Roles of Dysfunctional Attitudes and Self-Esteem in the Relationship between Social Support and Depression in Late Adolescence

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Abstract: - Adhere to the necessity for stimulating the psychological well-being amongst late adolescents, the current inspection has been orchestrated to investigate the moderating and mediating roles of dysfunctional attitudes and self-esteem in the predictive relationship between social support and depression in late adolescence. In light of this aspiration, a total of 522 late adolescent respondents have been taken from two local secondary schools and a university in Klang Valley, Malaysia, and being assessed with self-report Interpersonal Support Evaluation List, Dysfunctional Attitudes Scale, Rosenberg’s Self-Esteem Scale and Beck Depression Inventory for their perceived social support, dysfunctional attitudes, self-esteem as well as depression. Subsequent to a series of regression analyses, the research findings revealed that self-esteem has meaningfully moderated the predictive relationship between social support and depression which mediated by dysfunctional attitudes in the samples, yet, dysfunctional attitudes has purely and constantly performed its role of mediating the relationship between social support and depression with its insignificant moderating role in the investigation model.

Key-Words: - Late Adolescents, Depression, Social Support, Self-Esteem, Dysfunctional Attitudes, Mediation, Moderation.

1 Introduction

Heeding the call for boosting mental and emotional well-being amongst adolescents due to the increasing number of adolescents with psychosocial problems while development in economics and physical health have been growing swiftly in society [1], scrutiny in factors that influence adolescent depression as well as its process could be of enormous significance. As long been known, support from social has been a critical component that influences psychological well-being, especially in adolescence which requires high adjustment and adaptation in terms of biology, cognition, emotion as well as social in the transition process from childhood towards adulthood. Most of the time, social support has been contemplated as an important factor contributing to mental health [2].

Gradually, psychological well-being becomes more vital following the enhancement of life quality. In Malaysia, National Policy on Mental Health defines mental health as capacity of individual or a group of human being and interaction among each of them in promoting subjective well-being as well as optimal functioning, together with the utilization of cognitive and emotional abilities and positive relationship to achieve individual’s or group’s goals for the benefit together [3]. In this case, depression, which is seen as one of the most common mental disorders in community [4] has threatened the goal towards achieving a healthy community in Malaysia, especially in late adolescence age ranging from 17 years to 23 years who were at risk of getting depression [5]. The number of depressed adolescence has significantly been increasing from early adolescence to late adolescence [6]. Ergo, it is of immense momentousness to study the issue pertaining to depression in late adolescence.

According to Hilsman and Garber [7], the notion of cognition as the cause factor to evoking and maintaining depression is still on the way in searching its answer through research or study due to inconsistency of the existing research findings. Amongst cognitive models of depression, model developed by Aaron Beck is the most influential [8] in which it emphasizes cognitive perspective in developing individual depression, whereas Cohen and Syme [9] focus on the contribution of social support in governing individual health either cognitively or physically.

Besides, self-esteem, as part of the major developmental issues faced by adolescence [10], has
been critical factor to affecting one’s psychological well-being. According to Bednar, Wells and Petersen [11], high self-esteem is correlated with low psychological distress, and Solomon [12] mentioned that high self-esteem is able to reduce the tendency of acting defensively as well as cognitive distortion. However, social interaction or interpersonal learning is viewed as source and comprehension for development of self-esteem and in turn to determine individual’s psychological functioning.

Given this, depression in late adolescence is in need to be studied and its contributing factors comprising social support, cognition which represented by dysfunctional attitudes in this study, and self-esteem are relevant to be investigated in this phenomenon in Malaysia context. As such, relationship among all these variables could be concluded in moderating and mediating effects whereby dysfunctional attitudes and self-esteem play the roles of moderator and mediator in the relationship between social support and depression in late adolescence. This allows clearer relationship among these variables and examining the roles of dysfunctional attitudes as well as self-esteem for the importance of psychological treatment or counseling purpose.

Taken together, integration of Beck’s Cognitive Theory [13] [14] [15] [16] as well as Cohen and Wills’s Social Support Model [9] [17] has been accounted for in establishing the present model of study which was supported by the view of Sacco and Vaughan [18] whereby social support is conceptualized as a factor correlated to depression and at the same time cognitive component plays a role in perceiving the social or environmental events.

