. Reading is a *culture* in these homes. This culture, then, stimulates cognitive skills crucial for learning. For this reason, children who have access to books at home achieve good performance in school, not only among economically advantaged families but also modest ones (Evans et al., 2010).

For a reading activity to be a culture in a family, the main aspect to ensure is the quality of home literacy environment. Home literacy environment does not benefit just children but also adults living in the home. The home literacy environment factor is particularly important in improving literacy among children who have family-risk of dyslexia (Hamilton et al., 2016). This finding suggests that the role of home literacy is important in all types of families. Therefore, the social culture theory cannot be separated from the home literacy environment.

Evans and her colleagues have extensively investigated the effect of social culture on numerous variables, from educational performance among children to occupational success in adolescence. One study concluded that children growing up in homes with many books get three years more schooling than children from homes with no books (Evans et al., 2010). In a more recent study by Sikora et al. (2019), based on 31 countries, it was found that raising children in homes filled with books positively impacts their future academic growth and job attainment.

The scholarly culture theory emphasizes the importance of having books at home, not only for children but also for adults. A home filled with books encourages a culture of reading for enjoyment. Reading for pleasures has multiple benefits from reading attainment and writing skills (Clark, 2011), improve comprehension and vocabulary (Cox & Guthrie, 2001), and general knowledge (Cunningham & Stanovich, 1998). Most studies addressing the scholarly culture theory focus on linking the reading culture with cognitive development, a lesser interest has been shown on the effect the culture has on one’s mental development. This study is, therefore, intended to extend the effect of the scholarly culture toward psychological well-being.

For the strong evidence of the influence of books on cognitive development, we expect a similar trait on the relationships between book ownership and psychological wellbeing. Therefore, we raised two important questions for this research: (1) Do adults with more books available at home experience less anger, depression, stress, and worries? And (2) does access to books at home in adolescence enhance happiness and enjoyment experiences?

## METHOD

This study was based on a survey research in which a the questionnaire was developed to gather the data on the quality of life and wellbeing. We surveyed 1306 residents of a western state of Malaysia. The wellbeing section of the survey was adapted from the Gallup Global Wellbeing Index Measures (2017). The overall Cronbach’s alpha was .877 for the entire wellbeing section (5 constructs, 36 items), However, only the psychological wellbeing construct is included in the analyses of this study, the Cronbach’s alpha for the psychological construct was .781 (6 items). Other well-being factors in the survey included spiritual, economy, health, and environ-

ment. These factors are deemed to have far indirect relations with book ownership as they were measured in such a very broad term. Therefore, we focus on evaluating the linkage between book ownership with psychological well-being.

### **Data Collection**

The survey was administered by enumerators who were assigned to areas covering 12 municipalities within Selangor, Malaysia. The respondents were voluntarily asked to participate in this research, their participation was rewarded with a small token (gift card). Locations of data collection included public areas such as shopping malls, parks, and government service centers. All participants were adult residents (50.2% males and 49.6% females, two participants did not specify their gender) with an age range from 20 years to 60 years and came from various backgrounds—various professions, three major ethnicities, and different religions. Our respondents' monthly income levels ranged from RM1,000 (250USD) to RM10,000 or more (2,500USD) which represent a diverse range of income levels in Malaysia. Specifically, Table 1 shows the number of participants from each municipality included in this study.

**Table 1.** *Participants by Municipality*

| Municipalities | <i>N</i> |
|----------------|----------|
| Petaling Jaya  | 109      |
| Ampang Jaya    | 108      |
| Shah Alam      | 106      |
| Kajang         | 113      |
| Hulu Selangor  | 109      |
| Klang          | 110      |
| Kuala Langat   | 106      |
| Selayang       | 110      |
| Kuala Selangor | 108      |
| Sepang         | 110      |
| Sabak Bernam   | 110      |
| Subang Jaya    | 107      |
| Total          | 1306     |

### **Measures**

We observed six psychological experiences: anger, depression, stress, worry, happiness, and enjoyment. The six indicators of psychological experiences were adapted from Gallup Global Wellbeing Index Measures (Gallup, 2017) namely the emotional wellbeing. The participants responded to the experience statement using the four-point Likert scale: 1 – Strongly Disagree, 2 – Disagree, 3 – Agree, 4 – Strongly

Agree. This four-point scale indicates that the participants were forced to agree or disagree with the statements as no neutral option was available. The choice a participant needs to make, related to the statements, is clear, that is positive or negative; hence, this study employed the four-point Likert scale.

