

Investigating Humour Styles and Depression among Foundation Students: Is Gender a Factor?

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ABSTRACT

This study explores the relationship between four humour styles—affiliative, self-enhancing, aggressive, and self-defeating—and depressive symptoms among foundation-year university students, with a specific focus on gender differences. Pearson correlation analysis revealed no significant associations between depressive symptoms and affiliative, self-enhancing, or aggressive humour styles. However, self-defeating humour showed a marginally significant positive correlation with depressive symptoms ($r = 0.110$, $p = 0.050$), suggesting that students who frequently use this style may be slightly more susceptible to depressive experiences. Gender comparisons using independent samples t-tests indicated no significant differences in humour style usage or depression levels between male and female students. All p-values exceeded 0.05, and Cohen's d values pointed to negligible effect sizes. These findings suggest that humour styles largely function independently of depressive symptoms in this cohort, though the link with self-defeating humour may warrant closer scrutiny. The lack of gender disparity supports the importance of promoting psychological well-being through humour-informed approaches across diverse student populations. Future research should incorporate broader psychosocial factors and larger samples to better understand these dynamics and guide targeted mental health interventions.

Keywords: Humour Style, Depressive Symptoms, Gender Differences, Foundation Students, Mental Health, General Linear Model

INTRODUCTION

Understanding the psychological well-being of university foundation students is pivotal in fostering a conducive academic and social environment. Among various psychological factors, humour styles and their relationship with mental health outcomes, particularly depression, have garnered significant attention in psychological research. This study seeks to delve into the intricate dynamics between different humour styles and the prevalence of depressive symptoms among students undergoing university foundation program at Universiti Malaya.

Humour, a ubiquitous aspect of human interaction, has been extensively studied for its dual potential to both alleviate and exacerbate psychological stress. According to the Humour Styles Framework proposed by (Martin et al., 2003), humour styles can be broadly categorized into four types: affiliative, self-enhancing, aggressive, and self-defeating. Each style reflects different cognitive and emotional processes and has distinct implications for an individual's mental health. Affiliative and self-enhancing humour are generally associated with positive psychological outcomes, whereas aggressive and self-defeating humour are linked to negative outcomes, including higher levels of stress and depression.

The transition to university life, especially during the foundational phase, can be a period of significant psychological adjustment. This study aims to explore the prevalence and function of different humour styles within this context and examine their relationship with signs of depression. Such an understanding can provide insights into potential psychological interventions that may benefit students' mental health and academic performance.

Hence, this study proposes the following hypotheses:

H1: There is a statistically significant difference in the mean scores between affiliative and aggressive humour styles among students undergoing university foundation programs.

H2: There is a significant difference between genders in terms of their humour styles and signs of depression among students undergoing university foundation programs.

H3: There is a significant relationship between humour styles and signs of depression among students undergoing university foundation programs.

This research endeavours to contribute valuable insights into the psychological strategy students employ to cope with stress and emotional challenges, particularly through humour, and how this strategy correlates with their mental health outcomes. Through its findings, the study aims to inform more effective psychological support systems and interventions tailored to the unique needs of university foundation students.

However, this study is subject to several noteworthy limitations. Firstly, the association between self-defeating humour and depressive symptoms emerged at the conventional significance cut off ($p = 0.050$), warranting cautious interpretation until replicated within a larger cohort. Secondly, our sample comprised exclusively foundation level students from a single institution, a relatively homogenous group in terms of age and academic background, thereby limiting the generalizability of these results to other educational settings, age groups or non student populations. Finally, we did not measure potentially influential covariates such as cultural context, personality traits (for example, neuroticism or extraversion) or levels of academic stress. Future research that incorporates these factors into multivariate analyses would facilitate a more nuanced understanding of the unique and shared predictors of depressive symptomatology.

LITERATURE REVIEW

Over the past two decades, many studies on the psychology of humour have focused on the relationship between humour and various aspects of mental health, including depression (Kuiper & Borowicz-Sibenik, 2005; Menéndez-Aller et al., 2020; Tsukawaki et al., 2022; Tucker et al., 2013).

As researchers delve deeper into this domain, it becomes increasingly evident that humour acts as a powerful psychological tool for managing mental health and enhancing overall well-being (Abel, 2002; Gelkopf, 2011). Nevertheless, the relationship between humour styles and depression is not straightforward (Warren et al., 2018).

Depression is a pervasive mental health condition that affects millions of individuals worldwide, and understanding its underlying factors is of paramount importance. One potential factor that has garnered increasing attention is the role of humour styles in the development and maintenance of depression. As humour can be a valuable tool for coping with and managing symptoms of depression, it is essential to explore the psychological basis of humour and its substantial influence on mental health.

