

# **The Influence of Loneliness towards Life Satisfaction among Early Adulthood Industry Workers in Johor During the Post-Pandemic of COVID-19**

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## **Abstract**

Globally, the Covid-19 pandemic has had a significant effect on people's mental health, especially the increasingly prevalent feelings of loneliness. Early adulthood industrial workers have been disproportionately affected by the outbreak, with the enactment of the Movement Control Order (MCO) and Work from Home (WFH) policies causing individual social activities to be limited and affected. When social interaction is restricted, the natural desire to fulfill attachment relationships diminishes which in turn leads to life dissatisfaction. This has led to an increased focus on understanding the relationship and influence between loneliness and life satisfaction among early adulthood industrial workers. A total of 156 early adulthood industrial workers in Johor were involved in this study. This study was used a quantitative research design which is a correlation and regression analysis. UCLA Loneliness Scale (version 3) containing 20-items and Satisfaction with Life Scale containing 5-items were used to measure loneliness as an independent variable and life satisfaction as a dependent variable. Findings from this study reveal that there is a moderate level of loneliness and a high level of life satisfaction among early adulthood industrial workers in Johor. Moreover, a significant negative relationship was found between loneliness and life satisfaction and the findings of the study also showed that there was a significant negative impact of loneliness towards life satisfaction among early adulthood industrial workers in Johor. Hence, this research can assist organizations in dealing with future challenges such as how to plan effective initiatives in decreasing loneliness factors that indirectly impact employee life satisfaction during this post-pandemic Covid 19. However, further discussion and investigation is encouraged.

**Keywords:** Covid-19 Pandemic, Loneliness, Movement Control Order (Mco), Work From Home (Wfh), Life Satisfaction, Early Adulthood Industrial Workers

**Research Background**

The global spread of the Covid-19 pandemic in 2019 stunned the globe, leading to calamity on public health and the global economy (Naseer et al., 2023). Malaysia was also one of the countries that felt the repercussions, resulting in a remarkable history of mortality. As the Covid-19 pandemic intensifies and a public health emergency is proclaimed, Malaysia has enacted the Movement Control Order (MCO) and Work from Home (WFH) measures to avoid the disease from spreading throughout communities (Aziz et al., 2020; Chan, 2021). This implementation has separated many individuals from the outside world and has indirectly exacerbated loneliness in the society, particularly among employees (Tavares, 2017). Following the Covid-19 pandemic, several companies in a variety of industries have introduced remote work and work from home policies (Miyake et al., 2022). Previous research on remote work in other countries has found that distant workers struggle to form social interactions with coworkers, which can lead to feelings of loneliness (Tavares, 2017). Employees become socially isolated when remote work and WFH regulations are enforced and leads to loneliness and dissatisfaction with one's life (Gabrovec et al., 2020).

Loneliness may be impacted by the long-term effects of the Covid-19 pandemic on mental health (Smith, 2020). There are several risk factors and possible triggers for the complex emotional conditions of social isolation and loneliness, which existed before the pandemic and are likely to persist. (Malcom, 2020). In comparison to other demographic groups, students and young adults are more likely to experience loneliness, which is a problem made worse by the epidemic (Bu, 2020). The effects of loneliness may persist after the initial crisis of the epidemic has entirely passed (Delaney, 2021). Although the world is attempting to return to a "new normal," with significant modifications to our autonomy and locus of control occurring throughout the pandemic, the emotions we experience are frequently the only ones that will always persist (Malcom, 2020). The modifications to the workstyle brought on by the Covid-19 pandemic, such remote work, have limited possibilities for social interaction (Fujii et al., 2021). When social interaction is restricted, the natural desire to fulfil attachment relationships diminishes which in turn leads to life dissatisfaction. A considerable decrease in social interaction caused by Covid-19 was associated with poorer levels of life satisfaction (Ammar et al., 2020). This condition may be attributed to the fact that being socially distant from someone who is emotionally attached creates psychological stress and can lead to life dissatisfaction (Ammar et al., 2020).

Loneliness and life dissatisfaction are caused by social isolation (Gabrovec et al., 2020). Due to the adoption of MCO and WFH, all community movements, particularly those of early adulthood industrial workers, are limited, which makes it challenging to engage in normal social activities. In consequence of this, a lot of early adulthood industrial workers experience loneliness and low levels of life satisfaction. This is because limiting social contact and being more socially isolated serve as mediators that produce an increase in negative emotions and a decrease in life satisfaction (Zheng et al., 2020). Social imprisonment is a major risk to people's mental well-being (Rohr et al., 2020). Loneliness at work is also associated with worse performance evaluations, lack of commitment and lack of approachability (Ozcelik & Barsade, 2018). The loneliness faced by the early adulthood industrial workers makes them feel not enjoying their daily work.

