Correlation between Social Support and Depression: A Study with Adolescents in a Rural City in Indonesia

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Abstract: Depression that goes undetected for a long period of time may cause serious problems for adolescents, such as suicide. Stress that leads to depression is commonly associated with interpersonal relation with their closest people. Moreover, social support provided from their closest people is a protective factor which may mitigate depression in adolescents. This study aimed to identify relationship between social support and depression level among high school students in a rural area North Putussibau District, West Kalimantan, Indonesia, 724 respondents were selected by total sampling method. CASSS and PHQ-9 were employed as the instruments. Data were analyzed by Spearman Correlation. The findings suggest that there was a significant correlation between social support and level of depression among adolescents with negative direction of relationship. The higher social support which adolescents received, the lower their depression level would be. Authors recommend to improve social support and conduct courses of stress management in order to minimise stress in adolescence.

1 INTRODUCTION

Depression is a mood disorder characterized by feeling sadness, loss of interest, guilty and feeling worthless, sleeping problem, loss of appetite, fatigue, and concentration problem (World Health Organization, 2017). Depression may affect all people of all ages, sexes, and social and economy statuses, including adolescents.

In Indonesia, Basic Health Research/ Riskesdas (2013) revealed that 6% of population of individuals aged over than 15 years (approximately 14,000,000 people) in Indonesia were affected by mental health problems, which are referred to alteration of psychological condition including experiencing depression symptoms. It affected around 5.6% of adolescent population aged 15-24 years (Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan Republik Indonesia, 2013).

Stress, as precipitating factor of depression among adolescents, is associated with interpersonal problems with people around them. Adolescents perceived conflict with parents, peers, and fellows as their common source of daily stressor (46-82%) (Santrock, 2014). Another study discovered that adolescents’ relationship with parent and school fellows as the most common source of stressor shared among them, rather than their relationship with peer and fellow (Persike & Seiffge-Krenke, 2012). The studies implied that adolescents’ rapport with social support may affect their stress level.

Furthermore, social support is also thought to be the most important aspect in dealing with depression among adolescents. Intimacy with family, colleague, and teacher at school may mitigate stress in adolescent. Adolescent who is able to recognize that other people care for him would be able to manage his stress (Santrock, 2014). Murberg & Bru (2009) stated that teenager capable of employing social support properly would be able to maintain confidence and facilitate himself to use an adaptive coping strategy. Support provided by the close ones will help adolescent in dealing with stress. Review of 51 studies on relationship between social support and depression level revealed that there was a significant correlation between the two variables in both positive and negative direction. Positive direction of relationship implied that higher social support would result in higher depression level (Santini, Koyanagi, Tyrovolas, Mason, & Haro, 2015). Contrarily, the negative direction implied that lower social support received would result in higher...
depression level.

In Indonesia, a considerable number of studies about the relationship between social support and depression had been conducted although they involved older adults as participants, including studies conducted by Astuti (2013) that involved 72 older adults and by Saputri & Indrawati (2011) that involved 36 older adults. Both studies confirmed negative correlation between the two variables. On the contrary, Paramas et al. study (2015) on 233 elderly revealed a positive correlation between them. Rahmawati, Arneli, & Elita (2015) on 26 adolescents in correctional facility also identified correlation between them. Conversely, a study by Ping (2016) which involved 60 women in correctional facility revealed no significant correlation between social support and depression.

North Putussibau is a district with the highest population of high school adolescents in Kapuas Hulu, West Kalimantan that mounted up 1,308 people (Statistics Kapuas Hulu, 2016; Education and Culture Board of Kapuas Hulu District, 2017). Evaluation of social support and depression level among adolescents had never been conducted in this district. A pilot study conducted by authors through questionnaire revealed adolescents' interpersonal problem with their close person. There were records of suicide attempt among them, such as ingesting pesticide or other poisonous objects, self-harming, or hanged; albeit it rarely happened. The last known case was 15-year-old teenager hanged himself (Uncak.com, 2017).

2 MATERIAL AND METHODS

The study design was cross-sectional. This study aimed to identify relationship between social support and depression level among high school students in North Putussibau District.

Study sample was high school adolescents in North Putussibau District. The inclusion criteria were high school students of 2016/2017 academic year who consented to be involved in this study. The respondents were achieved through total sampling method. There were 3 questionnaires employed in this study, including questionnaire of participant demography (age, class, sex, and number of siblings). Children and Adolescent Social Support Scale for measuring social support/ CASSS (Malecki, Demaray & Elliot, 2000), and Patient Health Questionnaire-9 for evaluating depression level/ PHQ-9 (Kroenke, Spitzer & William, 2001).