According to Humour Styles Theory, different styles of humour can be categorized as affiliative, self-enhancing, self-defeating, and aggressive (Martin et al., 2003). The different styles serve various psychological purposes and have different effects on an individual's well-being and social interactions. Humour plays a significant role in influencing psychological states. Depending on its use and underlying intent, it has the potential to both heal and harm.

Affiliative humour is characterized by jokes and expressions intended to amuse others, foster connections, and enhance social cohesion (Brown & Holt, 2023; Martin et al., 2003). This style is inherently inclusive, promoting positive interactions and reinforcing group dynamics without offending or alienating individuals. It is associated with positive psychological outcomes and is considered a healthy method of coping with stress (Martin et al., 2003). Affiliative humour is typically used to smooth social interactions, reduce tensions, and build relationships, playing a critical role in social bonding and group cohesion.

Self-enhancing humour is the use of humour to maintain a positive outlook during stressful or adverse situations (Bartzik & Peifer, 2021; Martin et al., 2003; Saroglou & Scariot, 2002). It involves a humorous perspective on life's challenges, maintaining a cheerful disposition regardless of external circumstances. This style is closely linked with resilience and psychological well-being, serving as an internal coping mechanism that helps individuals maintain a positive emotional state (Martin et al., 2003). Self-enhancing humour is often seen as an adaptive humour style, reflecting an optimistic attitude and a tendency to see the lighter side of life.

Aggressive humour involves sarcasm, teasing, ridicule, and other forms of humour that may belittle or demean others (Anderson & Di Tunnariello, 2016; Martin et al., 2003; Ng & Lee, 2024). While it can sometimes be used playfully among close friends or groups with a mutual understanding, it often carries the risk of hurting others and may lead to social and interpersonal conflicts. Aggressive humour is frequently criticized for its potential to harm relationships and is generally regarded as a maladaptive humour style in psychological research (Martin et al., 2003).

Self-defeating humour is characterized by self-mockery or putting oneself down as a means to amuse others (Martin et al., 2003; Mohammed & Majeed, 2023). Individuals using this style often laugh at themselves in a way that might ingratiate them to others but at the cost of their own self-esteem. While it can temporarily ease social situations, habitual use of self-defeating humour is associated with negative psychological effects, including higher levels of depression and lower self-esteem (Kazarian & Martin, 2004).

According to Martin et al. (2003), humour styles that promote health include Affiliative and Self-enhancing humour, whereas humour styles that pose a risk to health include Aggressive and Self-defeating humour. Positive psychological outcomes are typically associated with Affiliative and self-enhancing humour, encouraging resilience and strengthening social connections, thus acting as protective factors against depression (Kuiper & Martin, 1998). On the other hand, negative psychosocial outcomes are frequently associated with self-defeating and aggressive humour, which can worsen depressive symptoms and lead to interpersonal conflicts (Kuiper et al., 2004).

Coyne's Interpersonal Theory of Depression posits that certain types of humour, particularly self-defeating and aggressive, may perpetuate depressive cycles by creating negative social interactions (Coyne, 1976). Likewise, Freud's Psychoanalytic Theory provides a perspective on humour as a reflection of subconscious conflicts and as a psychological defense mechanism, where maladaptive humour styles might indicate underlying psychological issues (Freud, 1928).

Understanding the distinctions between these humour styles holds significant implications for comprehending individual and social psychological dynamics. While affiliative and self-enhancing humour is generally adaptive, promoting personal and social well-being, aggressive and self-defeating humour styles carry risks. The overuse or inappropriate application of these maladaptive humour styles can lead to poor mental health outcomes and strained interpersonal relationships (Kuiper & McHale, 2009).

The study of different types of humour and their impact on mental health is an important area of psychological research. The question of how humour styles, such as affiliative and self-enhancing versus aggressive and self-defeating, are linked to both positive and negative mental health outcomes has remained one of the subjects of interest.

Affiliative humour, characterized by its non-hostile, inclusive nature, and self-enhancing humour, which involves maintaining a positive outlook through adversity, are frequently linked to beneficial psychological

outcomes. Affiliative humour is associated with enhanced social support networks, which are crucial for mental health resilience. This style of humour facilitates closer interpersonal relationships and creates a supportive social environment, which can mitigate the effects of stress (Kuiper & McHale, 2009)

Similarly, self-enhancing humour is identified as a personal resource that helps individuals cope with stress. It allows for the maintenance of a positive effect in the face of life's challenges, thereby fostering psychological resilience. A meta-analytic review by Schneider et al. (2018) suggests that individuals who employ self-enhancing humour tend to exhibit lower stress levels and greater overall well-being. This style of humour provides a buffer against the psychological impact of negative life events, enhancing an individual's ability to adapt to stressful situations.