During the pandemic of Covid-19, many industrial were affected. Some industries had to reduce expenses by suspending output, laying off workers, and adopting work-from-home options for some employees (Bartik et al., 2020). During the MCO that was first enacted, many industries were compelled to cease operations due to orders from the government (Nabil et al., 2021). Many early adulthood industrial workers wait and remain at home during that time before returning to work after getting orders. Due to having to discontinue their social activities, many workers suffer from loneliness, which in turn lowers their level of satisfaction in life (Song & Gao, 2020). The long-term consequences of these modifications will affect not only the future of remote work and hiring practices, but also how social infrastructure will adapt to shifting priorities regarding moving routines and urban resilience (Kong et al., 2022).

In Malaysia, Johor is well-known for its numerous industries (Hutchinson, 2020). Because of this, this study was conducted to examine workers in the industry who are between the ages of 18 and 40, which is known as early adulthood in Johor. This study was carried out to measure the level of loneliness of the workers. This study was also conducted to see if the level of loneliness of an employee will influence the level of satisfaction in life.

### *Loneliness*

Loneliness is referred as a sad feeling accompanied by the perception that one's social requirements are not fulfilled by the quantity or, more importantly, the quality of one's interactions with others (Pinquart et al., 2001). When the quantity and quality of perceived social relationships are reduced or unfulfilled, an individual will experience loneliness. Loneliness is highly associated with social isolation. (Cheng et al., 2020). As social isolation increases, this situation will contribute to increased loneliness and dissatisfaction with life, resulting in poor well-being and vulnerability (Gabrovec et al., 2020). Workplace modifications caused by the Covid-19 pandemic, such as remote work and WFH policies, increase social isolation among workers and exacerbate loneliness (Wang et al., 2020). Nearly 32% of respondents to the Deloitte Virtual Office Survey 2020 reported that they frequently experienced loneliness while working remotely or at a distance (Bartholomeusz et al., 2021). This exemplifies how remote workers are more likely to feel lonely.

Loneliness is an unavoidable phenomenon that is a personal experience that can occur at any time in life and affects anyone regardless of gender, age, or other socio-demographic criteria (Weiss, 1973). Some experience loneliness because of loss, lack of social contact, not having friends, partner or so on (Yanguas et al., 2018). Scientifically, loneliness is a state of being alone in which negative thoughts and sensations occur that are unpleasant (Yanguas et al., 2018). This condition results in a person's inability to find meaning in their life. Feelings become negative when a person feels isolated and alone, because of the reduction from social contact (Tiwari, 2013). Individuals who lack a social network will feel lonely because they will interact and communicate less with those around them (Charikleia Lampraki et al., 2022). This is because loneliness is essentially a sense of being isolated from others because of one's social requirements for interactions not being effectively addressed (Cacioppo et al., 2010). This is the seeming clash between a person's availability in his surroundings and social demands (Hawkey & Capitano, 2015).

### *Life Satisfaction*

Life satisfaction is defined as an individual's cognitive and emotional judgements of their everyday life (Diener et al., 2002). A person's life satisfaction is measured by how they feel and experience things in their life. Life satisfaction is intrinsically connected to the urge for connection, which entails having deep and meaningful interactions with people. If this connection requirement is not met effectively, it has a negative impact on the evaluation of life satisfaction (Bucher et al., 2018). Remote work, because of the Covid-19 pandemic, has decreased opportunities for social engagement (Fujii et al., 2021). When social engagement is constrained, the natural desire to fill attachment ties weakens, leading to life unhappiness. A significant reduction in social engagement caused by Covid-19 was linked to worse measures of life satisfaction (Ammar et al., 2020). Being socially distant from someone who is emotionally connected causes psychological stress and can lead to life unhappiness (Ammar et al., 2020).

Furthermore, life satisfaction is described as accepting one's living surroundings or meeting one's desires and requirements throughout one's life (Sousa & Lyubomirsky, 2001). Life satisfaction is essentially a subjective assessment of a person's quality of life (Sousa & Lyubomirsky, 2001). Sosa and Lyubomirsky (2001) define quality of life as a measure of life satisfaction with a high cognitive component. When a person's quality of life is good, they will be happy and satisfied with their lives. Life satisfaction is primarily defined as a logical comparison of what persons must feel they should have, desire for, or dream about (Campbell et al. 1976). Life satisfaction is a means of evaluating how one's life is progressing. Therefore, a person who has great life satisfaction would consider his life to be overall of good quality (Diener, 1984).

### **Purpose of the Study**

The purpose of this study is to investigate and assess how loneliness affects life happiness among early adulthood often known as workers, particularly in the industrial sector in the aftermath of the Covid-19 pandemic. This is because early adulthood dominates the working sector and that organizations can utilize this study as a springboard for future research on how to address the loneliness and dissatisfaction of workers' lives in the aftermath of the pandemic. This study is important because the relationship between the two variables in this study affects employee motivation and productivity. Therefore, this study was conducted to examine the relationship and influence between loneliness and life satisfaction due to inconsistent results based on past research.