Data were then undergone an editing process for checking completeness of answers, coding for keeping confidentiality purposes, processing for data input into software, and cleaning for re-confirming.

The study involved univariate and bivariate analyses. Univariate analysis was applied to identify distribution of both dependent and independent variables. Bivariate analysis of Spearman test was performed to determine correlation between dependent and independent variables. This study was conducted by complying with principles of research ethics, which include respect for human dignity, respect for participant’s privacy and confidentiality, justice, and assessing benefit and harm of the study.

This study has been granted with ethical clearance by ethical committee of Faculty of Nursing Universitas Indonesia.

3 RESULT

The study was conducted from May to June 2017 in North Putussibau by involving 724 participants. Result of univariate analysis of participant characteristics, social support, and depression level is presented below. The average age of participants was 16 years old, which was categorized as middle adolescence. The range age of participants was between 14 and 20 years old, indicated that participants were in phase of early, middle, or late adolescence.

Table 1: Description of Class, Sex, and Number of Siblings of High School Teenagers in North Putussibau (n=724).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>390</td>
<td>53.9</td>
</tr>
<tr>
<td>XI</td>
<td>334</td>
<td>46.1</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>292</td>
<td>40.3</td>
</tr>
<tr>
<td>Female</td>
<td>432</td>
<td>59.7</td>
</tr>
<tr>
<td>Number of siblings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-3</td>
<td>605</td>
<td>83.6</td>
</tr>
<tr>
<td>4-7</td>
<td>115</td>
<td>1.6</td>
</tr>
<tr>
<td>8-11</td>
<td>4</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Table 1 revealed that majority of participants in tenth grade (53.9%). Most of them were females and the only child of family or having 1 to 3 siblings. CASSS does not have specific category and its measurement is based on total answers completed by participants. If a participant mostly answered “occasionally” or over, then his social support would be classified as adequate. The table demonstrated that social support received by high school adolescents in total or per sub-variable was...
adequate.

Table 2: Description of Social Support Received by High School Teenagers in North Putussibau (n=724).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Min-Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total of Social Support</td>
<td>211.00</td>
<td>37.780</td>
<td>99-360</td>
</tr>
<tr>
<td>Parent’s Support</td>
<td>46.50</td>
<td>10.061</td>
<td>17-72</td>
</tr>
<tr>
<td>Teacher’s Support</td>
<td>41.00</td>
<td>9.673</td>
<td>12-72</td>
</tr>
<tr>
<td>Classmate’s Support</td>
<td>41.00</td>
<td>9.779</td>
<td>12-72</td>
</tr>
<tr>
<td>Close Friend’s Support</td>
<td>46.00</td>
<td>11.362</td>
<td>12-72</td>
</tr>
<tr>
<td>School Support</td>
<td>36.00</td>
<td>10.254</td>
<td>12-72</td>
</tr>
</tbody>
</table>

Median score of depression among adolescents in North Putussibau was 8 that indicated mild level of depression. Total score of PHQ-9 was categorized into five levels as follows: normal/minimal (0-4), mild (4-9), moderate (10-14), moderately severe (15-19), and severe (20-27). The level of depression is elaborated specifically in table 3.

Table 3: Description of Severity Level of Depression of High School Adolescents in North Putussibau (n=724).

<table>
<thead>
<tr>
<th>Level of depression</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal or Minimal</td>
<td>161</td>
<td>22.2</td>
</tr>
<tr>
<td>Mild</td>
<td>280</td>
<td>38.7</td>
</tr>
<tr>
<td>Moderate</td>
<td>177</td>
<td>24.4</td>
</tr>
<tr>
<td>Moderate Severe</td>
<td>81</td>
<td>11.2</td>
</tr>
<tr>
<td>Severe</td>
<td>25</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Table 3 described that majority of adolescents in North Putussibau were affected by mild level of depression. About 11.2% of participants were affected by moderately severe depression and 3.5% of them were affected by severe depression, which combined into 14.7% of total participants.

Following univariate analysis, bivariate analysis was applied to investigate the relationship between social support and level of depression by Spearman test. Spearman test was used since the data of both variables were not normally distributed (Kolmogorov-Smirnov < 0.05).