2 Methodology
Confirmatory factor analysis was employed to enquire into the structural validity of findings for the present study assessed by the four abovementioned questionnaires. In pilot study, each of these questionnaires was investigated its structural validity of findings followed by the improvement whereby insignificant items were omitted from the questionnaire for time 2 study.

In light of the purpose of inspecting the psychometric properties of the questionnaires, data has been amassed from a total of 83 late adolescent subjects (30 males and 53 females) at two local secondary schools in Klang Valley for pilot investigation purpose. The internal consistencies of the subscales of questionnaires are moderately high ranging from 0.648 to 0.874 in alpha cronbach’s coefficients, divulging the moderately high reliability of findings.

2.1 Subjects
In the current fact-finding, a total of 522 form six students and foundation program students with age ranging from 17 years to 23 years were taken from local secondary schools and a university in Klang Valley respectively. Of the entire number of subjects, 51.7% were female as well as 78.6% were in ages between 18 and 19 years.

2.2 Assessments
Interpersonal Support Evaluation List (ISEL), is a 40-item self-report questionnaire with 4-point likert scale developed by Cohen, Mermelstein, Kamarck and Hoberman [19] to assess the perceived social support that consists of four factors of support including belonging, esteem, appraisal and material. Higher scores of ISEL indicate higher perceived social support.
Dysfunctional Attitudes Scale (DAS), Weissman and Beck [20] has developed DAS for the purpose of assessing a set of rigid and perfectionistic beliefs of respondents in terms of vulnerability, success-perfectionism and social approval. Originally, there were total 40 items in DAS with 6-point likert self-report format. The higher score of DAS, the higher dysfunctional attitudes of an individual.
Rosenberg’s Self-Esteem Scale (RSES), that consisted of 10 items with 4-point likert scale has been developed to assess respondent’s self-confidence and self-deprecation. Respondent with higher score of RSES was regarded as higher in self-esteem.
Beck Depression Inventory (BDI), the originally 21-item BDI with 4 options for each item has been developed to assess severity of depression symptoms from the aspects of psychology and somatic. To be culturally fit in Malaysia context, the last item has been omitted from the original BDI for the present study. Higher score of BDI indicates more severe of the depressive symptoms one has.

2.3 Procedure
Subsequent to coming by permissions from authorities and schools’ principals, the subjects were assessed in their classrooms accordingly. In each class, subjects have been distributed questionnaire sets and given 40 minutes to answer the
questionnaire after giving a briefing on the purpose of study by researcher. The subjects have been advised to answer the questionnaire without discussion with others as the responses to each item of questionnaire should describe the individual respondents at best.

3 FINDINGS
Mean dissimilarities in subjects’ depression by social support, dysfunctional attitudes and self-esteem have apparently occurred. At the significance level of 0.001, high and low social supports have significantly distinguished each other in contributing to the mean of depression, \( t(520) = 6.169, p<0.001 \), with which high social support affects appreciably lower mean of depression. Akin to this, subjects’ high self-esteem has been discovered to be markedly divergent from low esteem in determining lower depression mean, \( t(520) = 11.276, p<0.001 \). As contradict to social support and self-esteem, high dysfunctional attitudes of subjects which is significantly disparate to low dysfunctional attitudes with \( t(520) = -7.159, p<0.001 \), has affected higher depression mean in the same direction. These results, hence, convey that those with low social support or self-esteem, or high dysfunctional attitudes could be experiencing significantly higher depression, whereby in-depth scrutiny in the relationships amongst the said variables should be directed.

Given that the present exploration has hypothesized the moderating role of dysfunctional attitudes in the predictive relationship between social support and depression that is mediated by self-esteem in late adolescence, a moderated mediation model investigation has been conducted by using multiple regression.