### **Literature Review**

Several studies have found significant levels of loneliness and an increase in loneliness since the Covid-19 outbreak began (Van et al., 2020). During the Covid-19 pandemic, early adulthood industrial workers are more lonely at work than in the past (Kniffin et al., 2020). Isolating oneself at home interrupts the routine of face-to-face connection, leading in a loss of face-to-face engagement with others (Elmer et al., 2020). Furthermore, during the Covid-19 epidemic, work arrangements such as remote work, flexible work, and telecommuting had negative consequences on the emotional and psychological well-being of early adulthood industrial workers (Wang et al., 2020). Furthermore, during the Covid-19 outbreak in the United Kingdom, the age range of 18 to 30 years, male gender, and living with a spouse indicated increased loneliness (Li & Wang, 2020). During the Covid-19 pandemic, young

persons in their twenties reported more social isolation than those aged 50 and older (Clair et al., 2021). This supports findings demonstrating adolescents and young adults in Finland reported higher levels of loneliness than other adults (Nyqvist et al., 2016).

Different frameworks have been developed in the past to describe the concept of loneliness. Attachment theory and self-discrepancy theory are two well-established theoretical approaches on the idea of loneliness. Attachment theory is a long-term emotional link between two individuals in which one side seeks to maintain closeness through attachment thoughts and takes effort to ensure that the relationship persists. (Pakdaman et al., 2016). Research on the association between attachment style and loneliness indicated that individuals with a secure attachment style felt less lonely than those with an insecure attachment style (Erozkan, 2011). People with a secure attachment style are at ease in personal relationships, rely on others for support, have a good self-image, and have positive expectations from others (Pakdaman et al., 2016). While, self-discrepancy theory is associated with disparities or conflicts between distinct aspects of the self (Kupersmidt et al., 1999). According to this view, disparities across different domains of the self are associated to adaptation (Kupersmidt et al., 1999). In addition, this theory also suggests that loneliness is a subjective, unpleasant, and troublesome phenomenon that results from the discrepancy between the level of social contact desired and achieved by individuals (Perlman & Peplau, 1981). Individuals feel lonely when there is a gap between their actual and desired amounts of social contact (Perlman & Peplau, 1998).

In addition, Covid-19 has disrupted everyone's daily routine, including businesses, schools, and the economy (Gautam and Sharma 2020). As a result of the global Covid-19 pandemic, there is a shift in employment form to WFH. Most early adulthood industrial workers are not used to this kind of situation. As a result, many stresses exist that affect their work performance, cause anxiety, and reduce life happiness. The Covid-19 pandemic has had an impact on people not only physically, but also financially and mentally (McKibbin & Fernando 2020). Individuals with higher levels of social isolation are less satisfied with their lives (Clair et al., 2021). Recent research shows that, because of the pandemic situation, general vulnerability in children and young adults increases, as well as stress in parents and caregivers who work while regular protective services are reduced (Fosco et al., 2021; Ravens et al., 2021; Tso et al., 2020). The coronavirus pandemic may have affected young people's social, emotional, and mental well-being in numerous ways, and as a result, implementation in everyday life may have altered the overall life satisfaction felt by young adults (de et al., 2022).

In the past, a variety of models have been devised to describe the idea of life satisfaction. Two established theoretical perspectives on the concept of life satisfaction, known as the "bottom-up" and "top-down" views, have different causal presuppositions (Diener 1984; Headey et al. 1991; Lance et al. 1989). Based on "bottom-up" perspective, the satisfaction domain controls how situational factors affect overall life satisfaction (Loewe et al., 2014). Bottom-up processes are usually evaluated by the extent to which stimuli impair (Theeuwes, 1991; Folk et al., 1992) or facilitate (Treisman and Gelade, 1980; Yeshurun et al., 2009) performance on cognitive and significant tasks. The bottom-up theory is the total of the aspects of life satisfaction such as marriage, work, material standard of living, leisure, friendship, and health that comprise an individual's daily demands (Headey et al., 1991). While, top-down theory highlights that an individual's happiness is determined by how he or she enjoys the reaction



of enjoyment in his or her everyday activities and experiences (Mutaqin et al., 2020). Anything observed might have multiple interpretations and perceptions that impact the interpretation of happiness (Gregory, 2015). Based on top-down approach, the perception that arises is from a complex cognitive process based on experience and knowledge (King, 2010). Knowledge plays an important role in building perceptions from what is felt based on objective factors (Andrews, 1974). Top-down approach is a dispositional theory that says that variances in a person's personality and other stable qualities lead to diverse perceptions, causing people to be differentially happy with their life (Diener et al. 2003; Steel et al. 2008; DeNeve and Cooper 1998).

