

Impact of Demographical Factors and Language Acquisition Level on Depression Symptoms Among Arabic Language Learners

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Abstract

The prevalence of depression among language learners, specifically Arabic learners, should receive proper attention from academics. Unfortunately, it would be easily overlooked by scholars because they tend more focusing on the development of effective teaching strategy. The objective of current study was to investigate the effect of demographic variables and language proficiency on symptoms of depression in individuals learning Arabic as a second language. This cross-sectional study involved 1126 participants who voluntarily provided their consent. Of the participants, 762 were female and 364 were male (age $M = 20.03$ and $SD = 1.56$). The study collected demographic information, assess language acquisition levels, and measure symptoms of depression. Data was analyzed using descriptive statistics, Pearson correlation, and multiple linear regression. Results showed that model proposed in this study with its predictors explained 7.5% of the variance in depression symptoms while factors such as sex, number of siblings, living arrangement, listening skills, and reading skills were found being significant predictors in the model. This study highlights the prevalence of depression among individuals learning Arabic as a second language and the importance of demographic variables and language proficiency in predicting depression symptoms. The findings suggest that interventions to address depression in this population should take into account factors such as sex, number of siblings, living arrangement, and language skills.

Keywords: Arabic, depression, demographic variables, language learners

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Introduction

The issue of depression among language learners has implication for individuals' second language acquisition. Depression could results negative outcomes, for instance decreased motivation to learn language and academic performance, which eventually can affect the overall quality of students performance (Gao et al., 2020; Lawrence et al., 2019; Salanova et al., 2009). Depression also potentially decreased the intention to further learning language which could lead to terminate individuals' desire to acquisition the language. These challenges are faced by institutions, especially those institutions which obligated its students to learn second language.

Given the potential negative impacts of depression for language learner, in particular Arabic language, it is important to investigate and understand the factors that possibly affect depression. In this

study, we look into the role of demographics factors such as sex, age, living area, number of siblings, monthly spending, living arrangement, having a side job, and living area toward depression symptoms among Arabic language learners. Furthermore, we also investigate the impact of language acquisition level on the depression symptoms. By understanding its relationship, we can further develop treatment strategies to minimize the potential depression occurred among Arabic language learners. Ultimately, it would lead to better results for individuals and institutions that obligated their students to learn Arabic language.

Depression refers to a condition when someone feels sad, hopeless, or lack of pleasure (Kronke et al., 2001). It could have a significant impact on individuals personal, social, or professional life. Depression has been reported to declining of academic performance and learning attendance (Gao et al., 2020; Lawrence et al., 2019). Furthermore, depression also could impact the ability to concentrating (Aalbers et al., 2019; Bennett et al., 2005). When someone is trying to memorize new vocabularies, structures, and follow conversations in new language, it becomes more challenging if she or he could not concentrate. In addition, negative self-talk is also something common experienced by depressive person (Maiese, 2020; Tackman et al., 2019). This habit would burden individual to achieve her or his potential.

Socio-demographical factors are commonly examined when it comes to depression studies, specifically in language learners. For instance, Dale et al. (2016) and Morris et al. (2011) stated that sex is a predictor, whereby depression tends to be associated with female than with male. It probably due to gender roles, cultural characteristics of female, or even due to emotional coping strategy that employed by female (Hatta et al., 2023). However, age seemed to be inconsistent in terms of its relationship with depression (Cuijpers et al., 2020). In certain circumstances, adults generally appeared could properly manage their depression, but in the other hand, they have been observed with depression symptoms.

Other demographical variables that have been related to depression among language learners include living area, number of siblings, spendings, living arrangement, and hustle. For example, Khongwir et al. (2020) found that students who live in urban area tend to be exposed to depression higher than in sub-urban area. Similarly, Chi et al. (2020) found that individuals who live with siblings were more likely to develop depression, while individuals who live alone were likely to able to prevent the development of the depression. Furthermore, literature suggests that monthly spending, having hustle, and living arrangement also may play role in how the development of depression various population (Capone & Petrillo, 2020; Chi et al., 2020; Srivastava et al., 2021). Even though literature have shown the trend of the demographical factors impact toward depression, further research is required to have a completely understand the interaction between these factors and depression in second language learners.