To measure book ownership, we asked the participants to estimate the number of books at home. The estimates were grouped on the following scales: 0-10, 11-50, 51-100, 101 -109, 200, and above. This range was adapted from Sieben and Lechner's (2019) research with six categories, while in our study, we had only five groups. Other studies related to cultural capital and scholarly culture have measured the books at home or home library size by treating it as a ratio variable allowing the participants to answer 0 to any number, not grouped or scaled (Evans et al., 2014). However, these studies have consistently documented that the range contributing to the differences is somewhat similar to our scale.

### ***Data Analysis***

To analyze the data, we computed the descriptive statistics and other related statistical tests using SPSS version 22. First, the data were analyzed for the descriptive states and further evaluated for normality. We observed the data normality using the box plot graph for each item included in this analysis. Six items from the psychological well-being namely, anger, depression, stress, worry, happiness, and enjoyment did not have a significant outlier, nor the graph was extremely skewed. The shape for each psychological well-being variable showed somewhat a bell-shape-like distribution. Therefore, we assumed that the data were normally distributed.

A multivariate analysis of variance (MANOVA) was employed to examine the group differences in the negative psychological experiences (anger, depression, stress, and worry) and positive psychological experiences (happiness and enjoyment). The use of a multivariate analysis was preferred due to the nature of the data that we have more than one dependent variable with the presence of multiple groupings. This type of data invoked the suitability to use MANOVA (Stevens, 2009). There are two steps in MANOVA calculation, the first one tests the overall hypothesis of no differences in the means for the different groups, and the second one is to conduct the follow-up tests to explain the group differences (Bray & Maxwell, 1985). To analyze the differences, we computed the univariate F tests, followed by the Tukey's HSD.

## **RESULTS**

Of the 1306 participants, we surveyed in Selangor, Malaysia, Table 2 below shows the statistics about book ownership. The percentages seen in Table 2 shows very concerning facts: only about 20% of the respondents have very few to no books at all at home while only 18.3% have more than 100 books. In the state where the survey was conducted (Selangor, Malaysia), the average size of the household is 4—an estimation for the 2000 to 2010 range (Department of Statistics, Malaysia, 2014). Using the statistics, 20% of our respondents have only about 2-3 books at home which is very small. Additionally, only 18.3% of Selangorians achieved the worldwide average for the number of books (112 books). This finding shows that the majority of the citizens of the richest state in Malaysia is below the world benchmark for the home library size, an indicator of scholarly culture. Highlighting on the positive sides, 60%

of Selangorians are book owners. As highlighted by the scholarly culture theory (Evans et al., 2014), regardless of how many books the family already has, each addition to the home library helps children do better on a reading test.

**Table 2. Book Ownership (Number of Books at Home) Responses**

| Book Ownership | 0-10 books  | 11-100 books | 101 or more |
|----------------|-------------|--------------|-------------|
| Responses (%)  | 261 (20.8%) | 762 (60.9%)  | 229 (18.3%) |

\*missing data was at 4% which was considered at random; hence, the listwise deletion method was employed for the missing data exclusion for further analyses

### **Linking Book Ownership with Negative Psychological Experiences**

Further, we analyzed the role of books on respondents' experiences of anger, depression, stress, and worry within the recent period of data collection. On a 4-point scale—1 (Strongly Disagree), 2 (Disagree), 3 (Agree), 4 (Strongly Agree)—the respondents rated their recent encounters with the psychological experiences. Table 3 shows the summary of the descriptive statistics for each variable.