According to research, loneliness is inversely connected with life satisfaction (Salimi, 2011). Loneliness and life satisfaction were found to have a significant and relatively strong negative correlation (Unni Karin Moksnes et al., 2022). A direct relationship exists between life satisfaction and loneliness (Małgorzata Szczeńniak et al., 2020), and a negative correlation has been shown between life satisfaction and loneliness (Tümkiye et al., 2008). The Covid-19 epidemic has had an influence on people's feelings of loneliness. A recent study found that the pandemic has significantly increased self-reported loneliness, particularly among people who have been compelled to stay at home (Killgore et al., 2020). Working from home has long been associated with feelings of isolation (Mann & Holdsworth, 2003). According to research conducted on prison personnel in Turkey, job satisfaction predicts loneliness at work adversely (Kaymaz & Eroglu, 2014).

During the epidemic, loneliness plays an important role in life satisfaction (Foa et al., 2020). A person's mental health and level of satisfaction with life may suffer when they encounter loneliness on a long-term basis (Loades et al., 2020). Smith et al., (2004) have reported that feelings of loneliness are the strongest predictor ( $\beta = -0.29$ ) of life satisfaction. Furthermore, according to Gow et al (2007), the largest risk factor for life unhappiness appears to be an individual's level of loneliness, which explains 12% of the variance in life satisfaction.

Therefore, this study was conducted to examine the influence of loneliness towards life satisfaction among industrial workers in Johor during this post pandemic of Covid-19. In this study, loneliness represents as independent variable meanwhile life satisfactions serve as dependent variable. Figure 1 below illustrates the conceptual framework of loneliness and life satisfaction among early adulthood industrial workers in Johor during this post pandemic of Covid-19.

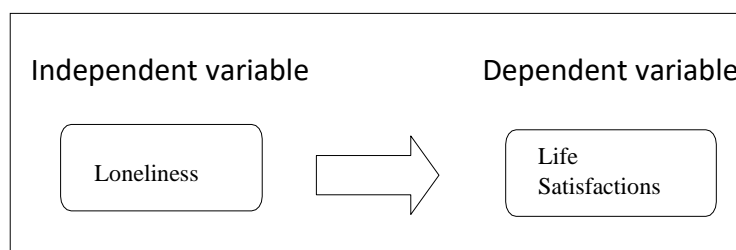


Figure 1: Conceptual framework

### Methodology

In this study, a quantitative approach which are a descriptive and correlational study was used to identify the relationship of loneliness and life satisfactions. In addition, regression analysis

was also used to identify the influence of loneliness towards the life satisfactions. In this research, researcher used simple linear regression to determine the influence of loneliness towards life satisfactions among early adulthood industry workers.

The population data is from workers who work in the manufacturing industry in Kulai Industrial Park, Johor. According to G-Power, the researcher should have a sample size around 138 respondents. In this study, sampling method that was used is non-probability sampling method which is a convenience sampling method. According to Dornyei (2007), convenience sampling is a sampling technique where participants from the target population are only included if they satisfy certain practical criteria, such as being readily available, near by geographically, available at specific times, or willing to participate. A total of 156 respondents are voluntarily participated in this study. The link has been forwarded to all randomly selected respondents who are among Manufacturing Industry workers in Industrial Park, Kulai, Johor. The google form link have been forwarded using social media such as Whatsapp, Telegram, Instagram and via email.

The UCLA Loneliness Scale (Version 3), developed by Russell (1996), was used to assesses the level of loneliness among early adulthood industrial workers in Johor during this post pandemic of Covid-19. It consists of a 20-item scale and 9 of the items are revised items. The total score for each respondent is determined by adding all responses for a score ranging from 20 to 80. The four-point Likert scale, from never to often that was used to measure the level of loneliness among early adulthood industrial workers. According to Russell (1996), this inventory had a high degree of reliability because its Cronbach's alpha value ranged from 0.89 to 0.94.

The Satisfaction with Life Scale, developed by Diener et al.,1985, was used to evaluate the respondents' level of life satisfaction. It is a 5-item scale that evaluates overall cognitive assessments of life enjoyment. According to Magyar-Moe (2009), Satisfaction with Life Scale has a very good test-retest reliability with a correlation of 0.82 and a very strong internal consistency with an alpha of 0.87. Each item is rated on a seven-point Likert scale, from strongly disagree to strongly agree. The seven- point Likert scale that was employed to assess the degree of life satisfaction among early adulthood industrial workers in Johor during this post pandemic of Covid-19.

The demographic data obtained from section A, that consists of six items related to personal information of respondents including gender, age, nationality, ethnicity, marital status, and duration of working experience in the current company were analyzed using frequency and percentage. Moreover, descriptive statistic such as frequency, percentage, mean, and standard deviation are involved to measure the levels of loneliness and life satisfactions of the respondents in section B and section C. Furthermore, the mean score will be employed to determine level of loneliness and life satisfactions among early adulthood industrial workers during this post-pandemic of Covid-19.

