

Association between Economic Strain, Family Strength and Depression among Low-income Drug Addict Wives in Malaysia

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Abstract

This study aims to investigate the association between economic strain, family strength and depression. A total of 132 low-income drug addict wives were selected in this study using purposive sampling. Participants completed a set of questionnaire packages that included the Malaysian Family Strengths Scale (MFSS), Economic Strain Scale (ESS), and Zung's Self-Rating Depression Scale (SDS). The results of path analysis revealed a direct association between family strength and depression as well as economic strain and depression. However, results showed that economic strain was not associated with family strength. Further analysis of the mediation effect was conducted utilising bootstrapping techniques. The findings revealed that the influence of economic strain on depression through family strength was insignificant. This study implies that when low-income drug addicts' wives perceive that they have a high level of family strength, they tend to have low depression. While, if they experience a severe economic strain, they tend to have high depression. The present study suggests a replicated investigation using probability sampling method to achieve a wider generalization of the research findings. It is also recommended for future researchers to conduct a longitudinal study particularly examining the long-term impact of economic strain and family strength on later depression experienced by this population.

Keywords: Economic Strain, Family Strength, Depression, Low Income, Wives of a Drug Addict

Introduction

Depression is now the leading cause of psychological diseases that exist in the global population. It was also recognized that the propensity is higher in women as compared to

men, demonstrating that women are highly exposed to the risk of suffering depression. Statistics reported an estimated five percent of the global adult population suffers from depression which is equivalent to 280 million people worldwide (World Health Organization, 2023). It was also further highlighted that the case of depression is found more common in women than men. Similarly, Malaysia has recorded higher cases of depression among women through several national surveys (Ministry of Health Malaysia, 2019; Azmi et al., 2024). Pursuing the growing interest in depression, Rose Fazilah et al (2018), have provided the overview regarding factors of depression among women which covers the biological aspect, social aspect, social orientation, emotion-focused coping strategy, and psychological aspect.

Even though the propensity has been constantly debated, it remains unclear why women are more exposed to suffer from depression as compared to men. Based on these statistics, women are viewed as vulnerable to depression especially those who face heavy life stressors.

In the context of a family in which drug addiction exists, women family members mainly wives have demonstrated a damaging psychological condition following the stressors rising in the household accommodating economic stress (Weldegabreal, 2014; Paramjit Singh, 2015), worsening family relationships, emotional stress, physical abuse, job issues, and discrimination (Paramjit Singh, 2015). Additionally, wives facing their husband's drug addiction are also recognized to experience overall health exacerbation and high distress deriving from economic strain and domestic abuse (Dawson, 2007). This condition could be explained by the fact that the family income is majorly used to acquire a constant supply of drugs which demand high expenditure as it is commonly overpriced. Moreover, the financial burden of the household shifted to the wives to fulfill the family needs which demanded them to have a job to earn wages. This condition is viewed as stressful to the wives as they have to perform sole parental responsibilities. Economic strain was also consistently recognized in the family facing drug addiction issues (Tiwari et al., 2010; Juibari et al., 2018; Mancheri et al., 2020). These studies stipulated that wives with drug-addicted husbands were observed to struggle in resolving the financial issues ensuing from the economic deprivation experienced. The challenging financial situation may reduce their ability to cope over time, thus leading to the development of depression as demonstrated in previous research (Juibari et al., 2018; Mancheri et al., 2020).

Commonly, the drastic changes of drug addicts raise issues in the household as they are basically limited to performing the familial responsibilities due to physical and psychological deterioration experienced. This condition extends the addiction's impact beyond the person with addiction, thus affecting their family members. A recent study has identified that women with drug-addicted husbands experienced two major psychosocial issues namely family psychological breakdown comprised (1) psychological disadvantages, (2) losing borders in the family, (3) insecure space house for the family, (4) turbulent family, (5) concern on spouses leaving; and disadvantaged social status consisting (1) trying to preserve family's image, (2) social stigma, and (3) family social isolation (Maghsoudi et al., 2019). This encapsulates that the drug addiction issue posits the family members, especially the wives, in a difficult and stressful situation whether within the family or in social settings.