In contrast, aggressive humour, which includes sarcasm, ridicule, and other forms of disparagement, has been associated with various negative psychological outcomes. Ford and Ferguson (2004) documented how aggressive humour correlates with higher aggression levels, reduced empathy, and poorer interpersonal relationships. This style of humour often alienates others and can exacerbate feelings of distress and social isolation.

Furthermore, self-defeating humour, which involves self-mockery or the belittling of oneself to gain acceptance, has been linked to adverse mental health outcomes. Kuiper et al., (2004) reported that individuals who frequently use self-defeating humour experience higher levels of depression and anxiety. This type of humour reflects and reinforces negative self-perceptions and low self-esteem, contributing to poorer mental health.

The literature distinctly shows that while affiliative and self-enhancing humour are associated with positive mental health outcomes, aggressive and self-defeating humour is linked to detrimental effects (Berger & Gonot-Schoupsinsky, 2023; Drake & Sears, 2023; Emmanuel Mabilia et al., 2021; Sharma & Singh, 2024). Depending on the style employed, the use of humour as a coping mechanism can either enhance well-being and foster resilience or contribute to psychological distress and interpersonal difficulties (Alexe et al., 2024; Oliveira et al., 2023). However, there is a notable lack of research focusing on foundation-year university students, highlighting the need for targeted studies in this demographic. This demographic is unique due to the transitional nature of their experience, which includes adjusting to a new academic environment, coping with increased academic pressures, and forming new social networks. The impact of humour styles and how humour might serve as a coping mechanism during this critical period remains underexplored.

Despite growing interest in the relationship between humour styles and mental health, there remains a notable gap in research focusing specifically on foundation-year university students—a group undergoing significant transitional challenges. This study aims to address this gap by examining the nuanced relationship between humour styles and depressive symptoms within this unique student population. Particular attention is given to potential gender differences in humour use and its psychological impact. The findings are expected to contribute valuable insights to the existing literature on humour, mental health, and student well-being, and to inform more targeted mental health strategies in higher education settings.

The research questions addressed in this study were as follows:

Research Question 1 (RQ1). Which humour styles (affiliative, self-enhancing, aggressive, and self-defeating) are significantly associated with depressive symptoms in foundation-year university students?

Research Question 2 (RQ2). Are there significant gender differences in the use of humour styles and levels of depressive symptoms among foundation-year university students?

Research Question 3 (RQ3). In what ways do humour styles function as coping mechanisms during the transitional phase of foundation-year university life?

METHODOLOGY

Data Collection

To answer the research questions, this study utilized a cross-sectional survey design to examine the relationship between humour styles and depressive symptoms among students at the Centre for Foundation in Science, Universiti Malaya. The sample comprised 319 students: 129 males (40.4%) and 190 females (59.6%), all between the ages of 18 to 19 years. These students were enrolled in two major programs: 159 (49.8%) in the Asasi Sains Hayat program, focusing on life sciences, and 160 (50.2%) in the Asasi Sains Fizikal program, which concentrates on physical sciences.

Instruments

Humour styles were assessed using the Humour Styles Questionnaire (HSQ) by Martin et al. (2003), which measures four distinct styles of humour: affiliative, self-enhancing, aggressive, and self-defeating. Affiliative and self-enhancing humour are classified as positive humour, while self-defeating and aggressive humour are classified as negative humour. This 32-item self-report instrument rates responses on a 7-point Likert scale, from 1 (totally disagree) to 7 (totally agree). Depressive symptoms were quantified using the Short Mood and Feelings Questionnaire (SMFQ), consisting of 13 items designed to assess depressive symptoms experienced over the past two weeks. Responses to the SMFQ range from "Not True" (0) to "True" (2), with higher scores indicative of more severe depressive symptoms.

The reliability of the instruments was confirmed through Cronbach's alpha coefficients, which indicate high internal consistency. The Cronbach's alpha for the HSQ was 0.937, while the Cronbach's alpha for the SMFQ was 0.878.

Procedure

Participants were recruited through purposive and convenience sampling, with an invitation to participate in the study disseminated via student email lists. Data collection was executed using Google Forms, a secure and accessible online platform that facilitated the efficient distribution and completion of the survey. The administration of the survey, which included both the HSQ and the SMFQ, required approximately 20 minutes per participant.

Data Analysis Procedure

Data analysis was conducted using SPSS Version 25. Descriptive statistics were utilized to outline demographic characteristics and the distributions of key variables, providing a foundational understanding of the study population and variables of interest.