Inferential analysis in this study such as Person Correlation Coefficient is use to examine the relationship between loneliness and life satisfaction among early adulthood industry workers. For regression analysis the method of linear regression and Analysis of Variance (ANOVA) is utilized for the purpose to study the influence of loneliness on life satisfaction among early

adulthood industrial workers. Statistical Package for Social Science (SPSS) version 26 was used in this study to analyse the results in this study.

To confirm the reliability of the research instrument, a pilot test was done among manufacturing sectors workers in Industrial Park, Kulai, Johor for this study. A pilot study was done on respondents in this study to improve the research questions and test the population sample. A total of 25 respondents from manufacturing sector workers in Industrial Park, Kulai, Johor were randomly selected to participate in the survey for this pilot study. The reliability of UCLA Loneliness Scale (version 3) items has good internal consistency with Cronbach's alpha of 0.822, while Satisfaction with Life Scale items have poor internal consistency with Cronbach's alpha of 0.567.

## **Research Findings**

### *Demographic Analysis*

A total of 156 early adulthood industrial worker in Johor participated in this study by filling out the online Google Form questionnaire. The demographic information indicates that 91 (58.3%) of the study's respondents are female industrial workers, while 65 (41.7%) are male. Regarding age, 89 respondents who were 30 years of age or older had the largest percentage (57.1%), followed by 37 respondents who were 22–25 years old (23.7%), 22 respondents who were 26–29 years old (14.1%), and the lowest with only 8 respondents (5.1%) in the age range of 18-21 years. In addition, in this study Malaysian citizens have dominated as much as 98.7 percent compared to only 2 Indonesian citizens working in Malaysia. Numerous ethnic groups also took part in this study, with most respondents of Malays which are 135 people (86.5%), followed by Indians which are 12 people (7.7%) followed by Chinese who are 7 people (4.5%) and the least recorded is among the Iban ethnic group which is only 2 people (1.3%).

Furthermore, in terms of marital status, married workers dominate and record the highest number with a rate of 56.4%, which is a total of 88 people, followed by unmarried workers, who are single, 63 people (40.4%), while workers who are divorced and in a long-distance relationship recorded the lowest number of only 1.9% and 1.3%. The last item in the demographic section is about the duration of working experience in current company. Most employees who are respondents in this study are among employees who have worked for 1 to 5 years, which is a total of 69 people (44.2%) followed by employees who have worked for 15 years or more in the current company, which is a total of 49 people (31.4%). Next, employees who have worked for 6 to 10 years recorded a total of 21 people (13.5%) and the lowest was recorded by employees who worked for 10 to 15 years in the current company, which is a total of 17 people (10.9%).



Table 1

*Demographic Information*

Demographic Information (n=156)		Frequency (f)	Percentage (%)
Gender	Male	65	41.7
	Female	91	58.3
Age	18-21 years old	8	5.1
	22-25 years old	37	23.7
	26-29 years old	22	14.1
	30 years old and above	89	57.1
Nationality	Malaysia	154	98.7
	Indonesia	2	1.3
Ethnicity	Malay	135	86.5
	Chinese	7	4.5
	Indian	12	7.7
	Iban	2	1.3
Marital Status	Single	63	40.4
	Married	88	56.4
	Divorce	3	1.9
	Long-distance relationship	2	1.3
Working experience in current company	1-5 years	69	44.2
	6-10 years	21	13.5
	10-15 years	17	10.9
	15 years above	49	31.4
<b>Total</b>		<b>156</b>	<b>100.0</b>

*Level of Loneliness*

The overall mean of loneliness among early adulthood industry workers is moderate with a mean score of 2.07 and a standard deviation of 0.48. Most of the items show moderate and low levels of loneliness, while no item exhibited a high level, and the mean score for each item ranged between 1.74 and 2.64.

Table 2

*Level of Loneliness*

Level	Frequency (f)	Percentage (%)
Low degree	38	24.4
Moderate degree	85	54.5
Moderately high degree	32	20.5
High degree	1	0.6
<b>Total = 156</b>		

Based on the table, most respondents have a high value of moderate degree of loneliness with a total of 85 respondents (54.5%). Followed, 38 (24.4%) of the respondents showed a low degree of loneliness. Next, the third highest is moderately high degree with a total of 32 respondents (20.5%) while only 1(0.6%) of the respondents showed a high degree of loneliness. Based on the data in the table above, we can conclude that the level of loneliness among industrial workers in Johor during the post-pandemic of Covid-19 was moderate and not too high.

*Level of Life Satisfaction*

The overall mean of life satisfaction among early adulthood industry workers is high with a mean score of 5.32 and a standard deviation of 0.97. Most of the items show high levels of loneliness and only one item recorded moderate level of mean score, while no item exhibited a low level, and the mean score for each item ranged between 5.56 and 4.78.