During a challenging life situation, family strength may act as a barrier to the huge impact of stressors on the family member's psychological condition, especially depression. Family strength in essence refers to family behaviors, processes, and relationship

characteristics that serve to uphold and protect the family members, especially during challenging phases and change (Otto, 1975; Williams, Lingren, Rowe, Van Zandt, & Stinnett, 1985; Moore, Chalk, Scarpa, & Vandivere, 2002). Previous research has indicated that economic strain may disrupt family functioning (Zarinah et al., 2018; Roper et al., 2016) and increase the level of depression (Batterham et al., 2024; Hertz-Palmor et al., 2021; Ruengorn et al., 2021). This suggested that individuals who experience greater economic strain are inclined to disrupt family functioning and be exposed to a more severe state of depression. According to the family strength model built for Malaysian families, family strength consolidates seven core qualities namely communication, love, support, commitment, acceptance, religiosity, and relationship (Zarinah et al., 2012). This captures the holistic familial aspects in viewing family strength, especially in the context of a family with drug addiction issues.

Based on the abovementioned studies, the current study seeks to examine the significant effect of economic strain on depression among low-income wives facing their husband's drug addiction. In addition, the current study also attempts to determine the mediation effect of family strength on the relationship between economic strain and depression.

Methodology

Research Design

The current study adopted a correlational research design which aimed to investigate the associations between the study variables namely economic strain, family strength, and depression. The independent variable of the current study is economic strain, mediating variable is family strength, and the dependent variable of the study is depression. Furthermore, this study is classified as quantitative research which systematically comprehends the process of numerical data collection and statistical analysis. In the descriptive analysis stage, the demographic profile of the respondents was computed using Statistical Package of Social Science (SPSS) version 22 software. Whereas the statistical data analysis stage is performed using SmartPLS version 4 software to test the direct and indirect effects of economic constraint, family strength, and depression. Additionally, this cross-sectional study focuses on examining the study variables at a particular period which in this current study, is during the rehabilitation phase of the respondent's husband.

Research Participants

The current study applied a purposive sampling method in selecting the study sample which sums the involvement of 132 (N=132) low-income drug addicts' wives from ten states in Malaysia. The screening procedure was also conducted by organizing the inclusive criterion outlined for the subject of the current study which are; (1) a low income wife who is categorized in a household income of less than RM 5,250 (USD 1,127.94), (2) a wife whose husband undergo rehabilitation at the Narcotic Addiction Rehabilitation Centre (NARC) managed by the National Anti-Drugs Agency in Malaysia, (3) wife who never involved in drug, (4) Malay race, and (5) has at least one child aged below 17 years who lives together. Based on the required criteria, subjects who did not meet all criteria were excluded from the sampling procedure. Initially, a total amount of 296 wives' information was managed to be acquired from the clients of drug rehabilitation centers. However, after the screening process, a total of 132 respondents managed to participate in the study, which fulfilled the requirement of 119 minimum samples as computed using GPower software at the 95 percent

confidence level ($\alpha=0.05$) with the insertion of three study variables into the formulation process.

Research Instruments

The current study employed three research instruments to measure economic strain, family strength, and depression experienced by the respondents. At the initial stage, permission from all instruments' developers was acquired for translation and data collection purposes. All three instruments are back translated into Malay language which is conducted by a professional translator from the Centre for the Advancement of Language Competence (CALC) of Universiti Putra Malaysia. Afterward, the research instruments are examined by two experts in human development and developmental psychology fields to support the instruments' face validity and content validity. This crucial procedure is important to assist researchers in identifying and minimizing errors regarding the research instruments to achieve their respective representation.

Economic Strain

The Economic Strain Scale (ESS) developed by Mills et al. (1992) was employed to assess the economic strain experienced by wives of drug addicts involved in the current study. Briefly, this scale consists of four items which require the respondents to evaluate their experience on each statement using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). A higher overall score suggested a greater economic strain. The items constructed in the scale comprise "I often experience money problems", "I spend a lot of time worrying about financial matters", "financial problems always interfere with my work or daily routine", and "financial problems always interfere with my relationship with other people". The internal consistency of the scale was also well demonstrated in the previous studies which are 0.86 (Muslihah et al., 2009) and 0.81 (Mills et al., 1992) Cronbach alpha value respectively. While the present study figures a good reliability measure with a 0.89 value.