The relationship between language proficiency and depression has been investigated by researchers in the past decade. Some researchers found that language learners with lack of proficiency in second language showed higher risk to develop depression due to social isolation, absence of peer or teacher support, and could not done the assignment properly. For example, Dovchin (2021) and Ding & Hargraves (2009) found that students with low level of language acquisition reported with higher level of depression. Just like the demographical factor, language proficiency needs further research to understand the dynamic relationship between this variable and depression, specifically among Arabic language learners.

Given the negative impact of depression during learning a second language, it is necessary to understand the factors that may affect depression. The inconsistent findings in this field of research also needs to be the attention of the researchers. The inconsistency of results may make a confusion among teachers or mental health professionals. Furthermore, it is crucial to research depression and its related factors in a very specific population such as Arabic language learners. Therefore, in this study, we decided to make a contribution to the literature in investigating the relationship between these factors and depression. The aims of this study were to investigate the influence of demographic variables and language proficiency on symptoms of depression in individuals learning Arabic as a second language.

Methods

Design

The present study utilized a cross-sectional design to investigate the influence of demographic variables and language proficiency on symptoms of depression in individuals learning Arabic as a second language. This study is a further version investigation of prior project in understanding how Arabic learners psychological struggle (Akla et al., 2023).

Procedures and Participants

After receiving research permission, the instruments were administered in a google form with following order: informed consent, demographical questions, language acquisition level, and depression symptoms. In November 2022 we shared the questionnaires to potential participants, the study sample comprised students from multiple Islamic universities in Indonesia who were obligated to study Arabic language as a component of their curriculum. The participants were invited to participate in the study on a voluntary basis after providing informed consent through an online instrument. Total 1126 participants were involved in the study with majority proportion of the participants consist of Female = 762, Male = 364, Age M = 20.03, and Age SD = 1.56 (See table 1 for more detailed participants characteristics).

Instruments

Demographical questions

The demographical questions employed in current study including: sex, age, living area, number of siblings, monthly spending, living arrangement, and having a side job.

Language acquisition level

In this study, a set of four questions was utilized to gather data regarding students' proficiency in the Arabic language, specifically in the areas of listening, speaking, reading, and writing. The instrument employed a five-point Likert scale ranging from negligible (1) to proficient (5) to rate the participants' language proficiency. The students self-reported their proficiency in Arabic using the instrument.

Depression symptoms

We use The Patient Health Questionnaire-9 also known as PHQ-9 (Kroenke et al., 2001) to measure depressive symptoms among Arabic language students. The PHQ-9 consists of nine items that assess the degree of symptoms felt in the past two weeks by the students. The items in the survey were evaluated using a 4-point scale, which spanned from 0 (indicating the absence of the characteristic) to 3 (representing a near-daily occurrence of the characteristic). The higher the score indicates severity of the symptoms. The PHQ-9 has been found to have good reliability and validity for the assessment of depression in various populations (Kroenke et al., 2001). The reason for selecting the PHQ-9 for this research was because of its brevity and reliability as a tool for measuring depression. This instrument also has been commonly utilized in both clinical practice and research.

Data analysis

To analyze the data, a series of statistical tests were performed using IBM SPSS 24 statistical software. The specific tests chosen were based on the research questions and the characteristics of the data. Descriptive statistics were calculated for all variables, including means, standard deviations, and frequencies. These statistics provided a summary of the sample characteristics and the distribution of the data. The relationships between the demographical factors (sex, age, living area, number of siblings, monthly spending, living arrangement, having a side job, and living area were transformed into dummies data, see table 1) and depressive symptoms were examined using Pearson correlations and multiple regression. We used two criteria were used in the assumption test for doing linear regression analysis. Firstly, the residual value or error should be normally distributed (Hair et al., 2019). Secondly, there is no multi collinearity by looking at VIF value being < 10 (Alin, 2010). The results of the statistical analyses were then interpreted and presented in a clear and concise manner, highlighting the main findings and

their implications for university students and practitioners. To ensure the clarity and transparency of the data analysis, the specific statistical tests and their assumptions were clearly described.