Table 3

*Level of Life Satisfaction*

Level	Frequency (f)	Percentage (%)
Extremely dissatisfied	0	0
Dissatisfied	2	1.3
Slightly dissatisfied	11	7.1
Neutral	13	8.3
Slightly satisfied	33	21.2
Satisfied	66	42.3
Extremely satisfied	31	19.9
<b>Total = 156</b>		

Most respondents have a high value of satisfied level of life satisfaction with a total of 66 respondents (42.3%). Followed, the second highest value is 33 (21.2%) of the respondents showed a slightly satisfied level of life satisfaction. Next, the third highest is extremely satisfied with a total of 31 respondents (19.9%). Furthermore, as many as 13 respondents are at the neutral level which is 8.3%. For the level of slightly dissatisfied, there are 11 respondents equal to 7.1%. While for the lowest level of life satisfaction is for dissatisfied and extremely dissatisfied with each of them recorded 2 respondents (1.3%) and no respondents (0.0%). Based on the data in the table above, we can conclude that the level of life satisfactions among industrial workers in Johor during the post-pandemic of Covid-19 was high.

*Relationship between Loneliness and Life Satisfaction*

The third objective of this study is to investigate the relationship between loneliness and life satisfaction among early adulthood industry workers in Johor during the post-pandemic of Covid-19. Hypotheses were constructed to investigate this potential relationship. Table 4.6 shows the correlation analysis between loneliness and life satisfaction among early adulthood industry workers in Johor.

Hypothesis 1: There is a significant negative relationship between loneliness and life satisfaction among early adulthood industry workers during this post-pandemic of Covid-19.

Table 4

*Correlation Analysis between Loneliness and Life Satisfaction*

Variable	Life Satisfaction	
	Pearson Correlation ( <i>r</i> )	Sig. 2-tailed ( <i>p</i> )
Loneliness	-0.535	0.000

\*Note:  $p < 0.05$ ;  $n = 156$

The result shows that there is a significant relationship when the two-tailed significance value is at 0.000 and where  $p < 0.05$ . In addition, the results show that the correlation coefficient is -0.535, which indicates that there is a negative moderate correlation between the variables. This negative relationship between the variables shows that the lower the level of loneliness, the higher the level of life satisfaction. Therefore, this finding reveals that there is a significant relationship and a negative moderate correlation between loneliness and life satisfaction among early adulthood industry workers in Johor ( $r = -0.535$ ,  $p = 0.000$ ). Hence, the hypothesis for this objective is accepted.

*Influence of Loneliness towards Life Satisfaction*

The fourth objective of this study is to analyse the influence of loneliness towards life satisfactions among early adulthood industry workers in Johor during the post-pandemic of Covid-19 by utilizing a simple linear regression. In this inferential analysis, loneliness and life satisfactions should have a linear and additive relationship, where a change in one unit of loneliness in the data leads to a change in value and level of life satisfactions. Therefore, a hypothesis is developed to address this objective. Table 4.7 illustrated the regression analysis of the influence of loneliness towards life satisfactions among early adulthood industry workers in Johor during the post-pandemic of Covid-19.

Hypothesis 2: There is a significant negative influence of loneliness towards life satisfaction among early adulthood industry workers during this post-pandemic of Covid-19.

Table 5

*Regression Analysis of Loneliness on Life Satisfaction*

Variable	Life Satisfaction					
	$R^2$	F	$\beta$	t	$p$ (Anova)	$p$ (Beta)
Loneliness	0.286	61.740	-0.535	-7.857	0.000	0.000

\*Note:  $p < 0.05$ ;  $n = 156$

The result indicates that there is a significant impact of loneliness towards life satisfactions among respondents, as stated by a significant value of  $p < 0.000$  and a R square value of 0.286. This suggests that loneliness will 28.6% predict the variance of life satisfactions. Furthermore, the significance value for loneliness's beta value of 0.000 is below 0.05, indicating it has a significant impact on life satisfactions with a beta value of  $\beta = -0.535$ . For instance, this Beta value indicates that the impact is negative and that a one-unit drop in loneliness will result in a 0.535-unit gain in life satisfactions. Therefore, loneliness is a significant negative predictor for life satisfactions. Hence, the hypothesis for this objective is accepted.