To assess the relationships between humour styles and depressive symptoms, Pearson correlation coefficients were calculated. This statistical approach was chosen to measure the strength and direction of the linear relationships between continuous variables. The use of Pearson correlation coefficients is pivotal in substantiating the relationships under investigation, offering insights into how variations in humour styles correlate with changes in depressive symptoms.

In addition to correlation analysis, differences in humour styles and depressive symptoms across gender and program type were examined using independent samples t-tests. Levene's Test for Equality of Variances was performed prior to the t-tests to ensure the homogeneity of variance, a necessary assumption for the accurate application of t-tests. This step confirms the appropriateness of using pooled variance estimates in the analysis.

Furthermore, effect sizes (Cohen's *d*) were calculated for each significant finding to gauge the practical significance of observed differences. Cohen's *d* provides a measure of the magnitude of differences, offering a deeper understanding beyond p-values, which helps to elucidate the real-world impact of the findings.

This comprehensive methodological approach, employing both parametric (Pearson correlation and t-tests) and nonparametric measures (effect sizes), ensures a robust analysis of the data, accommodating varied data characteristics and enhancing the validity of the findings.

RESULTS

Hypothesis 1: There is a statistically significant difference in the mean scores between affiliative and aggressive humour styles among students undergoing university foundation programs.

To test Hypothesis 1, which proposed a significant difference in the mean scores between affiliative and aggressive humour styles among students undergoing university foundation programs, a paired samples t-test was utilized.

Table 1 presents the results of the paired samples tests for differences between humour styles. Specifically, for the comparison between affiliative and aggressive humour styles, a significant difference was observed (mean difference = -0.15831, $t = -4.005$, p -value < 0.001), supporting Hypothesis 1.

Table 1 Comparison of Affiliative and Aggressive Humour Styles Among University Foundation Students

| Humour Style | (N = 319) | | t | p -value | Mean Difference | 95% CI | | Cohen's d |
|--------------|-----------|--------|--------|------------|-----------------|---------|---------|-------------|
| | Mean | SD | | | | Lower | Upper | |
| Affiliative | 4.6364 | 1.1667 | -4.005 | 0.000 | -0.15831 | -0.2361 | -0.0805 | -0.208 |
| Aggressive | 4.7947 | 0.9884 | | | | | | |

Note: The mean difference is calculated as (Mean of Affiliative - Mean of Aggressive).

The paired samples t-test revealed a statistically significant difference between the scores for affiliative and aggressive humour styles. The test statistic, $t = -4.005$, indicates that this difference is statistically significant with a p -value less than 0.001. This significance level suggests that the likelihood of observing such a difference by chance alone is less than 0.1%.

The mean scores show that the average score for affiliative humour (mean = 4.6364) was lower than for aggressive humour (mean = 4.7947). The mean difference between these styles was -0.15831, with a 95% confidence interval ranging from -0.2361 to -0.0805. This interval does not include zero, which supports the finding that the difference in mean scores is statistically significant.

The Cohen's d value of -0.208 indicates a small effect size. In the context of behavioural sciences, Cohen (2013) suggested the following benchmarks for interpreting d values: 0.2 to represent a small effect, 0.5 for a medium effect, and 0.8 for a large effect. Therefore, a Cohen's d of -0.208 suggests a small but practical difference between the two humour styles. This effect size helps us understand that while the difference between affiliative and aggressive humour styles is statistically significant, it is not a large difference in practical terms.

From a practical standpoint, the results suggest that university foundation program students exhibit a slightly higher preference for aggressive humour over affiliative humour. This finding could be interpreted within the academic and social context of university life where aggressive humour might be employed more frequently as a coping mechanism or as a way of social interaction among peers. However, given the small effect size, the practical impact of this preference on daily interactions or psychological outcomes might be limited.

In conclusion, while there is a statistically significant difference between affiliative and aggressive humour styles among university foundation students, the magnitude of this difference is small. These findings add to

the understanding of humour preferences among young adults in educational settings and suggest avenues for further research into how different humour styles are employed by students and their potential impacts on social relationships and psychological well-being. Further studies could explore the reasons behind these preferences and how they affect students' academic performance and social interactions.

Further exploratory analyses were conducted to deepen our understanding of the complex relationships and differences between various humour styles. These analyses are crucial as they extend beyond the initial hypotheses, providing insights into the broader dynamics of humour interactions among students.