Results and Discussion

Results

Authors conducted two pre-assumption tests before descriptive, pearson correlation, and multiple linier regression analyses namely Normality test and Variance Inflation Factors (VIF). These tests are necessary to make sure the data were normally distributed and no multicollinearity. The results of Normality test showed that the residual of data was normally distributed (see Figure 1). On the other hand, the VIF values found less than 10 (see Table 3), which mean there is no multicollinearity found.

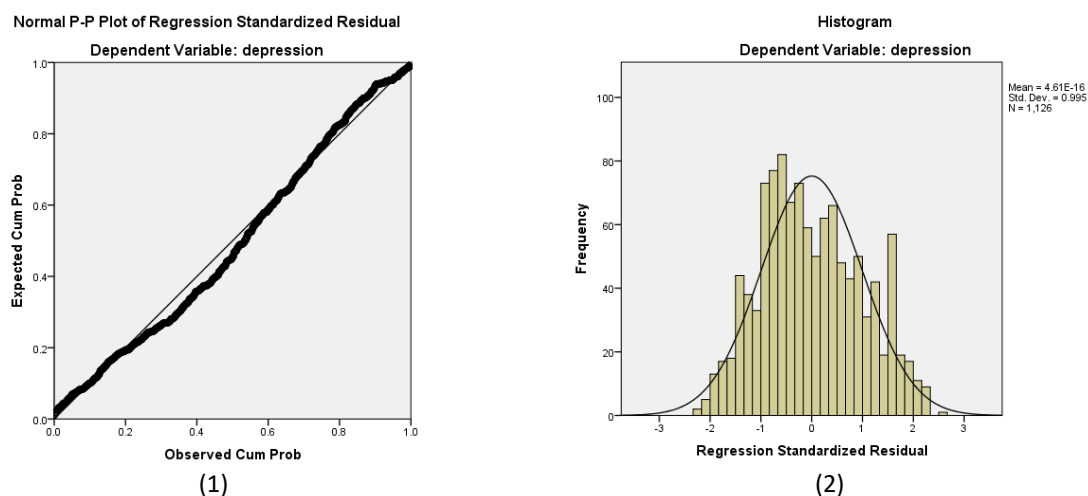


Figure 1. P-P Plot (1) and histogram (2) residual normality test results

Table 1. Demographical factors (N=1126)

Variables (Dummies)	N
<i>Sex</i>	
Male (1)	364
Female (0)	762
<i>Age</i>	M = 20.03; SD = 1.56
<i>Living Area</i>	
Urban (1)	197
Sub-urban (0)	929
<i>Siblings</i>	
> 1 (1)	1,071
0 (0)	55
<i>Spending in one month (IDR)</i>	
< 1.000.000 (1)	898
> 1.000.000 (0)	228
<i>Having hustle</i>	
Yes (1)	205
No (0)	921
<i>Active member of organizations</i>	
Yes (1)	418
No (0)	708
<i>Living arrangement</i>	
Boarding house (1)	646
With parents or relatives (0)	480
<i>Arabic listening skills</i>	

Proficient	9
High	41
Moderate	384
Low	599
Negligible	93
<i>Arabic speaking skills</i>	
Proficient	7
High	25
Moderate	290
Low	664
Negligible	140
<i>Arabic reading skills</i>	
Proficient	12
High	58
Moderate	396
Low	580
Negligible	80
<i>Arabic writing skills</i>	
Proficient	6
High	29
Moderate	315
Low	664
Negligible	112
<i>Depressive symptoms</i>	Min = 9; Max = 36; M = 21.99; SD = 7.41

According to Table 1, the sample consisted of 1126 participants, including 364 males and 762 females. The mean age of the sample was 20.03 years (SD = 1.56), indicating a relatively homogeneous group of young adults. Of the total sample, 197 participants lived in urban areas, while 929 lived in suburban areas. These findings suggest that the majority of participants were female residents of suburban areas (see Table 1 for detailed information).