**Discussions**

The first objective of this study is to examine the level of loneliness among early adulthood industry workers in Johor. Based on the findings of the descriptive analysis, the results found that the number of industrial workers among early adulthood has a low and moderate value for the level of loneliness during this post pandemic era. This shows that most early adulthood industry workers have a low level of loneliness during this post pandemic. Nonetheless, most studies contradict and differ from the results of this study's findings. The Covid-19 Psychological Well-being research found that early adulthood were four to five times more likely than older adults to report loneliness, and their degrees of loneliness were more severe (Groarke et al., 2021). One of the reasons that can influence the low level of loneliness in this study is because of the return of social activities and participation. Social participation just not only contribute to individuals' social connections (Thomas, 2011), but also establish new social networks to extend their existing social networks, which serves as prerequisite for lower degrees of loneliness (Niedzwiedz et al., 2016). The Malaysian government has announced the National Recovery Plan on 15 June 2021 with activities such as cross-state travel and social activities allowed to resume in November 2021 (Janet, 2021). Therefore, early adulthood industrial workers can socialize as usual such as going out to work, traveling, attending social events, and gathering freely without worrying about being transmitted of the Covid-19 and restrictions from the governments.

Next, the marital status of most respondents in this study who are married is also one of the other factors that contribute to the low level of loneliness in the results of this study. Loneliness is said to decrease and become low when early adulthood industrial workers get married and has a partner. This is because, when an individual has a partner, they can always connect with individuals they are close to and trust and this can reduce social loneliness (Liang Yu, 2022). Therefore, studies tend to find that married people are lower in loneliness (Stack, 1998). In addition, another factor that drives the low level of loneliness is because the respondents of this study are all individuals who work and have their own income. Systematic studies show that loneliness is lower for those who are employed and higher for those who are unemployed (Morrish & Antonieta Medina-Lara, 2021). This is because, individuals who work spend a lot of time at work and they will be able to develop and enhance a sense of community and belonging that is not always achieved outside of work with coworkers, and show value in encouraging involvement at work reduces the risk of feeling loneliness (Morrish & Antonieta Medina-Lara, 2021).

The second objective of this study is to examine the level of life satisfaction among early adult industrial workers in Johor during the post-pandemic of Covid-19. Based on the findings of descriptive analysis, the results found that the number of industrial workers in early adulthood has a high value for the level of life satisfaction during this post-pandemic period. This demonstrates that the research is following the same path as other studies, such as Golo Henseke et al.'s (2022) study, which found that life satisfaction has greatly increased since its historical lowest point of Covid-19 cases in February 2021, when social relations and related stress are beginning to recover globally and contributes to increase of the life satisfaction. One of the reasons that can influence the high level of life satisfaction in this study is because of work life balance where Work from Home (WFH) or teleworks was introduced and used widely after Covid-19. Many businesses and industries choose to try WFH practices and it has been widely used (Lina Vyas & Nantapong Butakhieo, 2021). Previous studies have confirmed

the role of WFH in promoting life satisfaction (Haar et al., 2014). This is because, working from home is quite famous for improving the well-being of early adulthood industrial workers because it gives them the flexibility to do their work in productive time (Organization for Economic Cooperation and Development, 2020). Another factor that may contribute to the high level of life satisfaction in this study is due to the reopening of the industrial sector and returning to physical work. When the government announced that all economic activities were back to normal, early adulthood industrial workers were able to work physically and interact with their coworkers at work that lead to increase their life satisfactions. This is because, the presence of social relationships has a positive effect on mental and physical health, thus, contributing to the general well-being of individuals (Campbell 1981; Nguyen et al. 2015). In addition, other factors such as job security and broad employment opportunities after covid also contributed to the results of this study. The Malaysian government introduced several emergency economic aid packages totaling RM315 billion, including the Prihatin Rakyat Economic Stimulus Package (PRIHATIN), the National Economic Recovery Package (PENJANA), and the KITA PRIHATIN Package, to alleviate people's financial burdens and assist businesses struggling to retain employees (The Star, 2020). This leads to an increase in life satisfaction where well-being and financial stability are components of life satisfaction (Gerrans et al., 2014; Joo, 2008; Netemeyer et al., 2018). This is because, early adulthood industrial workers are happier when they are financially secure (O'Neill et al., 2005).

The third objective of this research is to investigate the relationship between the level of loneliness and the level of life satisfaction among industrial workers in early adulthood during this post-pandemic of Covid-19. According to the inference analysis in the previous chapter, the research findings show that there is a significant relationship and a moderate negative correlation between loneliness and life satisfaction. The results of the study show that loneliness among early adulthood industrial workers during this post-pandemic of Covid-19 is moderate and low, thus causing their life satisfaction to increase. The results of this study are in line with other preliminary findings that show a negative relationship between the variables (Małgorzata Szcześniak et al., 2020). The relationship between loneliness and life satisfaction studied by some researchers who have asserted that there is a significant negative correlation between life satisfaction and loneliness (Goodwin et al., 2001; Kim, 1997; Schumaker, Shea & Marnat, 1993; Moore & Schultz, 1983). Loneliness and life satisfaction were found to have a significant and relatively strong negative correlation (Unni Karin Moksnes et al., 2022). A direct relationship exists between life satisfaction and loneliness (Małgorzata Szcześniak et al., 2020), and a negative correlation has been shown between life satisfaction and loneliness (Tümekaya et al., 2008). Negative correlations are typically found when attempting to figure out the relationship between life satisfaction and loneliness (Brajković, 2010).

