

The Predictive Role of Emotional Intelligence and Loneliness in Depressive Symptoms Among Malaysian Adults

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Depression is a global health concern, which has been associated with significant functional impairments and increased deaths by suicide over the years. The impact of depressive symptoms has been rising in Malaysia, but past research on the protective and risk factors linked to depression has been focused on Western-dominated samples. Emotional intelligence (EI) has been linked with decreased psychological distress such as loneliness and depression, while loneliness has been established as a risk factor for depression. This study aims to investigate whether EI predicts loneliness and depressive symptoms, and whether loneliness predicts depressive symptoms among Malaysian adults. A cross-sectional correlational design has been utilised on a sample of 318 Malaysian adults. Results showed that EI negatively predicted loneliness and depressive symptoms, while loneliness significantly positively predicted depressive symptoms, both while sex was controlled. Thus, EI may be a protective factor for loneliness and depressive symptoms, while loneliness may be a risk factor for depression. Interventions and policies targeting EI and loneliness may effectively help reduce depressive symptoms in the Malaysian and even other collectivistic populations.

Keywords: depressive symptoms, emotional intelligence, loneliness, Malaysian adults

Introduction

Depression, or Major Depressive Disorder (MDD), is a global health concern, which affects 280 million people worldwide (World Health Organization, 2023). Depressive symptoms have contributed to approximately 31% of reported suicide attempts in recent years (Dong et al., 2018; Li et al., 2022). In Malaysia alone, about 1 in 50 adults were found to suffer from depression (Mental Illness Awareness & Support Association [MIASA], 2025; Ministry of Health Malaysia [MOH], 2020). Apart from contributing to suicidal ideation and attempts, depressive symptoms – like sadness, emptiness or hopelessness that is persistent, and a loss of enjoyment in once pleasurable activities – impair one's interpersonal relationships, occupational functioning and overall quality of life (American Psychiatric Association, 2022). Thus, understanding its psychological risks and protective factors is crucial.

Emotional intelligence (EI) – an individual's innate ability to perceive and process emotionally-charged information – has undoubtedly been a popular topic of discussion in the light of depression up until recent years (Grases et al., 2023; Walter et al., 2024). It has been strongly established that a higher EI is associated with lower severity of depressive symptoms (Grases et al., 2023; Pham et al., 2025; Walter et al., 2024). Factors such as emotional awareness, emotional regulation and social cognition were suggested to have aided individuals in navigating through psychological distress (Isa et al., 2024). That said, EI appears to be a key psychological resource linked to reduced depressive symptoms.

Loneliness, an increasingly prevalent phenomenon, refers to a negative feeling caused by a dissatisfaction towards the perceived quality and quantity of one's own

social relationships (Taylor et al., 2023). It is an important phenomenon to be considered when studying the underlying factors linking EI and depression, considering the highly reciprocal relationship that it has with depression (Chen et al., 2023).

According to extensions of the Stress-Buffering Model, personal resources like EI and coping skills, along with social resources like social support act as a buffer for stress (Cohen & Wills, 1985; Zeidner et al., 2011). Individuals with high EI are more capable of identifying a need to seek help, communicate their needs effectively, regulating their emotions, using more adaptive coping styles and seeking social support when encountering stressors (Isa et al., 2024; Zeidner et al., 2011). This facilitates stronger social connections and reduces negative emotions, including feelings of alienation (Zeidner et al., 2011). Consequently, they may experience lower levels of loneliness, which in turn may decrease their vulnerability to depression (Ghiggia et al., 2023). To support this, the Perseverative Cognition Hypothesis posits that when individuals are lonely, they tend to engage in rumination, which predicts and perpetuates depressive symptoms (Brosschot et al., 2006; Luo et al., 2024).

Unlike the Western population who are often studied in these areas, individuals from collectivist cultures, including Malaysia, have been found to regulate their emotions mainly through emotional suppression (Hadi et al., 2023; Ip et al., 2021). Not only is loneliness positively associated with emotional suppression, but it has been suggested to have a stronger psychological impact on the collectivist population who are understudied (Beller & Wagner, 2020; Tan et al., 2022). Moreover, gender differences have been shown to mediate the relationship between EI and depression; Yet gender was

not accounted for in the analyses of past research on the EI-depression link (Ghiggia et al., 2023; Grases et al., 2023; Zhao et al., 2024).