Table 2. Pearson correlation

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1 depression	1.000	-.093	.016	-.063	.061	.008	-.058	.002	.118	-.194	-.132	-.191	-.151
2 sex		1.000	.060	.027	-.028	.022	.176	.161	-.053	.018	.004	-.008	.002
3 age			1.000	-.066	.013	-.052	.233	.008	-.066	-.050	.015	.018	-.005
4 living_area				1.000	.007	-.024	.080	.009	-.142	.000	-.042	.004	-.057
5 num_siblings					1.000	-.001	.032	.012	-.020	-.003	.005	-.034	.010
6 spendings						1.000	-.043	-.043	-.157	-.043	-.026	-.075	-.073
7 have_hustle							1.000	.095	-.068	.026	.006	.058	-.013
8 mem_org								1.000	.086	.132	.110	.107	.114
9 living arrangement									1.000	.044	.034	.047	.037
10 listening										1.000	.777	.792	.773
11 speaking											1.000	.745	.827
12 reading												1.000	.758
13 writing													1.000

The Pearson correlation test results indicate that depression was significantly correlated with several demographic and personal factors in the sample. Specifically, there was a small negative correlation between depression and sex ($r = -.093$), suggesting that females in the sample may have reported higher levels of depression than males. Age was found to have a small positive correlation with depression ($r = .016$), while living area and having a hustle were negatively correlated with depression ($r = -.063$ and $r = -.058$, respectively). The number of siblings and spendings had small positive correlations with depression ($r = .061$ and $r = .008$, respectively). The results also showed that being a member of an organization had a small positive correlation with depression ($r = .002$), while living arrangement had a small positive correlation with depression ($r = .118$).

Furthermore, depression was found to be strongly negatively correlated with Arabic listening skills ($r = -.194$), and moderately negatively correlated with Arabic speaking skills ($r = -.132$), Arabic reading skills ($r = -.191$), and Arabic writing skills ($r = -.151$), suggesting that individuals who reported higher levels of depression tended to have lower levels of Arabic language acquisition. These findings suggest that a range of demographic and personal factors, as well as Arabic language acquisition, may be related to depression in the sample.

The regression equation of the model was observed ($F(5, 1123) = 11.991, p < .000, R^2 = .051$). The model with its predictors explained 5.1% of the variance in depression symptoms. It was relatively small variance when consider total of twelve predictor variables. Furthermore, Table 3 showed that the standardized coefficients indicated that sex ($\beta = -.086, p = .003$), number of siblings ($\beta = .057, p = .049$), living arrangement ($\beta = 1.776, p = .000$), listening skills ($\beta = -1.571, p = .006$), and reading skills ($\beta = -1.238, p = .018$) were significant predictors of depression symptoms; whereas age ($\beta = .027, p = .374$), living area ($\beta = -.037, p = .212$), spendings ($\beta = .014, p = .631$), having hustle ($\beta = -.033, p = .285$), being member of organization ($\beta = .034, p = .250$), speaking skills ($\beta = .085, p = .133$), and writing skills ($\beta = -.019, p = .739$) were not significant predictors of depression symptoms.

Table 3. Regression analysis to determine the impact of demographical factors and language acquisition level on depression symptoms

Variables	B	SE	β	t	p	VIF
(Constant)	22.010	3.196		6.888	.000	
sex	-1.331	.471	-.084	-2.826	.005	1.064
age	.126	.142	.027	.889	.374	1.089
living_area	-.719	.575	-.037	-1.250	.212	1.048
num_siblings	1.962	.995	.057	1.972	.049	1.008
spendings	.261	.544	.014	.480	.631	1.047
have_hustle	-.626	.586	-.033	-1.070	.285	1.119
mem_org	.524	.455	.034	1.152	.250	1.060
living arrangement	1.776	.447	.119	3.974	.000	1.071
listening	-1.571	.569	-.152	-2.761	.006	3.656
speaking	.901	.599	.085	1.504	.133	3.840
reading	-1.238	.521	-.124	-2.375	.018	3.286
writing	-.206	.620	-.019	-.333	.739	3.944

Discussion

The aims of this study were to investigate the influence of demographic variables (such as sex, age, living area, number of siblings, monthly spending, living arrangement, having a side job, and living area) and Arabic language proficiency (such as listening, speaking, reading, and writing skills) on symptoms of depression in individuals learning Arabic as a second language. Results showed that not all demographic factors were significant. Factors like sex, number of siblings, and living arrangement were found significant predictors of depression symptoms whereas other factors were not. Furthermore, Arabic language proficiency specifically listening skills and reading skills were found being significant predictors among four skills in Arabic language skills acquisition.