The final objective in this study is to analyze the influence of loneliness towards life satisfaction among early adulthood industry workers during this post-pandemic of Covid-19. The results of the findings show that there is a significant negative influence of loneliness towards life satisfaction among early adulthood industry workers during this post-pandemic of Covid-19. The results of the study show that low loneliness among respondents causes life satisfaction to be high. To support this finding, a study by (Padmanabhanunni & Pretorius, 2021) also found the same result where loneliness was found to have significant direct negative effects on life satisfaction ( $\beta = -0.26$ ,  $p = 0.001$ ). This indicates that higher levels of life satisfaction are associated with lower levels of loneliness (Padmanabhanunni & Pretorius,

2021). Among the reasons that can explain the findings of this study is because of social support. Individuals can protect themselves from loneliness with social support from romantic partners, family, and friends (Lee & Goldstein, 2016). Most respondents in this study are married individuals and tend to have social support that can help them overcome loneliness during the post-pandemic. This is because, one of the most important components of the marital relationship is social support (Acitelli, 1996; Gottlieb, 1994). Social support includes providing instrumental support, informational support, evaluative support, and emotional support (House, 1981). Satisfaction is mainly determined by a person's satisfaction with interpersonal relationships, especially with friends and partners (Social Diagnosis 2005; 2009). Positive emotions and life satisfaction are also negatively correlated with loneliness (Argyle, 2004). This suggests that those who are married can manage loneliness and are happier and have better physical and mental health (Perelli-Harris et al., 2019, Whisman et al., 2018). Therefore, the findings of the study show that respondents have a low level of loneliness and a high level of life satisfactions during this post-pandemic of Covid-19

#### *Limitation and Recommendation*

There were a few inconsistencies and discrepancies identified while conducting the research, along with several recommendations that can be proposed to improve future research. First, the study was used non-probability sampling which is convenience sampling that can lead to bias in the sample where some groups may be over or under-represented. Furthermore, the sample size focused only on early adulthood workers in Industrial Park Kulai, Johor may not represent the entire population of industrial workers. Next, researchers using quantitative methods which is self-report questionnaires, which can contribute to the high possibility of response bias and misinterpretation. Hence, some suggestions are made for improvements and references for future research to overcome the limitations. First, this study recommends that future researchers obtain data from respondents by using different sampling techniques such as simple random sampling because it can give each individual in the population an equal chance of being selected to participate. Next, is to increase the size of the study population by involving all industries in Johor that consist of various backgrounds in Malaysia to ensure that the findings of the study can be generalized to the entire population. Finally, it is recommended that future researchers use a mixed methodology research strategy, which combines quantitative and qualitative research techniques into one research so that researchers can gain a more holistic view of the topic under discussion.

#### **Conclusion**

In conclusion, the results of this study found that the level of loneliness of early adulthood industrial workers in Johor is moderate while the level of life satisfaction is high during this post-pandemic of Covid-19. In addition, this study also revealed that there is a significant relationship and a negative correlation between loneliness and life satisfaction among early adulthood industry workers during this post-pandemic of Covid-19. The results of the study also found that there is a significant negative influence of loneliness towards life satisfaction. The results of this study offer new information about the relationship between loneliness and life satisfaction in early adulthood among industrial workers. This study provides benefits that can help researchers to understand more deeply about the relationship between loneliness and life satisfaction and how a person's level of life satisfaction affects their daily life. Apart from that, this study can contribute to expanding the body of knowledge about human resources related to loneliness and life satisfaction among workers after the Covid 19



pandemic. This research is expected to be used as a reference and scientific resource for relationship studies, especially the effect of loneliness on life satisfaction among industrial workers during the post-Covid 19 pandemic. In addition, this study is expected to help organizations gather more information about the impact of loneliness on life satisfaction. This study helps organizations in dealing with future challenges such as how to plan effective initiatives in reducing loneliness factors that indirectly affect employee life satisfaction during this post-pandemic Covid 19. Moreover, it is important to address the life satisfaction among industry workers because it affected to work motivation. The motivated industrial workers tend to experience a greater sense of purpose and accomplishment, which positively influences their overall well-being and satisfaction in life. Besides, a motivated worker often leads to a more supportive work environment and contributing to life satisfaction. To summarise, this study outlines the relationship and influence between loneliness and life satisfaction among early adulthood industry workers in Johor during this post-pandemic of Covid-19. However, more research needs to be conducted to present more relevant elements that may influence relationships and provide a clear picture of loneliness towards life satisfactions among early adulthood industry workers during the post-pandemic of Covid-19.

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