Thus, the proposed study aimed to test the predicting roles of emotional intelligence and loneliness on depressive symptoms while focusing exclusively on Malaysian participants. This is to capture the dynamics of these variables within the context of a collectivistic culture, and to inform the development of culturally relevant mental health interventions and policies.

The objectives of this study includes: (1) To evaluate whether EI predicts loneliness while controlling for sex; (2) To evaluate whether EI predicts depressive symptoms while controlling for sex; (3) To evaluate whether loneliness predicts depressive symptoms while controlling for sex.

Research Methods

Design

This study utilized a cross-sectional correlational design (Zhao et al., 2024) to determine whether emotional intelligence predicted loneliness and depressive symptoms, and whether loneliness predicted depressive symptoms.

Participants

According to G*Power calculation with a conventional medium effect size of 0.25, alpha level of .05 and power of .80, the suggested sample size is 128 participants. To account for attrition rates and the exclusion criteria, the sample size was increased by 10 to 20% as recommended by Sullivan (2012) to ensure that the final sample meets the required statistical power and significance. Thus, the minimum sample size to be recruited for the study is at least 141 participants.

To obtain this large sample, convenience and snowball sampling methods were used. A promotional post containing the link to the Google Form survey will be uploaded to the researcher's social media platforms and sent to individuals from different institutions, including universities, mental health centres and companies. Interested participants can click on the link to participate in the study. This approach allowed wide participation and gave everyone an equal chance to be included.

To participate in the study, participants needed to be aged between 18 to 50 years old. This age range was broad enough to capture a diverse adult population, while avoiding age-related differences in depressive symptoms, which would come from including adolescents and the elderly (Handing et al., 2022; Wagner et al., 2020). In addition, participants needed to be Malaysian to ensure generalisability to collectivistic cultures while informing nationwide mental health interventions and policies.

Participants were excluded from the data analyses if they had been diagnosed with a psychological disorder such as schizophrenia or related disorders that can impact judgement and decision-making while questionnaires are administered. Additionally, participants who had an active suicidal ideation and plan were to be excluded from the study for ethical reasons.

Materials

A demographic form was administered to the participants, where they were required to provide their unique participant code, age, sex, history of psychotic disorders, along with history of suicidal ideation and plan in the past 2 weeks. An informed consent form was also provided to ensure that the

participants consent to participating in the entirety of the study.

The Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002) was used to measure EI before classifying participants into low and high EI groups. This scale consists of 16 items, with each item to be rated from 1 to 7 on a seven-point Likert scale. A rating of 1 indicates “Strongly disagree” while a rating of 7 indicates “Strongly agree”. Not only does this scale provide insight to four subdomains of EI (i.e. self-emotions appraisal, regulation of emotions, use of emotions, others-emotion appraisal), but it has good internal consistency ($\alpha = .82$ to $.86$), acceptable to good construct validity (chi-square/df = 4.83, RMSEA = 0.10, GFI = 0.94, and CFI = 0.90), and acceptable convergent validity (AVE < 0.5) in collectivist cultures (Rathore & Chadha, 2021; Traymbak et al., 2022).

The UCLA Loneliness Scale (Version 3; Russell, 1996) was used to measure loneliness. This 20-item scale was to be rated from 1 to 4 on a four-point Likert scale, with 1 indicating “Never” and 4 indicating “Always”. Items 1, 5, 6, 9, 10, 15, 16, 19 and 20 were to be reverse scored before calculating the total score of loneliness for each participant. This scale is still widely used in recent studies, with its high reliability ($\alpha = .89$ - $.94$) and acceptable construct validity (CFI = 0.98; TLI = 0.97; RMSEA = 0.060; and SRMR = 0.075; Lin et al., 2022; Russell, 1996; Zeas-Sigüenza et al., 2022).

The Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) was used to measure depressive symptoms. This questionnaire contains 9 items, each to be rated from 0 to 3 on a four-point Likert scale. The ratings show different statements, and participants are to select the option that best represents them in the past 2 weeks. For instance, 0 indicates

“Not at all” while 3 indicates “Nearly every day”. The PHQ-9 is a highly reliable ($\alpha = .84$) scale with acceptable criterion validity in a collectivist culture ($r = 0.61$, ICC = 0.59, $p < .001$), and commonly used in clinical practice (Sun et al., 2020; Sun et al., 2022). It has universally established categories which could prove handy in discussing the study’s results later on. For instance, a score ranging from 0 to 4 would be categorized as “Normal”, while a score ranging from 20 to 27 would be categorized as “Severe depression”.

Procedures

The study has obtained ethics approval from the Taylor’s University Human Ethics Committee (TUHEC), HEC 2025/384. The promotional materials including the poster, brief information and link were shared on the researcher’s social media platforms and sent to individuals from different institutions, including universities, mental health centres and companies. Interested potential participants were able to click onto the link on a promotional post and be redirected to complete a Google Form survey containing the informed consent form, demographic form, WLEIS, UCLA Loneliness Scale (Version 3) and PHQ-9. The study took no longer than 20 minutes to complete. Participants who fit the exclusion criteria or decided not to give their informed consent were redirected to the “thank you” page of the survey form instead of the rest of the questionnaires. Participants who were identified to have active suicidal ideation and plan were also prompted to voluntarily provide their email addresses, which allowed the sole purpose of the researcher to email them with personalized mental health resources and support immediately based on the state that they were currently residing in. Participants’ emails were kept safely in a locked sheet, which were only accessible to the researcher, and were completely deleted

one month after data collection was complete. The page prompting for actively suicidal participants' emails also consisted of general mental health resources that these participants could refer to if they decided to not proceed with providing their emails and submitting the form.

Data Analysis

Inferential Analysis

Multiple linear regression analyses were conducted to examine the relationships between EI, loneliness and depressive symptoms while controlling for sex.

Ethical Considerations

To ensure this study was fully ethical, ethical approval was obtained from the organization's ethics review board. Participants were informed about the study's purposes and procedures before participating and may withdraw from the study at any time without penalty. In case of any distress from this study, resources to mental health help – such as contact details of suicide helpline, mental health clinics and hospitals – were provided at the start and end of the survey form. Actively suicidal participants were immediately provided with personalized mental health resources via email. Confidentiality was maintained by using unique participant codes instead of identifiable information. Actively suicidal participants whose emails were collected remained confidential to anyone other than the researcher, as their emails were kept safely in a locked sheet and deleted one month after data collection has been completed. The participants' data was only accessible by the research team.

Results

Descriptive Analysis

As illustrated in Table 1 below, each participant's score on the Wong and Law Emotional Intelligence Scale (WLEIS) was calculated by averaging their Likert-point ratings across all items. The scores found on the WLEIS ranged from 2.31 to 7.00. Participants' scores on the UCLA Loneliness Scale (Version 3) and Patient Health Questionnaire (PHQ-9) were calculated by summing their Likert-point ratings across all items. Scores found on the UCLA Loneliness Scale (Version 3) ranged from 21.00 to 74.00, while that of the PHQ-9 ranged from 0 to 27.00.

Inferential Analysis

As shown in Table 2, a multiple regression analysis was conducted to assess whether EI predicted loneliness while sex was being controlled. This model explained 14.6% of the variance in loneliness, $F(2, 313) = 26.70$, $p < .001$. EI significantly negatively predicted loneliness ($\beta = -.38$, $p < .001$), whereas sex did not significantly predict loneliness ($\beta = -.01$, $p = .795$). A one-unit increase in EI was associated with a 5.57-unit decrease in loneliness, when sex is controlled.

The same analyses were conducted to assess whether EI and loneliness predicted depressive symptoms – all while sex was being controlled. The EI-depressive symptoms model was statistically significant [$F(2, 313) = 25.97$, $p < .001$], explaining 14.2% of the variance in depressive symptoms. Depressive symptoms were significantly negatively predicted by emotional intelligence ($\beta = -.37$, $p < .001$), but not significantly predicted by sex ($\beta = .06$, $p = .294$). When emotional intelligence increases by one unit, depressive symptoms are likely to decrease by 0.85 units while sex is controlled.