Table 2 presents the results of Pearson correlation tests, which revealed significant correlations between different pairs of humour styles. Notably, a strong positive correlation was observed between affiliative and aggressive humour styles ($r = 0.798$, $p\text{-value} < 0.001$). This suggests that students who tend to use affiliative humour are also inclined to engage in aggressive humour, indicating overlapping psychological or social functions of these styles. Similarly, high correlations were noted between self-enhancing and self-defeating humour styles ($r = 0.809$, $p\text{-value} < 0.001$). Such findings imply that these humour styles, although seemingly disparate, may co-occur as part of a complex emotional regulation strategy among students.

Table 2 Correlations Between Different Humour Styles

| Pair | Humour Styles Compared | Correlation | $p\text{-value}$ |
|------|---|-------------|------------------|
| 1 | Affiliative Style and Aggressive Style | 0.798 | 0.000 |
| 2 | Affiliative Style and Self-Defeating Style | 0.819 | 0.000 |
| 3 | Self-Enhancing Style and Aggressive Style | 0.722 | 0.000 |
| 4 | Self-Enhancing Style and Self-Defeating Style | 0.809 | 0.000 |

Additionally, paired sample tests, as detailed in Table 3, explored the differences in the prevalence of these humour styles among foundation students. The analysis revealed significant differences between self-enhancing and aggressive humour styles, with the mean score for self-enhancing humour (4.3358) being significantly lower than that for aggressive humour (4.7947), $t = -11.003$, $p\text{-value} < 0.001$. Cohen's d value of -0.616 indicates a medium effect size, highlighting a substantial preference for aggressive humour over self-enhancing humour. This preference may suggest that students find aggressive humour more effective in social interactions or as a coping mechanism. Moreover, the differences between self-enhancing and self-defeating humour were also significant, with self-enhancing humour scoring lower (mean = 4.3358) compared to self-defeating humour (mean = 4.7269), $t = -11.551$, $p\text{-value} < 0.001$, and a Cohen's d of -0.646 , suggesting a strong preference for self-defeating humour, which might indicate a tendency among students to engage in humour that, while potentially maladaptive, could be used as a mechanism for handling academic and social pressures.

These findings indicate that aggressive and self-defeating humour styles are more prevalent or favoured among the foundation student population compared to affiliative and self-enhancing styles. The observed preferences, supported by the respective effect sizes, may reflect underlying cultural, social, or psychological dynamics specific to this group of students. Such insights are pivotal as they not only elucidate the relationships between different humour styles but also highlight how these styles may contribute to or reflect underlying psychological processes. The significant correlations and differences observed suggest potential avenues for further research into the adaptive and maladaptive aspects of humour usage in academic settings. This exploration could lead to the development of targeted interventions aimed at promoting healthier social interactions and psychological well-being among university students.

Table 3 Paired Sample Test for Differences Between Humour Styles

| Humour Style | Mean (Style 1) | Mean (Style 2) | <i>t</i> | <i>p</i> -value | Mean Difference | 95% CI | | Cohen's <i>d</i> |
|-------------------------------|-------------------|-------------------|----------|-----------------|--------------------|---------|---------|---------------------|
| | | | | | | Lower | Upper | |
| Affiliative-Aggressive | 4.6364 | 4.7947 | -4.005 | .000 | -.15831 | -.23608 | -.08054 | -0.208 |
| Affiliative-Self-Defeating | 4.6364 | 4.7269 | -2.415 | .016 | -.09052 | -.16426 | -.01678 | -0.135 |
| Self-Enhancing-Aggressive | 4.3358 | 4.7947 | -11.003 | .000 | -.45886 | -.54090 | -.37681 | -0.616 |
| Self-Enhancing-Self-Defeating | 4.3358 | 4.7269 | -11.551 | .000 | -.39107 | -.45768 | -.32446 | -0.646 |

Note: Mean (Style 1) and Mean (Style 2): These columns provide the mean scores for the first and second humour styles involved in each paired comparison.

Hypothesis 2: There is a significant difference between genders in terms of their humour styles and signs of depression among students undergoing university foundation programs.

This hypothesis was investigated to determine if there were significant gender differences in the expression of various humour styles and the prevalence of depressive symptoms among university foundation program students. To address this, independent samples *t*-tests were conducted, comparing the scores between male and female students across different humour styles and depressive symptoms among foundation students.

In the analysis of humour styles and signs of depression between genders, Levene's Test for Equality of Variances was initially conducted to assess whether the variances between male and female groups were statistically equivalent, a prerequisite for the standard independent samples *t*-test. Levene's Test results, revealed that all *p*-values were greater than the conventional alpha level of 0.05. This implies that there was no significant difference in variances between males and females across all tested variables (Affiliative, Self-Enhancing, Aggressive, Self-Defeating Styles, and Symptoms of Depression). Consequently, the assumption of equal variances was maintained for each *t*-test, permitting the use of the standard independent samples *t*-test which pools variances between the two groups.