**Table 3. Descriptive Statistics**

| No of Books | Anger    |           | Depression |           | Stress   |           | Worry    |           |
|-------------|----------|-----------|------------|-----------|----------|-----------|----------|-----------|
|             | <i>M</i> | <i>SD</i> | <i>M</i>   | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| 0-10        | 2.51     | .873      | 2.39       | .853      | 2.51     | .837      | 2.52     | .864      |
| 11-50       | 2.34     | .795      | 2.17       | .749      | 2.27     | .733      | 2.37     | .783      |
| 51-100      | 2.15     | .794      | 2.04       | .768      | 2.24     | .820      | 2.22     | .834      |
| 101-200     | 2.25     | .881      | 2.05       | .808      | 2.21     | .877      | 2.25     | .948      |
| > 200       | 2.29     | 1.002     | 2.14       | .977      | 2.28     | 1.000     | 2.30     | 1.004     |

Table 3 shows the group with 0-10 books recorded higher means across the psychological experiences. The groups with 51-100 and 101-200 books recorded smaller means across the psychological experiences.

To analyze the data, we performed two sequences of MANOVA. The first sequence analyzed the group differences across the negative psychological experiences (i.e., anger, depression, stress, worry) while the second sequence examined the differences between groups on two positive psychological experiences (i.e., happiness and enjoyment). Using MANOVA to analyze multivariate data, a dataset with more than one criterion variable—provide a distinct advantage because the test considers the correlations between variables in the model (Bray & Maxwell, 1985). In this study, the main rationale for using MANOVA is the intention to evaluate the mean differences on all of the dependent variables simultaneously, while controlling for the intercorrelations among them (Thompson, 2006).

**Table 4. Means, standard deviations, and pooled within-cell correlations for the data**

| Variable   |    | Overall Means | Group           |                  |                   |                    |                  |
|------------|----|---------------|-----------------|------------------|-------------------|--------------------|------------------|
|            |    |               | 0-10<br>N = 259 | 11-50<br>N = 432 | 51-100<br>N = 322 | 101-200<br>N = 114 | > 200<br>N = 114 |
| Anger      | M  | 2.31          | 2.51            | 2.34             | 2.15              | 2.25               | 2.29             |
|            | SD | .848          | .873            | .795             | .794              | .881               | 1.002            |
| Depression | M  | 2.17          | 2.39            | 2.17             | 2.04              | 2.05               | 2.14             |
|            | SD | .814          | .853            | .749             | .768              | .808               | .977             |
| Stress     | M  | 2.34          | 2.52            | 2.37             | 2.22              | 2.25               | 2.30             |
|            | SD | .857          | .864            | .783             | .834              | .948               | 1.004            |
| Worry      | M  | 2.31          | 2.51            | 2.27             | 2.24              | 2.21               | 2.28             |
|            | SD | .824          | .837            | .733             | .820              | .877               | 1.000            |

| Pooled within-groups correlations |       |            |        |       |
|-----------------------------------|-------|------------|--------|-------|
| Variable                          | Anger | Depression | Stress | Worry |
| Anger                             | 1.000 |            |        |       |
| Depression                        | .745  | 1.000      |        |       |
| Stress                            | .760  | .792       | 1.000  |       |
| Worry                             | .650  | .745       | .735   | 1.000 |

Table 4 presents the means, standard deviations, and pooled within-group correlations for the data. The pooled within-group correlation coefficients were computed to perform the discriminant analysis used to detect the multicollinearity problem. In our data, multicollinearity was not detected, and all values for the pooled within-group correlations were smaller than .800. In Table 5, the eigenvalues and canonical correlations for the data are presented. Function 1 explains the most group variance (86.10%). Calculating the overall MANOVA tests of significance from the eigenvalues shows that there was a statistically significant association between the number of books with negative psychological experiences at  $p < .01$  for all four multivariate test statistics.

Given that the omnibus tests showed in Table 5 are significant, we proceed to the next step to probe the data further to analyze the nature of the differences. In other words, the analysis focuses on determining which groups are responsible for the significant differences expressed by the omnibus test above. Besides, we also examined which variables were important for group separation. To conduct these analyses, we observed the univariate F tests and effect size values, accompanied by the post hoc Tukey’s test.