The loneliness-depressive symptoms model was also statistically significant [$F(2, 313) = 78.38, p < .001$], and explained 33.4% of the variance in depressive symptoms. Loneliness significantly positively predicted depressive symptoms ($\beta = .03, p < .001$), while sex was not a significant predictor ($\beta = .07, p = .124$). A one-unit increase in loneliness was associated with a 0.32-unit increase in depressive symptoms, when sex is controlled.

Taken together, the results indicated that when sex is controlled, higher EI levels significantly predict lower loneliness levels and lower depressive symptoms severity, while higher loneliness levels significantly predict greater depressive symptoms severity.

Table 1
Mean Scores

	<i>M</i>	<i>SD</i>
Wong and Law Emotional Intelligence Scale	5.19	0.78
UCLA Loneliness Scale (Version 3)	48.01	11.25
Patient Health Questionnaire	9.81	6.34

Discussion

The aim of this study was to examine whether higher EI levels will predict lower loneliness levels and lower severity of depressive symptoms, and whether higher loneliness levels will predict higher severity of depressive symptoms all while sex is controlled. All three hypotheses were supported by this study's findings.

The results of this Malaysian-based study demonstrated consistency with past research

with Western-dominated samples, which stated that individuals with higher EI experience lower levels of loneliness and depressive symptoms compared to individuals with lower EI (Ghiggia et al., 2023; Grases et al., 2023; Kim & Sutharson, 2023; Pham et al., 2025; Walter et al., 2024). Previous findings from Deak et al. (2022) suggested that individuals with higher EI tend to be able to pay attention to and perceive more emotional information compared to lower EI counterparts. For instance, higher EI individuals tend to feel an amplified intensity of positive facial expressions from others, improving their social connections and emotional well-being (Fiori et al., 2024). Not only that, but higher EI individuals also are equipped with greater abilities – via visual affective cues and imagination – to effectively regulate their negative emotions (Deak et al., 2022).

Moreover, individuals with higher EI have improved ability in being empathetic, communicating effectively, and developing strong relationships with others (Antonopoulou, 2024). As a result, they may have more healthy interpersonal relationships and find social connections to feel more gratifying (Antonopoulou, 2024). Additionally, higher EI levels have been suggested to be beneficial for improving job performance, increasing achievements at work, and developing a positive work environment, which are usually associated with stress (Antonopoulou, 2024). Taken together, it is no surprise that individuals with higher EI will have lower loneliness levels and depressive symptoms.

Besides, the positive link found between loneliness and depressive symptoms is supported by past research suggesting a reciprocal relationship between the two variables (Chen et al., 2023; Luo, 2023). In collectivistic cultures, individuals are more

Table 2
*Multiple Linear Regression Analyses Predicting Loneliness
 and Depressive Symptoms*

Variable	Predictor	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Loneliness	EI	-5.57	0.76	-0.38	-7.31	.000
	Sex	-0.38	1.44	-0.01	-0.26	.795
Depressive symptoms	EI	-3.02	0.43	-0.37	-7.06	.000
	Sex	0.85	0.81	0.06	1.05	.294
Depressive symptoms	Loneliness	0.32	0.03	0.57	12.41	.000
	Sex	1.10	0.72	0.07	1.54	.124

Note. EI = Emotional Intelligence; B = Unstandardized Beta Coefficient; SE B = Standard Error Coefficient; β = Standardized Beta Coefficient.

interdependently self-construal, and social connections are more highly valued (Schermer et al., 2023). If these individuals perceive a flaw in their ability to connect with the rest of their societal group or a sense of isolation, their mental health may be hugely impacted (Schermer et al., 2023).

This study's findings show that EI could serve as a protective factor against psychological distress, such as loneliness and depressive symptoms. Additionally, it can prove beneficial in future mental health interventions and policies related to improving depressive symptoms if EI and loneliness start being targeted.

Conclusion

Overall, these findings highlight the importance of fostering emotional intelligence and addressing loneliness as potential avenues for promoting psychological well-being and reducing depressive symptoms among Malaysian adults. Future interventions and mental health initiatives may benefit from incorporating strategies that enhance emotional competencies and strengthen social connectedness.

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