Family Strength

Malaysia Family Strengths Scale (MFSS) developed by Zarinah et al (2012), is adopted to measure the family strength perceived by wives of drug addicts in the present study. The scale fundamentally measures family strength through seven core dimensions namely: (1) Communication; (2) Love; (3) Support; (4) Commitment; (5) Acceptance; (6) Religiosity; (7) Relationship. Specifically, the scale incorporates 27 questions with a six-point response format ranging from 1 (definitely disagree) to 6 (definitely agree). Several items included in the scale are "Our family members help each other", "Our family members discuss among each other if there is a problem" and "Our family members take care of each other when needed". The family strength is calculated by summing up all of the scores, in which a higher overall score indicates higher family strength. Previous study has recorded an adequate reliability value of 0.95 (Zarinah et al., 2013) whereas for the present study is 0.97 suggesting a good internal consistency for the scale.

Depression

Zung's Self-Rating Depression Scale (SDS) pioneered by Zung (1986) is adopted in the present study to measure the depressive symptoms of the respondents. The scale consists of 20 items that assess the psychological, emotional, and somatic symptoms related to depression. The respondents are required to respond in a 4-point ranging format from "little of the time" to "most of the time". Depression level was calculated by summing up all scores and the

increment of score represents the depression severity. Examples of the items are “I have crying spells or feel like it” and “I feel downhearted and blue”. This widely used instrument has demonstrated good reliability across studies with Cronbach’s alpha value of 0.87 (Li et al., 2023) and 0.83 (Tao et al., 2021). Whereas the present study reported an internal consistency coefficient of 0.74 specifying good reliability.

Data Collection

Data collection involves the procedure of acquiring and evaluating information on the investigated study variables. Ethics approval was sought from the Ethics Committee for Research Involving Human Subjects, Universiti Putra Malaysia (Reference No.: JKEUPM-2020-406). Additionally, permission from the National Anti-Drugs Agency (NADA) Malaysia to do a brief background survey among clients at the Narcotic Addiction Rehabilitation Centre (NARC), was also granted. Following the written consent from the clients, wives of drug addicts were then contacted based on the contact information provided. Regarding the data collection procedure, both online and offline platforms were benefited. For online data collection, a set of online questionnaires was distributed to the respondents through the WhatsApp application. While for offline data collection, a set of questionnaires along with written consent was posted out to respondents’ home addresses. The respondents were closely monitored by the researchers for any inquiry during the data collection process.

Results of Analysis

Descriptive Analysis

The descriptive analysis identifies the demographic profile of the study participants encompasses personal and familial information particularly age, education level, marriage duration, and number of children aged 17 years old. Based on the results, most of the respondents are identified as aged from 31 to 40 years old (44.7%); followed by class age of 21 to 30 years old, 41 to 50 years old, more than 51 years old, while only a few respondents aged younger than 20 years old. Regarding the educational level, most of the respondents (48.5%) have completed upper secondary school, followed by junior secondary school, diploma, certificate, bachelor's degree, and primary school and only a slight proportion have completed a master's degree. Regarding the respondent’s familial information, most of the respondents were recognized as having been married for 6 to 10 years (27.3%), followed by a marriage duration of less than five years, 11 to 15 years, 16 to 20 years, 21 to 25 years, 26 to 30 years, and only small fraction among the respondents who have been married for more than 31 years. Additionally, most of the respondents were discovered to have 3 children aged 17 years old and younger (29.5%) followed by two children, one child, four children, five children, seven children, and the least recorded was six children.

Inferential Analysis

Based on the main study objectives, inferential analysis was conducted using SmartPLS software which specifically performs partial least squares path modelling method. Basically, this analysis involves two crucial evaluation stages namely measurement model assessment and structural model assessment to reach the path analysis conclusion. According to Hair et al. (2021), measurement model specifies the examination of the relationship between latent variables with their indicators, whereas structural model details the relationship between latent variables in the tested model. The validation of both stages is necessary before proceeding to the direct and indirect effect analysis of the hypothesized path model as depicted in Figure 1.