**Table 5. MANOVA Results for Negative Psychological Experiences**

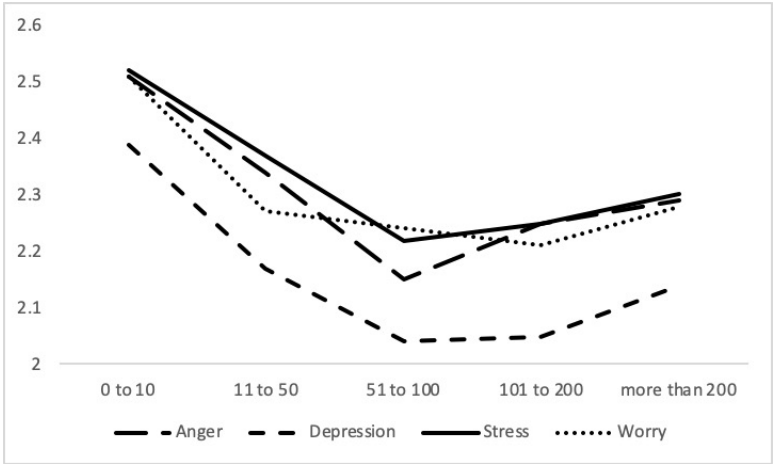
| Function           | Eigenvalue | % of variance    | Cannonical Correlations |               |          |
|--------------------|------------|------------------|-------------------------|---------------|----------|
| 1                  | .34        | 86.10            | .66                     |               |          |
| 2                  | .03        | 18.50            | .18                     |               |          |
| 3                  | .01        | 14.4             | .08                     |               |          |
| 4                  | .00        | .90              | .02                     |               |          |
| Test Name          | Value      | Approx. <i>F</i> | Hyp df                  | Err <i>df</i> | <i>p</i> |
| Pillai's Trace     | .360       | 8.12             | 16                      | 1944.00       | .009     |
| Wilks' Lambda      | .964       | 8.16             | 16                      | 1767.51       | .009     |
| Hotelling's Trace  | .370       | 12.88            | 16                      | 1926.00       | .009     |
| Roy's Largest Root | .280       |                  | 4                       |               | .007     |

**Table 6. *F* Tests and Tukey's HSD for Negative Psychological Experience**

| Variable                   | <i>df</i> | Mean Square | <i>F</i> | <i>p</i> | Partial Eta Square |      |
|----------------------------|-----------|-------------|----------|----------|--------------------|------|
| Anger                      | 4         | 5.018       | 17.111   | .000     | .22                |      |
| Depression                 | 4         | 5.081       | 17.842   | .000     | .25                |      |
| Stress                     | 4         | 3.613       | 14.984   | .001     | .16                |      |
| Worry                      | 4         | 3.593       | 15.363   | .000     | .17                |      |
| Post Hoc Tukey HSD Results |           |             |          |          |                    |      |
| Variable                   | Subset    | Group       |          |          |                    |      |
|                            |           | 51-100      | 101-200  | > 200    | 11-50              | 0-10 |
| Anger                      | 1         | 2.15        | 2.25     | 2.29     | 2.34               |      |
|                            | 2         |             |          |          | 2.34               | 2.51 |
| Depression                 | 1         | 2.04        | 2.05     | 2.14     | 2.17               |      |
|                            | 2         |             |          |          |                    | 2.39 |
| Stress                     | 1         | 2.22        | 2.25     | 2.30     | 2.37               |      |
|                            | 2         |             |          |          | 2.37               | 2.52 |
| Worry                      | 1         | 2.21        | 2.24     | 2.27     | 2.28               |      |
|                            | 2         |             |          |          |                    | 2.51 |

The univariate *F* tests showed that the groups are significantly different across all four variables ( $F > 1.96, p < .05$ ; see Table 6). Depression had the highest effect size (Partial Eta Square = .25) compared to other variables, indicating a stronger effect of book ownership on depression than other variables. Importantly, the Tukey's

test results showed that, across all four variables, the group with 0-10 books had significantly higher means while the group with 51 or more books had significantly lower means. The group with 11-50 books had significantly high mean on anger and stress but low means on depression and worry. The line graph illustrated in Figure 1 below clearly presents the mean differences between the groups with a lower number of books at home as compared to the groups with a higher number of books at home. The plunged decline in means can be seen in the groups with having books at 51 or more.