Table 4 summarizes the independent samples *t*-test results comparing male and female students in various humour styles and depressive symptoms, based on data from students enrolled in a university foundation program.

Table 4 Gender Differences in Humour Styles and Depression

| Humour styles | Male (<i>N</i> = 129) | | Female (<i>N</i> = 190) | | <i>t</i> | <i>p</i> -value | Cohen's <i>d</i> | Mean Difference | 95% CI | |
|---------------------|------------------------|-------|--------------------------|-------|----------|-----------------|------------------|--------------------|--------|-------|
| | Mean | SD | Mean | SD | | | | | Lower | Upper |
| Affiliative | 4.517 | 1.194 | 4.717 | 1.144 | -1.503 | 0.134 | -0.461 | -0.200 | -0.461 | 0.062 |
| Self-Enhancing | 4.302 | 1.007 | 4.359 | 1.010 | -0.489 | 0.625 | -0.283 | -0.056 | -0.283 | 0.170 |
| Aggressive | 4.747 | 0.995 | 4.827 | 0.985 | -0.708 | 0.480 | -0.302 | -0.080 | -0.302 | 0.142 |
| Self-Defeating | 4.673 | 0.952 | 4.764 | 0.929 | -0.853 | 0.394 | -0.302 | -0.091 | -0.302 | 0.119 |
| Signs of Depression | 2.247 | 0.422 | 2.220 | 0.460 | 0.524 | 0.600 | 0.026 | 0.026 | -0.073 | 0.127 |

For affiliative humour, despite slight numerical differences in mean scores between males (mean = 4.517) and females (mean = 4.717), the difference was not statistically significant $t = -1.503$, p -value = 0.134). The same trend was observed for self-enhancing, aggressive, and self-defeating humour styles, where p -value (0.625, 0.480, and 0.394 respectively) well exceeded the traditional threshold for statistical significance, indicating a lack of substantial gender-based disparities in humour style preferences.

Additionally, no significant differences were found in the levels of reported depressive symptoms between genders ($t = 0.524$, p -value = 0.600), suggesting a uniformity in emotional experiences across male and female students in this aspect. Additionally, Cohen's d values suggest minimal effect sizes ranging from -0.461 to 0.026. These effect sizes imply that any differences in humour styles and depressive symptoms between genders are negligible and not practically significant. The 95% confidence intervals included zero in all cases, further supporting the non-significance of the observed differences.

These findings suggest that gender does not appear to be a determining factor in the expression of humour styles or the prevalence of depressive symptoms within this sample. This lack of gender influence highlights the potential for other individual or environmental factors to play more substantial roles in shaping these psychological constructs. Consequently, these results not only challenge assumptions about gendered emotional expression but also underscore the necessity for further research to explore alternative influences on humour and mental health in academic environments.

Hypothesis 3: There is a significant relationship between humour styles and signs of depression among students undergoing university foundation programs.

Hypothesis 3 was designed to explore the correlations between various humour styles and the prevalence of depressive symptoms among students in university foundation programs. The objective was to determine if certain humour styles were associated with higher or lower levels of depression.

The normal Q-Q plots for the humour styles (Affiliative, Self-Enhancing, Aggressive, and Self-Defeating) and symptoms of depression generally indicate that these variables are approximately normally distributed. Minor deviations, particularly in the Affiliative and Aggressive styles and symptoms of depression, suggest slight skewness or outliers at the higher end of the scales. Despite these minor deviations, the overall normality of the data supports the use of Pearson's correlation for testing relationships between humour styles and depression symptoms.

Pearson correlation coefficients were calculated to assess the strength and significance of the relationships between four humour styles (affiliative, self-enhancing, aggressive, and self-defeating) and signs of depression. The results are summarized in Table 5.

Table 5 Correlation Between Different Humour Styles and Signs of Depression

| Humour Style | Pearson Correlation (r) | p -value | Significance |
|----------------|-------------------------|------------|-----------------|
| Affiliative | 0.102 | 0.068 | Not Significant |
| Self-Enhancing | 0.085 | 0.131 | Not Significant |
| Aggressive | 0.022 | 0.695 | Not Significant |
| Self-Defeating | 0.110 | 0.050 | Significant |

The correlation matrix provides the Pearson correlation coefficients (r) between the four humour styles (Affiliative, Self-Enhancing, Aggressive, and Self-Defeating) and symptoms of depression, along with their significance levels.