Table 4: Normality Test of Dependent and Independent Variables (n=724).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kolmogorov-Smirnov</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total of Social Support</td>
<td>0.000</td>
</tr>
<tr>
<td>Parent’s Support</td>
<td>0.000</td>
</tr>
<tr>
<td>Teacher’s Support</td>
<td>0.000</td>
</tr>
<tr>
<td>Classmate’s Support</td>
<td>0.000</td>
</tr>
<tr>
<td>Close Friend’s Support</td>
<td>0.000</td>
</tr>
<tr>
<td>School Support</td>
<td>0.000</td>
</tr>
<tr>
<td>Depression</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Correlation significance was represented by p value lower than 0.05. The table revealed that there was significant correlation between overall social support and depression level (p < 0.05). Specifically, three sub-variables of social support were significantly correlated with depression level; the sub-variables included support provided by parent, teacher, and classmate.

Table 5: Result of Bivariate Analysis of Social Support and Depression Level in High School Adolescents in North Putussibau (n=724).

<table>
<thead>
<tr>
<th>Spearman Test</th>
<th>p-value</th>
<th>Strength</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support-Depression Level</td>
<td>0.021</td>
<td>0.085</td>
<td>Negative</td>
</tr>
<tr>
<td>Sub-variable support: Parent’s Support-Depression Level</td>
<td>0.000</td>
<td>0.138</td>
<td>Negative</td>
</tr>
<tr>
<td>Teacher’s Support-Depression Level</td>
<td>0.002</td>
<td>0.114</td>
<td>Negative</td>
</tr>
<tr>
<td>Classmate’s Support-Depression Level</td>
<td>0.050</td>
<td>0.073</td>
<td>Negative</td>
</tr>
<tr>
<td>Close Friend’s Support-Depression Level</td>
<td>0.225</td>
<td>0.045</td>
<td>Positive</td>
</tr>
<tr>
<td>School Support-Depression Level</td>
<td>0.122</td>
<td>0.058</td>
<td>Negative</td>
</tr>
</tbody>
</table>

The three sub-variables had negative direction of correlation which implied that the higher support provided by parent, teacher, and classmate, the lower depression level in adolescents would be. There was also a finding of positive correlation between close friend’s support and depression level in adolescents which implied that the higher support provided by close friend, the higher their level of depression would be, although it was not significantly correlated (p > 0.05).

4 DISCUSSION

4.1 Participant Characteristics

The study result indicated that most of participants were attending tenth grade (390 participants, 53.9%). It implied that adolescents attending first year of high school were at higher risk of depression.

Transition from Middle School and High School is thought to be stressful experience due to changes occurred in individual, family, and school. The changes included changes in ideas, higher education environment, new teachers, and peer. First year of High School is a difficult situation for mostly students. It might be resulted from student’s dissatisfaction with school environment, lack of commitment, and dislike of new teachers which usually manifested as decline in academic performance (Santrock, 2014).
The average of participants’ age was 16 years old or middle adolescence. It demonstrated that younger adolescent population was at higher risk of depression. Stage transition from childhood to adolescence affected adolescents’ ability to adapt or unstable which rendered them vulnerable to depression (Tujuwale, Rottie, Wowling, & Kairupan, 2016).

Majority of participants were females (432 participants, 59.7%). Furthermore, this result confirmed that female teenagers were at higher risk of depression. Study review by Darmayanti (2008) of 14 studies which involved 5206 participants also confirmed this result. The study concluded that female teenagers were more vulnerable to depression. A study conducted by Ardiawan (2015) on 25 male teenagers and 25 female teenagers revealed that female adolescents had a higher level of depression.

Depression was mostly affecting female due to biological, environmental, hormonal, and psycho-social factor which resulted in earlier onset of depression in females than males. Hormon directly influences chemical substance that regulates emotion or mood. Onset of depression in females was resulted from a higher sensitivity toward their own feelings. Female was more likely to deal with problem by using her feeling than logic (Utami & Pratiwi, 2011).

### 4.2 Social Support

The study result revealed that 724 high school adolescents in North Putussibau received adequate support from closest people. This result coincided with study by Camara, Bacigalupe, & Padilla (2017) on 43 male teenagers and 37 female teenagers in Spain which described that although the closest people might become the stressor itself, adolescents realized that social support provided by closest people would improve their coping method in dealing with said situation.

Stress in adolescents is generally caused by their surrounding people, but at the same time they also need their support to cope with the problem. When a teenager does not receive the support he needs, he tends to look for support from familiar people such as parent and relative than health professionals such as therapist. From perspective of adolescent, trust is the most important factor in seeking for support in solving problem and it could be acquired from closest people than therapist. Adolescents perceived that they did not need to tell their problems to therapist (Camara et al., 2017).

In resolving problem, adolescents would experience phase of support-seeking behavior and acquiring help. There is a fundamental difference between female and male teenagers in seeking for support. Female teenager was more likely to try to acquire emotional support, such as by venting problem to her reliable friend, while male teenager was more likely to divert his attention from problem into activities and exercise (Camara et al., 2017).

Essentially, teenager requires social support from his close ones. Social support received might come as compassion, attention, appreciation, help, and tenderness from closest people that made adolescents feel loved, recognized, and respected (Kumalasari & Ahyani, 2012). When adolescent is accepted and respected positively, he inclines to develop positive attitude and better coping in solving a problem.

### 4.3 Depression

Adolescent’s depression should be treated properly since the symptoms would likely to continue until his adulthood. Depressive symptoms in adolescent is usually manifested in many ways, including tendency to wear dark-colored cloth, write poetries and listen to depressive-themed song, sleep problem such as unable to sleep at night or watch television until late, difficult to rise or attend classes, and lack of motivation which usually demonstrated as absence in class. Depression in adolescent may also emerge along with other problems, including behavioral problems, substance abuse, or eating disorder (Santrock, 2014). If the condition continues to occur, their daily functions may be altered.

The analysis result indicated that most of participants were affected by mild level of depression (280 participants, 38.7 %). This result was supported by Karnovinanda & Suciati (2014) which involved 122 teenagers which revealed that majority of participants were affected by depression (75.4 %).

The analysis also showed that a number of participants were suffering from moderately severe level of depression (11.2 %) and severe depression (3.5 %), or 14.7% in aggregate. This aggregate required special consideration since these two categories of depression necessitate medical attention, such as antidepressant and psychotherapy.

Common cause of undetected and undiagnosed depression in adolescents is the tendency of their closest people, such as parent, teacher, or friend to see their changing behavior as normal behavior. They admitted that they occasionally feel difficult to express their problems to the close ones for the reactions that may surface. Parents usually reacted
exaggeratingly toward the problem that their teenager should deal with, while friend tended to underestimate their problem (Santrock, 2014; Camara, Bacigalupe & Padila, 2017). This may complicate their stress which eventually leads to depression.

4.4 Relationship between Parent’s Support and Depression Level

The study result implied a significant correlation between parent’s support and depression level ($p < 0.05$). This result coincided with the study conducted by Purnomo & Supratman (2011) which identified that depression in adolescents was largely affected by parent’s role. Parenting has an impact on adolescent’s level of depression. Study by Sharma, Sharma, & Yadava (2011) on 100 parents and 100 teenagers revealed that there was positive correlation between authoritarian parenting and depression. It illustrated that the more authoritarian parenting the higher the risk of depression in adolescence would be. Conversely, there was negative correlation between permissive parenting and depression which indicated that the more permissive parenting would result in lower risk of depression. The study also revealed that adolescents with history of authoritarian parenting and permissive parenting had a higher risk of depression than authoritative parenting.

Hurlock (1991) in Purnomo & Supratman (2011) stated that parenting incorporated various aspects which should be enacted properly to avoid strain for children or generate problem between child and parent. Unmet desire and need, communication trouble, and education pressure may lead to depression among adolescents. Based on statements above, authors concluded that parenting had a pivotal role. Excessive restrain or liberation that parents put on their children may result in higher depression level. Applying authoritative parenting or establishing definite rule but still offering negotiation was proven to be effective in reducing stress among adolescents.

Parent may serve as either protective factor of depression or cause of the depression itself. Several types of parents who may cause depression among teenagers included depressive parent, emotionally distant parent, and parent with marriage or financial problem (Santrock, 2014).

4.5 Relationship between Teacher’s Support and Depression Level

The statistical analysis demonstrated that there was significant correlation between teacher’s support and depression level. It suggested that support provided by teacher may reduce depression level in adolescent. In this matter, teacher’s support became protective factor of depression. It was associated with longer time of interaction with teachers at school. Santrock (2014) described that teacher’s positive attitude might impact positively on adolescents. Teacher’s positive attitude is reflected by his enthusiasm, proper planning, providing equality of care, adaptive, compassion, flexible, and awareness of uniqueness in every teenager.