**Figure 1. Profile Plots for the Negative Psychological Experiences**

**Associating Book Ownerships with Positive Psychological Experiences**

**Table 7. Means, standard deviations, and pooled within-cell correlations for positive psychological experiences**

| Variable                          |           | Overall Means | Group           |                  |                   |                    |                  |
|-----------------------------------|-----------|---------------|-----------------|------------------|-------------------|--------------------|------------------|
|                                   |           |               | 0-10<br>N = 259 | 11-50<br>N = 432 | 51-100<br>N = 322 | 101-200<br>N = 114 | > 200<br>N = 114 |
| Happiness                         | M         | 2.93          | 2.93            | 2.89             | 2.90              | 3.03               | 3.02             |
|                                   | SD        | .672          | .728            | .653             | .645              | .680               | .668             |
| Enjoyment                         | M         | 3.01          | 2.97            | 2.97             | 3.02              | 3.18               | 3.10             |
|                                   | SD        | .678          | .787            | .630             | .675              | .591               | .654             |
| Pooled within-groups correlations |           |               |                 |                  |                   |                    |                  |
| Variable                          | Happiness | Enjoyment     |                 |                  |                   |                    |                  |
| Happiness                         | 1.000     |               |                 |                  |                   |                    |                  |
| Enjoyment                         | .688      | 1.000         |                 |                  |                   |                    |                  |

Table 7 presents the means, standard deviations, and pooled within-group correlations for the positive psychological experience variables (i.e., happiness and enjoyment). The coefficients show that the discriminant analysis requirement to be smaller than .800 (Stevens, 2009) has been met.

**Table 8. MANOVA Results for Positive Psychological Experience**

| Function           | Eigenvalue | % of variance    | Canonical Correlations |               |          |
|--------------------|------------|------------------|------------------------|---------------|----------|
| 1                  | .09        | 78.2             | .09                    |               |          |
| 2                  | .03        | 21.8             | .05                    |               |          |
| Test Name          | Value      | Approx. <i>F</i> | Hyp <i>df</i>          | Err <i>df</i> | <i>p</i> |
| Pillai's Trace     | .012       | 1.777            | 8                      | 2448.000      | .006     |
| Wilks' Lambda      | .989       | 1.771            | 8                      | 2446.000      | .006     |
| Hotelling's Trace  | .012       | 1.772            | 8                      | 2444.000      | .006     |
| Roy's Largest Root | .009       | 2.774            | 4                      | 1224.000      | .009     |

Table 8 shows that the omnibus MANOVA test for the positive psychological experience variables was statistically significant. However, only 78.2% variance were extracted by function one, indicating a small variance accounted in this function. Though the analysis recorded statistically significant findings, further analyses are to be evaluated to determine the worthiness of the omnibus MANOVA result.

Table 9 presents the F test result for each variable. The analysis recorded a statistically significant result for enjoyment ( $p < .05$ ) with a small effect size (Partial Eta Square = .11). The Tukey's test result showed a clear group separation in which those in groups with books more than 50 were associated with experiencing more enjoyment recently as compared to their counterparts with books of 50 or lesser. A non-significant result was detected in happiness. This finding indicates that the number of books contributed to account for one's enjoyment but not happiness.

**Table 9. Univariate F Tests and Tukey's HSD**

| Variable                   | <i>df</i> | Mean Square | <i>F</i> | <i>p</i> | Partial Eta Square |      |
|----------------------------|-----------|-------------|----------|----------|--------------------|------|
| Happiness                  | 4         | .697        | 1.548    | .186     | .005               |      |
| Enjoyment                  | 4         | 4.262       | 3.759    | .021     | .11                |      |
| Post Hoc Tukey HSD Results |           |             |          |          |                    |      |
| Variable                   | Subset    | Group       |          |          |                    |      |
|                            |           | 0-10        | 11-50    | 51-100   | 101-200            | >200 |
| Happiness                  | 1         | 2.93        | 2.89     | 2.90     | 3.03               | 3.02 |
|                            | 2         | -           | -        | -        | -                  | -    |
| Enjoyment                  | 1         | 2.97        | 2.97     |          |                    |      |
|                            | 2         |             |          | 3.02     | 3.10               | 3.18 |

## DISCUSSION AND CONCLUSION

This study evaluated the linkages between book ownership with psychological well-being aspects. More specifically, we compared respondents on positive and negative psychological experiences in relation to the number of books they have: (1) 0-10 books, (2) 11-50 books, (3) 51-100 books, (4) 101-200 books, and (5) more than 200 books. Four negative psychological well-being items were surveyed—anger, depression, anxiety, stress, and worry, and two positive psychological well-being items—happiness, and enjoyment were included in this study. Surprising as well as expected results were revealed through the rich data gathered in Malaysia.

For the negative psychological well-being items, the results showed that the group with 0-10 books was related to experiencing anger, depression, stress, and worry more than the groups with 11 books and more. This result indicates that having books at home is related to having positive psychological experiences. Having more books at home is linked with more reading: this is particularly true among children. Children's reading fluency, increased through reading activities, is linked to aspects of the family environment such as access to books at home (van Bergen et al., 2017). Based on this argument, our study suggests correlational relationships between more reading and psychological experiences, such as being less worried, experiencing less anger, and be less depressed and less stressed.

Among the negative psychological items, books were highly related to depression in which the result showed that the more books one has, the lower they scored on depression experience. Depression is the most common mental health problem documented by WHO in 2019. The 2015 National Health and Morbidity Survey recorded that 1 in 3 Malaysians have a mental health condition. Furthermore, Ning (2020) reported that 29% of workers have poor mental health and have implications on their company's spending on mental health. Related to these facts, the finding of this study recorded that only about 18% of Malaysians have more than 100 books at home. Having more than 100 books is linked with experiencing less anger, stress, worry, and a stronger association was found with depression. To help reduce the likeliness of experiencing those negative psychological items, one is recommended to have more books at home so that they read more, as reading can help improve one's mental health.

The positive influence of reading on the psychological state was clinically documented by Billington et al. (2010) who reported that depressed patients showed significant improvements in their mental health during the 12-month period of attending reading groups. Besides, the participants of the study expressed that they feel more confident, more willing to interact with other people after participated in the reading group. Additionally, research has also associated reading activities such as shared-reading can significantly reduce symptoms of mental health (Billington et al., 2013; Dowrick et al., 2012). These studies, however, included a reading intervention to trace improvements in mental health patients. The current study, in particular, examined the effect of having books at home on people's psychological well-being, and this simple observation itself revealed significant results. The finding of the present study reinforces the importance of books in one's life, particularly the psychological state and experiences.

The analysis results for the positive psychological well-being items revealed the number of books has no significant influence on happiness, but it had a significant, but small effect, on enjoyment. The positive effect was seen in the groups with 51 books and more. This finding indicates that those with an expanded home library may have different types of books for them to enjoy; hence, contributing them to experience more enjoyment. Evans et al. (2015) found that the expansion of home library size has a very substantial positive influence on occupational status. The change from no books at all to some books, even if a very small number, had a significant effect on occupational status; however, differences between large library sizes did not show a very significant difference. Comparing the present study with Evans et al.'s (2015) derives a conclusion that a small number of books in the home may enhance occupational success, but to stimulate positive psychological well-being, one needs more books.

The elaboration above suggested that the scholarly culture effect can be extended toward psychological well-being. Having access to books at home can relate to the unlikeliness of having negative psychological experiences. Having about 11 books or more is associated with less depression, stress, less anger, and less worry. On the other hand, having books at home is positively linked to the experience of enjoyment. The positive influence was seen in those homes with more than 50 books.

This study, however, has some limitations. No physical observation was performed to validate that the self-reported information about the number of books was accurate. Therefore, this study does not make any causal conclusion on the findings: all results are presented to interpret the correlational relationships. In addition, variables such as socioeconomic status and educational background were not controlled; however, the sample was comprised of respondents of different backgrounds. In addition, this study was only conducted within Selangor, Malaysia. Future research is expected to cover the other variables and other regions..

Noteworthy findings were revealed by our study, regardless of its limitations. This study, therefore, calls for readings and a love of books to enhance a more positive psychological state of individuals. Reading is indeed a non-clinical approach to cope with depression, stress, anger, and worry. Besides, having more books can have a positive influence on one's happiness and enjoyment.

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