The Pearson correlation between Affiliative style and symptoms of depression is $r = 0.102$ with a p -value of 0.068 exhibited a weak and non-significant correlation with depression, indicating no substantial link between affiliative humour and depressive symptoms.

The correlation between Self-Enhancing style and symptoms of depression is $r = 0.085$ with a p -value of 0.131 also showed a weak and non-significant negative correlation with depression ($r = 0.085$, $p = 0.131$), suggesting that this humour style does not significantly impact the students' depression levels.

For the Aggressive humour style, the correlation with symptoms of depression is $r = 0.022$ with a p -value of 0.695 demonstrated a very weak and non-significant correlation, indicating that aggressive humour is not associated with the signs of depression among the students.

The correlation between Self-Defeating humour style and symptoms of depression is $r = 0.110$ with a p -value of 0.050. This relationship is just at the threshold of significance at the 0.05 level, suggesting a slight positive relationship where higher levels of Self-Defeating humour might be associated with increased symptoms of depression, though this result is marginal. This result suggests that higher engagement in self-defeating humour, which often involves demeaning oneself, is associated with increased depressive symptoms, highlighting a potential risk factor for depression among students.

The analysis indicates that there is no significant relationship between most humour styles (Affiliative, Self-Enhancing, Aggressive) and signs of depression among students undergoing a university foundation program. The only exception is the Self-Defeating humour style, which shows a marginally significant positive relationship with symptoms of depression. This implies that students who exhibit higher levels of Self-Defeating humour may experience slightly higher signs of depression, though the relationship is not strong.

Overall, these findings suggest that humour styles are largely independent of depression symptoms in this student population, with the notable consideration that Self-Defeating humour might be an area of concern in relation to depression. Further research could explore this potential link more deeply, possibly considering other contributing factors or using larger sample sizes for more robust conclusions.

In addition to exploring the relationship between humour styles and signs of depression, our analysis also examined the correlations among the humour styles themselves. The findings indicate strong, significant positive correlations across all humour styles, reinforcing the notion that these are not isolated traits but are part of a broader humour disposition spectrum.

Significant interrelationships among different humour styles were identified, as detailed in Table 6. These findings indicate that humour styles are not mutually exclusive but are interdependent, suggesting that students who exhibit one type of humour are likely to exhibit others.

Table 6 Interrelationships Among Humour Styles

| Humour Styles Combination | Pearson Correlation (r) | p -value | Significance Level |
|-----------------------------------|-------------------------|------------|--------------------|
| Affiliative and Self-Enhancing | 0.737 | 0.000 | Highly Significant |
| Affiliative and Aggressive | 0.798 | 0.000 | Highly Significant |
| Affiliative and Self-Defeating | 0.819 | 0.000 | Highly Significant |
| Self-Enhancing and Aggressive | 0.722 | 0.000 | Highly Significant |
| Self-Enhancing and Self-Defeating | 0.809 | 0.000 | Highly Significant |
| Aggressive and Self-Defeating | 0.771 | 0.000 | Highly Significant |

The correlations among the humour styles themselves are all positive and significant at the 0.01 level. These strong correlations indicate that students who exhibit one type of humour style are likely to exhibit others as well.

Among the significant findings, the strong correlation between self-enhancing and self-defeating humour ($r = 0.809$, $p < 0.001$) merits special attention. This relationship suggests that students who employ self-enhancing humour, which generally aids in maintaining a positive outlook during stressful situations, might also engage in self-defeating humour. Self-defeating humour, characterized by self-mockery or putting oneself down, potentially serves as a complex strategy that intertwines resilience with vulnerability.

This nuanced interplay could reflect an adaptive yet risky psychological mechanism. While self-enhancing humour is used to foster resilience and emotional well-being, its strong correlation with self-defeating humour could suggest that the line between using humour as a shield and as a weapon against oneself can be thin. Students may leverage self-enhancing humour to cope effectively in the short term but might resort to self-defeating humour in situations where their resilience is tested, or perhaps as a form of social bonding that inadvertently reinforces negative self-perceptions.

Particularly notable is the high correlation between affiliative humour and self-defeating humour ($r = 0.819$), which indicates that students who frequently use humour to foster social bonds may also engage in humour that involves self-criticism. This suggests a complex relationship where humour used to create interpersonal connections paradoxically coexists with humour that could undermine one's self-esteem.

Similarly, the strong link between affiliative and aggressive humour ($r = 0.798$) indicates that social bonding through humour can coexist with more confrontational humour styles. This reveals a dynamic where humour serves dual purposes—both to connect and, potentially, to confront or challenge social interactions, illustrating the multifaceted roles humour can play within social contexts.

These interrelationships underscore the complexity of humour as a multifaceted psychological trait within the student population. They highlight the importance of considering how different humour styles coexist and interact, shaping students' social interactions and psychological health. The significant correlations not only between self-enhancing and self-defeating humour but also between affiliative and other humour styles provide crucial insights into the adaptive and potentially maladaptive aspects of humour. These findings suggest areas for targeted psychological interventions and further academic study, particularly in exploring the dual nature of humour in social and personal contexts.

DISCUSSION

The analysis of humour styles and their relationship with signs of depression among university foundation program students provides significant insights into the psychological profiles within this demographic. Notably, the results suggest that while most humour styles (Affiliative, Self-Enhancing, Aggressive) do not significantly correlate with depressive symptoms, a marginal exception exists with the Self-Defeating humour style, which exhibits a slight positive correlation with signs of depression ($r = 0.110$, $p = 0.050$). This finding implies that students engaging frequently in self-defeating humour, characterized by demeaning oneself or emphasizing flaws for amusement, may experience slightly higher levels of depression, potentially reinforcing negative self-perceptions and exacerbating psychological challenges (Kazarian & Martin, 2004; Martin et al., 2003).

This observation highlights the complex role humour can play in psychological well-being, where not all humour styles have equivalent effects. Affiliative and self-enhancing humour, often linked with positive coping mechanisms and resilience, contrast sharply with self-defeating humour which might serve as a maladaptive coping mechanism under academic and social pressures. These findings emphasize the need for further investigation into how different humour styles interact with mental health and underscore the potential for targeted interventions that promote more adaptive humour styles in educational settings.

Moreover, the lack of significant gender differences in humour styles and depressive symptoms challenges traditional assumptions about gender-specific emotional and behavioural expressions. This suggests that other factors, perhaps personality traits, cultural background, or individual socialization experiences, may play more substantial roles in shaping these psychological constructs (Kuiper & McHale, 2009). This insight invites a broader examination of the influences on humour and mental health beyond gender, advocating for a more nuanced understanding of these dynamics in academic settings.

Additionally, the significant interrelationships among the humour styles indicate that these are not isolated traits but are part of a broader humour disposition spectrum. This pattern suggests that students who engage

in one form of humour are likely to engage in others, reflecting an underlying personality or coping style that encompasses a range of humour expressions. The implications of such findings are considerable, as they suggest that interventions aiming to enhance mental health through humour should consider the complex interplay of different humour styles and their collective impact on students' psychological well-being.

In conclusion, this study underscores the multifaceted nature of humour that can be both helpful (a potential therapeutic tool) and harmful (a risk factor), depending on the situation and the type of humour style employed. It reinforces the need for further research to explore these relationships more deeply, potentially leading to the development of more effective psychological interventions that leverage humour to support student well-being in high-stress academic environments.

CONCLUSION

The exploration of humour styles and their correlation with depressive symptoms among Universiti Malaya foundation program students provides nuanced insights into the complex dynamics of humour as a psychological construct. This study underscores the diverse roles that different humour styles play within the student population, highlighting both their potential therapeutic benefits and risks.

Our findings reveal a significant relationship between self-defeating humour and increased signs of depression, suggesting that this humour style, which involves self-criticism and self-mockery, may exacerbate negative self-perceptions and contribute to depressive symptoms (Martin et al., 2003; Kazarian & Martin, 2004). In contrast, other humour styles such as affiliative and self-enhancing were not significantly correlated with depression, indicating their neutral or possibly beneficial roles in student well-being.

The absence of significant gender differences in the use and effects of humour styles on depressive symptoms challenges traditional gender stereotypes and suggests the influence of broader, more complex factors like personality traits, cultural influences, and socialization processes (Kuiper & McHale, 2009). This finding invites a re-evaluation of conventional beliefs about gender-specific emotional expression and underscores the importance of considering individual differences in psychological research.

Moreover, the significant interrelationships among different humour styles suggest that these are not isolated traits but are interconnected within a broader humour disposition spectrum. This interplay highlights the potential for adaptive and maladaptive outcomes, depending on the context in which humour is used.

In conclusion, this research contributes to the growing body of literature that seeks to understand the multifaceted nature of humour and its implications for mental health. By elucidating the complex relationships between various humour styles and depressive symptoms, this study provides valuable insights for developing targeted interventions that leverage humour to enhance psychological well-being. Future research should continue to explore these associations in diverse populations and contexts, enhancing our understanding of how humour can be effectively integrated into mental health strategies in academic and other high-stress environments.

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DECLARATION OF CONFLICTING INTERESTS

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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