Teacher may help teenager in dealing with depression at school through numerous methods, including providing feedback for his academic performances, social skill and behavior, as well educating teenager in arranging plan and priority, developing capability in responding with changes in mood, ability to concentrate or on effect of medication, providing chance for social interaction, observing for suicidal ideas in adolescent, and communicating with parents (Crundwell & Killu, 2010).

Furthermore, it was explained that adolescent with depression was more likely to experience difficulty in daily functions; hence, it was necessary for teachers to use proactive strategies including monitoring development and providing positive feedback or positive reinforcement when a teenager performed his task properly. In case of adolescent who undergoes medication regimen, teacher is expected to recognize the medication effect, such as dry mouth, to allow the adolescent to drink as well facilitates him to go out of the class and take rest whenever he needs. Concentration deficit could be improved by allowing adolescent to record the learning process at class. Role of teacher does not only involve teaching but also ensuring security and safety of adolescent with depression at school (Crundwell & Killu, 2010).

4.6 Relationship between Classmate’s Support and Depression Level

The study results suggested that there was significant correlation between classmate’s support and depression level, while there was no significant correlation between close friend’s support and depression level in adolescents. Classmate and close friend are adolescent’s peers. Santrock (2014) described that peer had a huge influence for them. Peer also served as both protective factor and cause of depression.
The intriguing aspect of this study was positive correlation between close friend’s support and depression level which indicated the higher support provided by close friend, the higher their depression level would be. It might be resulted from times spent together with peer that perceived as meaningful experience for adolescents. Peer also play pivotal role in developing social skill for adolescents, but on the other hand, may became the source of stress, such as in case of bullying.

Bullying is reported to be able to generate anxiety and depression which increases the risk of self injury or suicide. A study conducted by Bowes, Joinson, Wolke, & Lewis (2015) which involved 6719 teenagers with history of bullying when they were 13 years old revealed that 3898 of them affected by depression five years later. Bullying is aggressive behavior by individual or particular group who possesses power greater than the victim. Examples of bullying include calling someone with improper name, spreading rumor, hitting, kicking, and so on. It should not be left unresolved since it may affect mental development and health in adolescent.

Moreover, Klomek et al. (2013) identified that bullying increased depression risk in male teenager and depression was the risk factor of bullying in female teenager. Bullying was reported to be able to aggravate anxiety and depression that also increase the risk of self injury and suicide. It also confirmed that presence of peer is very crucial for adolescent.

Apart from bullying, there are several conditions that may increase the risk of depression in adolescent, such as poor relationship with peer, having no close friend, lack of communication, rejection from peer, and romantic relationship problem. Contrarily, frequency of support provided by close friends may help adolescents in dealing with a problem. Expressing problem to close friend may facilitate adolescents in resolving his problem (Colderbank, 2009 & Santrock, 2011). Therefore, it can be concluded that sympathy of peer, close friend, or companion which is demonstrated by openness and allocating time to listen to adolescent’s problem may help in preventing depression among adolescents.

4.7 Relationship between School's Support and Depression Level

The analysis result suggested that there was no significant correlation between school support and depression level. This result contradicted with several studies which reported the impact of school environment on depression among adolescents. A study by Briere, Pascal, Dupere, & Janosz (2013) on 5262 teenagers revealed that school with proper social environment might reduce the risk of depression symptoms. Proper and poor school environment may increase or decrease the risk of depression in adolescent.

Study review by Kidger, Araya, Donovan, & Gunnell (2012) which involved 23 studies on correlation between school environment and emotional health in adolescent reported that school environment might have or have no impact on adolescent’s mental health. Based on the study review, it can be concluded that conditions affecting adolescent’s mental health included width of school building, ratio of student-teacher, quality of interaction, and safe and fair school environment. A number of studies suggested that there was significant correlation between school environment and adolescent’s mental health. It was possible since depression affected their perspective of school environment.

5 CONCLUSION

Authors concluded that there was a significant and negative correlation between social support and depression level among adolescents in North Putussibau. The negative correlation implied that the higher social support received by adolescent, the lower his depression level would be.

Adolescent is expected to fully utilize health services such as counseling provided by Public Health Office through Centre of Adolescent Care (Pelayanan Kesehatan Peduli Remaja/PKPR) in Health Center or counseling teacher. Discussion with parents about the importance of authoritative parenting, providing courses of management of adolescent with depression at school, and courses of stress management in new academic year and prior to National Examination are among the methods recommended for treating depression by providing support from closest people.

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