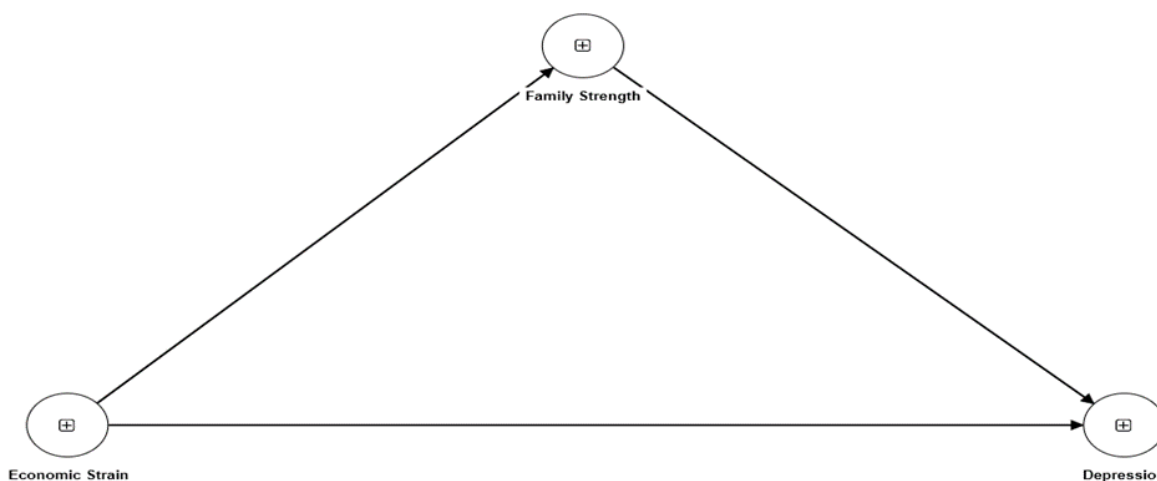


Figure 1: Conceptual Framework of the Study

Measurement model assessment

The main study variables are all computed reflectively considering that the indicators of each construct are presumed to be deriving from their respective constructs. Subsequently, the assessment of the reflective measurement model in the current study is determined through four evaluations namely indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Hair et al., 2021). Precisely, SmartPLS software describes indicator reliability using the loading value; internal consistency reliability using composite reliability (CR) value; convergent validity using average variance extracted (AVE) value; discriminant validity using heterotrait-monotrait ratio of correlations (HTMT) value.

Table 1 displays the findings from the assessment of the measurement model. It was identified that all items satisfy the requirements for economic strain and family strength constructs, with outer loading values lay between 0.40 and 0.708, composite reliability (CR) values above 0.70, and average variance exact (AVE) values exceeding 0.50 (Hair et al. 2021). However, it was discovered that eleven items (O2, O5, O6, O8, O11, O12, O14, O16, O17, O18, and O20) did not match the predetermined requirements for the construct of depression with an outer loading value that did not exceed 0.40. Thus, the items are excluded from the measuring model.

Table 1
Outer Loading, CR dan AVE

Variable/Indicator	Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Economic strain		0.924	0.753
C1	0.877		
C2	0.930		
C3	0.844		
C4	0.815		
Family strength		0.979	0.637
P1	0.725		
P2	0.896		
P3	0.878		
P4	0.888		
P5	0.900		

P6	0.750		
P7	0.861		
P8	0.702		
P9	0.904		
P10	0.925		
P11	0.896		
P12	0.897		
P13	0.581		
P14	0.662		
P15	0.875		
P16	0.875		
P17	0.859		
P18	0.728		
P19	0.845		
P20	0.688		
P21	0.547		
P22	0.902		
P23	0.835		
P24	0.883		
P25	0.846		
P26	0.348		
P27	0.496		
Depression		0.903	0.512
O1	0.750		
O2	Item deleted due to low loading		
O3	0.809		
O4	0.748		
O5	Item deleted due to low loading		
O6	Item deleted due to low loading		
O7	0.511		
O8	Item deleted due to low loading		
O9	0.603		
O10	0.780		
O11	Item deleted due to low loading		
O12	Item deleted due to low loading		
O13	0.756		
O14	Item deleted due to low loading		
O15	0.760		
O16	Item deleted due to low loading		
O17	Item deleted due to low loading		
O18	Item deleted due to low loading		
O19	0.669		
O20	Item deleted due to low loading		

Note: Item O2, O5, O6, O8, O11, O12, O14, O16, O17, O18, O20 was deleted due to low loading

Additionally, the determination of discriminant validity in this study was examined using the heterotrait-monotrait ratio of correlations (HTMT) approach (Franke & Sarstedt, 2019). All correlation values are identified beneath the HTMT threshold value of 0.90, as indicated in Table 2. Therefore, discriminant validity was proven.

Table 2

Discriminant validity

	1	2	3
1. Economic strain			
2. Family strength	0.087		
3. Depression	0.415	0.262	

Note: Discriminant validity is established when HTMT <.90 (Gold et al. 2001)

Structural Model Assessment

After the validation of the measurement model, the analysis progresses to the structural model assessment which involves path coefficient analysis particularly examining the correlation between studied variables. The initial step in structural model analysis is to recognize the collinearity problem using the inner variance inflation factor (VIF) value (Hair et al., 2021). If the VIF value is more than 3.33, collinearity problems occur (Diamantopoulos & Siguaw, 2006). According to Table 3, all VIF values are identified as less than 3.33. Therefore, this study has no collinearity issues.

Table 3

VIF values for collinearity issue

Relationship	VIF
Economic strain → Family strength	1.000
Economic strain → Depression	1.002
Family strength → Depression	1.002

As suggested by Hair et al. (2021), the PLS algorithm was used to test the hypotheses and a bootstrapping resampling procedure with 10000 sub-samples was utilized to ensure the accuracy of the PLS estimates. Table 4 shows the outcomes of one-tailed path coefficients. The R² value was 0.216, indicating that family strength and economic strain may account for 21.6% of the variance in depression. As presented in Table 4, family strength was found to be negatively related ($\beta = -0.246$, $p < 0.05$) to depression meanwhile economic strain was found to be positively related ($\beta = 0.382$, $p < 0.05$) to depression. However, results show that economic strain is not associated ($\beta = -0.049$, $p > 0.05$) to family strength.

Table 4

Path coefficient assessment

Relationship	Std Beta	Std Error	T value	P Value
Family strength → Depression	-0.246	0.087	2.828	0.002
Economic strain → Depression	0.382	0.063	6.101	0.000
Economic strain → Family strength	-0.049	0.127	0.387	0.349

Note: $p < 0.05$

Further analysis of the mediation effect was conducted utilizing bootstrapping techniques. The results of the influence of economic strain on depression through family strength are shown in Table 5, and the impact of mediation was statistically found as insignificant ($\beta = 0.012$, $p > 0.05$).

Table 5

Indirect relationship assessment

	Indirect Effect	Standard Error	T Value	P Value
Economic strain → Family strength → Depression	0.012	0.030	0.400	0.345

Note: $p < 0.05$

Discussion and Conclusion

The current study primarily targeted to investigate the relationship between economic strain, family strength, and depression among low-income wives of drug addicts in Malaysia. The results revealed that both economic strain and family strength are associated with depression. Specifically, economic strain was found to be positively correlated to depression which suggests that higher economic strain is associated with severe levels of depression. Whereas family strength demonstrated a negative correlation with depression implying that stronger family strength perceived by wives of drug addicts in the current study is related to lower depression. Nevertheless, the result of the study did not show any significant correlation between economic strain and family strength. Regarding mediation analysis, family strength was not proven to mediate the hypothesized path model suggesting that family strength does not mediate the relationship between economic strain and depression in the current study.

This finding corroborates the results from the previous research revealing a significant link between economic strain and depression (Batterham et al., 2024; Hertz-Palmor et al., 2021; Ruengorn et al., 2021). In the stressful situation of a family facing drug addiction, financial burden might be the central issue as family income is essential for family survival. In the context of the current study, wives of drug addicts play a crucial role as the sole providers for the family members during the husband's rehabilitation period. This condition exposed them to developing depression as it was reported that the economic strain experienced by women who are responsible as the head of the household, was found to impact their depression level (Kim et al., 2018). Furthermore, the study also revealed a notable prevalence difference of depression experienced between the two studied groups in which more women in female-headed families experience depression as compared to women in dual-partner families. In line with the finding, a recent study has also recognized a significant impact of economic strain on women with young children on their psychological condition in which they were reported to self-blame for being unable to optimally provide for the family needs and perform their parental responsibilities which then lead to depression, anxiety, and suicidality (Marcil et al., 2020). Based on the inclusive criterion of wives of drug addicts who have young children living together in the current study, the economic strain experienced by this community deserves serious observation as its association with depression is constantly affirmed.

However, it is evident that the correlation between economic strain and family strength was not supported in the current study. This finding was contradicted to the results revealed in the study on Malaysian families which accentuated the association of severe economic strain with lower family strength (Zarinah & Rozumah, 2009). On the other hand, this study demonstrated a negative correlation between family strength and depression. This indicates that a stronger family strength which covers the essential qualities of

communication, love, support, commitment, acceptance, religiosity, and relationship in a family plays an important role in reducing the risk of depression experienced by wives of drug addicts. Furthermore, family strength was also discovered to protect struggling individuals from depression across various contexts of studies (Orji et al., 2023; Ren et al., 2019; Yoon & Chon, 2014). Even though previous studies do not directly examine family strength, the associating variables such as family function (Orji et al., 2023), family relationship (Ren et al., 2019), and family communication (Yoon & Chon, 2014) are observed to involve in the process of assembling family strength. Thus, these studies are beneficial in understanding the association between family strength and depression in the current study. Specifically, family strength is viewed to capacitate individuals during life adversity through a quality relationship and encourage individuals to cope with life stressors and crisis. In contrast, the scenario is conflicting in a family that failed to build family strength thus the family member is more exposed to the risk of depression during stressful life encounters which in this case, drug addiction issue of the husband. In short, based on the present finding, it was identified that family strength is remarked as a beneficial associating factor strategized to address depression issues in this community.

In addition, the present main finding revealed that the indirect effect of family strength on the relationship between economic strain with depression is not significant. This indicates that there is insufficient evidence to prove that the impact of economic strain on depression experienced by wives of drug addicts in the current study is mediated through family strength. To be precise, a reasonable interpretation of this finding is that economic strain does not exert its effect on depression through reinforcement of family strength perceived by wives of drug addicts, but rather because of its direct effect on depression. However, this finding is incomparable as the previous studies are identified to examine the mediating role of family strength on the relationship between varied variables and study context such as adolescents from poor families (Nurwianti et al., 2018) and cancer survivors (Tao et al., 2023).

Nonetheless, the current study has potential limitations that need to be addressed which comprise research design and methodological aspects. Our study was a cross-sectional design that particularly assessed the respondent's experience and perception at a specific time. This execution has somehow hindered the causal inference to be explored. Besides, the study findings are not completely generalizable to the whole population of wives of drug addicts in Malaysia, instead, the results are restricted only to the study sample. This limitation results from the non-probability sampling method (i.e. purposive sampling) adopted in the current study to counter the insufficient sample size for the probability sampling method. Additionally, the data collection process is mostly conducted through online platform which may expose the research to data collection bias in which the respondents may not accurately understand the instrument statement before answering the questions listed in the questionnaires.

On top of that, the current study has presented empirical evidence regarding economic strain, family strength, and depression perceived by Malaysian wives of drug addicts in the area of expertise, considering the scarcity of the previous quantitative studies. In addition, the current findings contribute a distinct perspective in understanding the associating factors generating the development of depression namely economic strain and

family strength. Predominantly, the study findings are most advantageous to wives of drug addicts in understanding the contributing factors to their experience of depressive symptoms.

Accordingly, a few recommendations are advised as a reference for future researchers. First, future researchers might involve both government and private drug rehabilitation centers in the West and East regions of Malaysia to acquire a higher sample size to enable the probability sampling method. Thus, the generalization of the study findings are more complete and representative of the sample of wives of drug addicts in Malaysia. Second, the future researchers also suggested conducting a longitudinal study examining the long-term impact of economic strain and family strength on later depression experienced by this population. Finally, it is also recommended that the process of data collection take place in physical form to encourage face-to-face communication to reduce research bias.

In summary, this study concludes that a higher perceived economic strain by low-income wives of drug addicts in Malaysia is linked with a higher predisposition to depression. On the other hand, a lower perceived family strength is associated with a higher inclination to experience depression. Additionally, family strength was however not proven to mediate the relationship between economic strain with depression. As the present findings imply the consequential role of both economic strain and family strength on depression, it is beneficial for the policymakers and women health care providers to include these elements as a strategic plan of action to fight the depression issue in this community.

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