As displayed in Table 1, depression is remarkably predictive of self-esteem, \( B = -0.737, p<0.001 \), as well as the interaction between social support and dysfunctional attitudes as moderator has significantly predicted depression after the entering of self-esteem as a mediator in this model, in which it has been changed from \( B = -0.005, p>0.05 \) to \( B = -0.737, p<0.001 \). Nevertheless, the abovementioned interaction, with \( B = -0.002, p>0.05 \), could not predict self-esteem which is the mediator in the model. For this reason, the null hypothesis was accepted and revealed that the predictive relationship between social support and depression which mediated by self-esteem, was not moderated by dysfunctional attitudes, as demonstrated in Figure 1.

| Table 1 Moderated Mediation Test: Moderating Role of Dysfunctional Attitudes in the Relationship among Social Support, Self-Esteem and Depression |
|--------------------------------------------------|-----------------|-----------------|
| \( y: \text{Depression} \) | \( y: \text{Self-Esteem} \) | \( y: \text{Depression} \) |
| \( B \) | \( B \) | \( B \) |
| Intercept | 12.550 | 8.957 | 19.149 |
| SS | .036 | .255 | .224 |
| Dys | .706 | .075 | .762 |
| SS x Dys | -.005 | -.002 | -.006 |
| SES | -.737 | *** |

Note. ***p<0.001; **p<0.01. Standardized Beta coefficients before the entering of Self-Esteem as the mediator in the model were shown in parentheses.

Fig.1 Path Diagram for Moderated Mediation Model with Dysfunctional Attitudes as Moderator and Self-Esteem as Mediator in the Relationship between Social Support and Depression

In turn, the self-esteem has been studied its moderating role in the predictive relationship between social support and depression which mediated by dysfunctional attitudes. By using multiple regression, Table 2 shows that depression has meaningfully been predicted by dysfunctional attitudes, \( B = 0.186, p<0.001 \), while the interaction between social support and self-esteem as a moderator has been an appreciable predictor to dysfunctional attitudes as well, \( B = -0.015, p<0.01 \). With the entering of dysfunctional attitudes as a mediator in the model, the interaction between social support and self-esteem has once again demonstrated significant Beta coefficient, that is \( B = 0.011, p<0.05 \) compared to the previous \( B = 0.015, p>0.05 \). Thus, hypothesis was accepted that self-esteem played a striking moderating role in the predictive relationship between social support and depression that mediated by dysfunctional attitudes. Subsequently, this finding was further investigated, by implementing multiple regression as well, to test the applicability of this moderated mediation model to those with high and low self-esteem.

| Table 2 Moderated Mediation Test: Moderating Role of Self-Esteem in the Relationship among Social Support, Dysfunctional Attitudes and Depression |
|--------------------------------------------------|-----------------|-----------------|-----------------|
| \( y: \text{Depression} \) | \( y: \text{Dysfunctional Attitudes} \) | \( y: \text{Depression} \) |
| \( B \) | \( B \) | \( B \) |
| Intercept | 82.325 | 52.900 | 72.479 |
| SS | -.352 | -.141 | -.378 |
| SES | -.154 | -.753 | -.686 |
| SS x SES | .008 | -.015 | .011 |
| Dys | .186 | *** |

Notes. ***p<0.001; **p<0.01. Standardized Beta coefficients before the entering of Self-Esteem as the mediator in the model were shown in parentheses.
Analyses have also shown that the interaction between social support and low self-esteem has not been a conspicuous predictor to dysfunctional, $B = -0.028$, $p>0.05$, whereas social support interacted with high self-esteem has significantly predicted dysfunctional attitudes with $B = -0.031$, $p<0.05$.

Moreover, to those with high self-esteem, social support has contributed 63.0% of the total variance of dysfunctional attitudes which is reported higher compared to that of low self-esteem subjects, 34.7%. This has been given meaning that social support is more strongly correlated with dysfunctional attitudes for those having higher self-esteem. Therefore, the model is applicable for those having high self-esteem instead of those with low self-esteem, as presented in Figure 2.

Commensurate with the momentousness of examining effect size and power of the research finding, Cohen [21] as well as Miles and Shevlin [22] have articulated that effect size and power need to be tested in order to identify the power or probability of the result in yielding powerful enough conclusion which could be generalized among the samples, with which at least 80% prediction power is recommended. In accordance with this notion, divulged by the regression model and its $R^2 = 0.343$, the effect size for the current investigation has methodically been calculated, as presented below:

$$ES = \frac{R^2}{1 - R^2} = \frac{0.343}{1 - 0.343} = 0.522$$

With reference to Cohen [21] [22], values of 0.35 and above are categorized as large effect size. In this case, 0.522 has apparently demonstrated its large effect size of research finding where 38 subjects are actually enough to attain 80% prediction power [21].