This research study highlights the significant prevalence of depression among university students who are required to learn Arabic language at their institution. It also emphasizes the importance of taking into account specific demographic factors and language skills in predicting depression symptoms among this population. The study findings suggest that interventions aimed at addressing depression in Arabic language learners should incorporate considerations of factors such as sex, number of siblings, living arrangement, and language skills, particularly listening and reading abilities. By paying attention to these significant factors, the probability of successful intervention to reduce depression prevalence may be increased. While there is also a possibility of unsuccessful intervention, mental health professionals, such as counselors, psychologists, or psychiatrists, could benefit from the study results by reflecting on the significant predictors that could result in improvements in their empathy.

The findings showed that sex, number of siblings, living arrangement, and language skills, particularly listening and reading abilities were significant predictors of depression symptoms in this population. These results are consistent with prior research that has discovered sex to be a significant predictor of depression (Dale et al., 2016; Morris et al., 2011). Similarly number of siblings and living arrangement (alone or with family), in other words, the role of family structure and social support individuals received from their environment would play an important role in the development of depression (Alsubaie et al., 2019; Zhong et al., 2020). In this study, the findings indicate that certain demographic variables hold considerable importance in the management of depression, as evidenced by their consistent results. Therefore, these variables should be given thorough consideration when addressing depression in this population, specifically Arabic language learners.

Despite Dovchin (2021) stated that psychological aspect like depression has commonly often been overlooked in Language learning, students specific language skills also play a vital role whether they will experience psychological distress or not. Regarding language skills, the findings showed that listening and reading skills were significant predictors of depression symptoms in individuals learning Arabic as a second language. These findings are consistent with previous research that has identified language barriers and difficulties in language learning as risk factors for depression in immigrant populations (Ding & Hargraves, 2009; Dovchin, 2021; Kartal et al., 2019). Language proficiency may influence social connectedness, access to resources, and cultural adjustment, all of which can affect mental health.

One possible theory may explain the relationship between language acquisition and depression is the theory of social interactionist (Li & Jeong, 2020; Montgomery, 2020; Vygotsky, 1978). This theory stated that language development is related to social interaction which make children learn language through their communication with others. Furthermore, this theory describes the difficulties with language mastery may lead to social isolation and deprivation of meaningful interaction, this would end up with the development of depression. Despite this theory has this perspective, more research is needed to fully understand the link between language mastery and depression.

Implications, limitations, and suggestion for future research

The results of current study have important implication for the advancing knowledge in the field of depression symptoms among Arabic language learners. Furthermore, the development of intervention should take these finding into consideration because when interventions tailored to the specific needs and characteristics of the population the possibility of success treatment would increase dramatically. For instance, interventions could focus on improving listening and reading skills to minimize the risk of depression. In addition, interventions could target specific demographic groups, such as Arabic learners with large number of siblings or those living with family to address the unique experiences they may face. Overall, these contributions would benefit the mental health professional or Arabic language teachers in conducting treatment to lessen the possibility of depression.

There are some limitations arise in this study. These limitations that we should be addressed in the future research. Firstly, significant proportion of the data in demographical variables were categorical (binary). This limitation may impact the scope of analysis and results generalizability. Second, sex was not representing gender. This limitation may not be compatible when results generalized in term of wide range gender definition. Third, low variance percentage. This limitation showed there are many others variables that have not been investigated by current study. Future research should address these limitations. First of all, consider to employ the demographical data as continuous rather than categorical data only. Secondly, it is important to measure gender with its all dimensions for more comprehensive understanding on how Arabic language learner depression symptoms. Finally, other factors related to depression symptoms should be investigated rather than just its demographical factors.

Conclusion

This study provides new knowledge related to impact of demographical factors, language acquisition level, and depression symptoms among individuals learning Arabic as the second language. Factors such as sex, number of siblings, living arrangement, listening skills, and reading skills are significant predictors of depression symptoms. These findings should be underscored the need for tailored intervention that address these significant variables. Intervention that focusing on improving language

proficiency and targeting these specific demographic groups may improve the success of language learning and mitigating the risk of depression among Arabic learners.

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