As a consequence, the discovery of this study that employs 522 respondents can convincingly be generalized in the said community.

### 4 Discussion and Conclusion

According to Wu and Zumbo [23], mediation and moderation are theories in developing and understanding a causal relationship in which mediator is a third variable that alters the strength of causality in order to establish a more comprehensive relationship between independent and dependent variables. As well, researchers for other studies have tried making their efforts to articulate the differences between mediation and moderation [24] [23]. More specifically, Baron and Kenny [24] as well as Muller, Judd and Yzerbyt [25] have shown that combination of mediation and moderation in a research model yielded more in-depth understanding in the relationship between predictor and criterion. Such a model has been recommended for studies of more complex relationship among variables.

The present inspection has unambiguously expressed findings that late adolescents with high self-esteem have been described as more appropriate group in discussing this phenomenon that involves dysfunctional attitudes as mediator. This has been an addition to the Cognitive Model of Depression by Beck [26] which contains the method of moderated mediation developed by Baron and Kenny [24].

Undoubtedly, according to the Beck’s Cognitive Model of Depression [26], dysfunctional attitudes is a set of negative cognitive schema that provides mediating effect in an individual’s life events and depressive symptoms. The present study has precisely supported this statement albeit some research showed that dysfunctional attitudes played a moderating role instead of mediator in between social support and depression, such as study from Wise and Barnes [27] conducted on 49 normal college students.

Furthermore, Beck [28] emphasized that stress and negative life experience is actually not sufficient to evoking depression of an individual. Yet, negative cognitive schema which elicited by negative life events has been accounted for in developing depression.

Notwithstanding to the existing research that showed the significant mediating effect yielded by dysfunctional attitudes, this model could only be generalized on those with high self-esteem. This occurrence may be due to the explanation whereby people who have high global self-esteem may not as well be possessing high specific self-esteem that
could be fluctuated at any given time [29]. Its instability may cause higher vulnerability to depression, hence, dysfunctional attitudes has been viewed more appropriately describing this group of individuals, especially in late adolescence who are facing the changes of social relationships [30] may have higher unstable self which could contribute to the vulnerability in cognition.

Provided that self-esteem is somehow correlated with dysfunctional attitudes, the findings of Luxton, Ingram and Wenzlaff [31] showed that individual with higher dysfunctional attitudes has been demonstrating higher tendency in possessing unstable self-esteem. Hence, individuals with high self-esteem may also be holding high dysfunctional attitudes which has considerably been proven its prediction to developing depressive symptoms.

According to Neukrug [32], individuals with high self-esteem, may be the consequence of inferior feeling towards themselves, and resulted by the compensation through achieving planned goals. This given situation is called cognitive dissonance which unconsciously causes stress on an individual [33], and consequently weakens the strength of facing challenges as well as heightening dysfunctional attitudes resulted by cognitive dissonance [34].

The aforementioned explanation is even more applicable to late adolescents whose cognition has largely been developed throughout human developmental process, compared to that of children and early adolescents [35]. Being able to view issues from different perspectives, late adolescents may be more confident in their cognitive ability, which may in turn believe in their dysfunctional attitudes.

The present inspection has come with its implication in which examining the roles of cognitive and self components in a model is of necessity to the benefit of late adolescents’ psychological well-being where psychological treatment and programs could absorb the findings as important points in them for more effective outcomes.

Opposite to what may commonly be expected, high self-esteem individuals in late adolescence have to be paid heed to their emotional well-being too as their psychological states are not only explained by social support, but dysfunctional attitudes as well.

By the momentousness of social support on affecting individual psychological well-being, the findings of the present study has greatly agreed with the person-centered therapy’s view in which positive regards, interpreted as social support in this study, has been essential and vital component to promoting emotional well-being of individuals.

Nonetheless, the present exploration that conducted in cross-sectional method was unable to predict future depressive symptoms of late adolescents. Longitudinal study may be conducted in future in this case to further investigate the moderating and mediating effects of dysfunctional attitudes and self-esteem in explaining the prediction of social support to depression among late adolescents.

Hopefully, these findings would contribute to the society in some way which has been mentioned by National Mental Health Policy 1997 [3] in Malaysia to provide a basis in developing strategies and direction to those involved in any planning and implementation towards improving mental health, as well as to improve mental health services for population at risks of developing psychosocial problems.

References: