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Risk factors, protective factors, and mental health well-being among adolescents: A multiple mediator model

Ni Made Dian Sulistiowati
Division of Mental Health Nursing, Department of Nursing, Faculty of Medicine, Universitas Udayana, Indonesia and Department of Mental Health Nursing, Faculty of Nursing, Universitas Indonesia, Indonesia

Budi Anna Keliat
Department of Mental Health Nursing, Faculty of Nursing, Universitas Indonesia, Indonesia

Raden Irawati Ismail
Department of Psychiatric, Faculty of Medicine, Universitas Indonesia, Indonesia

Besral
Department of Biostatistics, Faculty of Public Health, Universitas Indonesia, Indonesia

I Wayan Darsana
Bali Psychiatric Hospital, Bali, Indonesia

I Ketut Dian Lanang Triana
Division of Mental Health Nursing, Department of Nursing, Faculty of Medicine, Universitas Udayana, Indonesia

***Abstract*---**Background: An individual naturally possesses risk factors that may develop as the stressors and protective factors that would affect their mental well-being. Aim: This study ought to explore the effect of risk factor (bullying, anxiety, stress, emotional issue, behavioral issue, hyperactivity, and issue with peers) and protective factor (self-esteem, family relationship, prosocial) on the mental health status among adolescents. Method: This was a cross-sectional study involving 240 junior high school students in the area of Denpasar City, Bali. Participants were asked to fill the research instrument using questionnaires. The SPSS 23.0 and smart PLS was employed to analyzed the collected data. Result: Findings revealed that the risk factor had delivered a negative and significant effect on the protective factor and mental health status. Further, statistical analysis also

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discovered the positive and significant effect of the protective factor on the mental health status. Protective factor also performed as a significant mediator that affected the influence of the risk factor's impact on the mental health status. Conclusion: The risk factor needs to be prevented and the protective factor is necessary to be enhanced to maintain the state of mental well-being among the adolescents.

***Keywords*---**mental health, protective factor, risk factor, mediator model.

Introduction

Each individual has a potency to experience various health issues that would affect their physical, psychological, social, and spiritual well-being. Maladaptive responses in managing the stressors may alter the state of mental well-being among the adolescents (Anniko *et al.*, 2019). Mental health issues in the adolescent population have been widely documented in several epidemiology studies in all over the world. American Psychiatric Association (APA) mentioned in their survey that individuals aged from 15 to 25 in United State of America had been experienced the psychosis episodes in their life annually (100,000 adolescents and young adults) (Goldstein & Azrin, 2014). Similarly, several studies also confirmed the prodromal symptoms occurrence among 81.4% adolescents aged between 12 to 15 years in Indonesia (Damanik et al., 2017).

Transition period in the adolescence could be quite vicious and may triggers mental health issues or illnesses. Biological, social, and psychological changes in this period, such as family relationship quality, life experiences, self-concept, and conflict management serve as essential risk factors and initiate the construction of protective factors among the adolescents. These protective dan risk factors possibly influence their mental well-being (Babić *et al.*, 2020; Liu *et al.*, 2019).

Several programs had been designed and directed to achieve the state of mental well-being among adolescents globally. World Health Organization stated that mental health care should be delivered in various health care settings, such as hospitals or primary health care providers. Community setting such as family, correctional institutes, and school institutions are also targeted as the area for mental health services. The mental health programs in the community are embedded with the physical, mental, and social activities to achieve the state of mental well-being among the adolescents (World Health Organization, 2005). In Indonesia, the promotive, preventive, curative, and rehabilitative mental health care services are intensively directed for the mental health improvement in the adolescent population.

This study was conducted in Bali Province, Indonesia. The data from the National Health Survey in 2018 had revealed that 4.3% adolescents aged between 15 to 24 years old (177,410) in Bali Province were vulnerable of mental and emotional health issues (National Health Ministry, 2018). An interview session in our pilot study had uncovered the smoking or alcohol drinking experimentation behavior, explosive anger issues, hopelessness, concentration issues, suicide ideation,

negative body image, frequent extreme worries or nervous feeling, lack of confidence in starting something new, and the tendency of self-isolation behavior in overwhelming situation among the adolescents. Therefore, the significance of this study was the investigation of the unknown risk and protective factor that influenced the mental health well-being among the adolescents.

Objective

This study ought to address six major objectives. The first objective was to analyze the correlation between the risk factor and mental health status among adolescents. This correlation would be investigated according to its negative correlation, lower risk factor produced higher mental health status and vice versa. The second objective was to identify and examine the effect of the risk factor on the protective factor. Subsequently, we wanted to study the correlation between the protective factor and mental health status among adolescents in the third objective. Including the role of the adolescent's protective factor, we also examined the indirect effect of the risk factor on the adolescent's mental health status in the fourth objective. The fifth objective was to identify the indirect effect of the risk factor through the mediator effect presented by the protective factor. Finally, we identify the factor that delivered dominant effect on the mental health status among adolescents in the sixth objective.

Method

Study Participant and Procedure

This quantitative and cross-sectional study conducted to identify the correlation between the risk factor, protective factor, and mental health status among the adolescents. The stratified cluster sampling was applied to adolescents from the ages of 10-15. The stratified cluster sampling employed to randomly pick the district, school, and class. There are two school on east Denpasar and two school on west Denpasar with total of 240 eligible study participants were then recruited on seventh and eighth grade. Data were collected from August 2018 to November 2019.

Study Instrument

Mental Health Continuum Short Form (MHCS-F). The mental health variable was measured by the Mental Health Continuum Short Form (MHC-SF) Questionnaire, which was developed by Keyes (2002). This scale consists of 14 question items measuring the mental health status through three major components: emotional, psychological, and social well-being. Each question item asks participants to indicate their mental health state on a Likert scale, anchored by the range of score from 0 to 5. The score of 0, 1, 2, 3, 4, and 5 referred to the response of once or twice, once a week, two to three times a week, almost every day, and every day, respectively.

The Rosenberg Self Esteem. Participant's self-worth perception was evaluated by the Rosenberg Self-Esteem Scale (RSES) Questionnaire, which was developed by Morris Rosenberg in 1965. Ten question items with four types of responses

(Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1) were included to measure the level of self-esteem among the participants. These question items were organized as favorable question items (four question items, item number 3, 5, 9, and 10) and unfavorable question items (six question items: item number 1, 2, 4, 6, 7, and 8). RSES Questionnaire has been widely adopted to measure self-esteem level in previous studies. We adopted the Bahasa Indonesia version of RSES Questionnaire from a study conducted by Triana, et al. (2019). The total score from the questionnaire ranged from 0 to 40, that eventually divided into two categories: low self-esteem: ≤ 20 and high self-esteem: > 20.

Index of Family Relations (IFR). The family relationship quality variable was measured by the Index of Family Relations (IFR) Questionnaire from Hudson (1993). IFR is a self-report measure of a family relationship quality. Triana, et al. (2019) had applied the Indonesian version of the questionnaire in their previous study. We adopted this version of questionnaire to evaluate the family relationship quality among the adolescents. IFR consists of 25 questions items with five types of responses (0 = never, 1 = seldom, 2 = sometimes, 3 = often, 4 = always) with the total score of 0 to 100. These question items were classified into favorable (item number 1, 2, 4, 5, 8, 14, 15, 17, 18, 20, 21, and 23) and unfavorable sections (item number 3, 6, 7, 9, 10, 11, 12, 13, 16, 19, 22, 24, and 25). The total score of > 50 signified a high-quality family relationship. Lower quality of family relationship indicated by the total score of ≤ 50.

Strength and difficulties questionnaire (SDQ). The Strength and Difficult Questionnaire (SDQ) was developed by Robert Goodman in 1997 to screen the pro-social capability. This questionnaire has been used by the National Health Minister and a study conducted by Satria (2018). The SDQ screens the pro-sociality domain through 25 question items. Five question items are evaluating the direct prosocial behavior as the protective factors. Each question is complemented by three Likert-Scale based responses: not true (score 0), somewhat true (score 1), and certainly true (score 2). The total score was classified into three categories: normal (score 6 to 10), borderline (score 5), and abnormal (score 0 to 4).

Bullying Questionnaire. This instrument was applied to collect the bullying behavior among the participants. The question items were developed according to an instrument that had been established by Tarshis & Huffman (2007), "*Peer Interaction*". Twenty-two question items with a Likert-Scale-based responses are provided (never=0, sometimes=1, often=2) to measure the bullying behavior. The total score ranged from 0 to 44 that classified into low and high bullying behavior with the total score of 0-16 and >16, respectively.

Depression, Anxiety and Stress Scale (DASS). DASS enrolls 21 question items that specifically divided into 7 depression, 7 anxiety, and 7 stress related question items to measure the degree of depression, anxiety, and stress among the participants. Each question is accompanied by four types of responses in Likert-Scale: never=0, sometimes=1, often=2, and always=3) with the total score of 0 to 21. The total score of 0-7, 10-12, 13-16, and >16 indicated the mild, moderate, severe, and extreme level of anxiety, respectively.

Data Analysis

The descriptive statistic and intercorrelation between variables were analyzed by SPSS 23.0. The inferential analysis then subsequently conducted by using the *Smart Partial Least Square* (*Smart PLS*) to address the study hypothesis. According to the findings from the PLS analysis, a structural model equation was then evaluated. Two fundamental evaluations were involved in this study: 1) measurement model (outer model) evaluation to know the validity and reliability of the latent variable measurement indicators, and 2) structural evaluation model (inner model) to investigate the model accuracy.

Discussion

Table 1 shown the descriptive statistic and correlation analysis. Figure 1 presents the study variable pathway diagram. Findings confirmed the negative and significant correlation between the risk factor and mental health status among the adolescents. Risk factors were also found to be positively and significantly associated with their mental health status.

There were eight indicators on the risk factor variable (X_1): bullying ($X_{1.1}$), depression ($X_{1.2}$), anxiety ($X_{1.3}$), stress ($X_{1.4}$), emotional issue ($X_{1.5}$), behavioral issue ($X_{1.6}$), hyperactivity ($X_{1.7}$), and peer relationship issue ($X_{1.8}$). Analysis revealed that peer relationship issue ($X_{1.8}$) and anxiety ($X_{1.3}$) had the lowest statistical mean of 3.44 and 11.67, respectively. Further, the cross-loading variable indicated the risk factor variable (X_1) (0.874) and behavioral issue (X_1) (0.513) as the strongest and weakest indicator, respectively.

Self-esteem ($Y_{1.1}$), family relationship ($Y_{1.2}$), and pro-social activity ($Y_{1.3}$) were analyzed in the protective factor variable (Y_1). Statistical analysis showed that pro-social activity ($Y_{1.3}$) and family relationship had the lowest and highest mean of 7.13 and 80.55, respectively. The cross-loading value subsequently signified that the indicator of self-esteem ($Y_{1.1}$) and pro-social activity ($Y_{1.3}$) was the strongest and weakest indicator with the value of 0.849 and 0.357, respectively.

The lowest and highest mean in the mental health variable (Y_2) was found in emotional well-being ($Y_{2.1}$) and psychosocial well-being indicator ($Y_{2.2}$), with the total of 9.16 and 19.11, respectively. Statistical analysis also discovered that the strongest and weakest indicator from the cross-loading value was the psychosocial ($Y_{2.2}$) and emotional well-being ($Y_{2.1}$), with the value of 0.898 and 0.818, respectively.

Table 1. Mean, SD, and Intercorrelation between the Variables

Variable/ Indicator	Mean	SD	1	2	3
Risk Factor (X_1)	54.39	28.57	-	-0.556**	-0.459**
Bullying ($X_{1.1}$)	8.12	6.67	0.658	-0.320	-0.288
Depression ($X_{1.2}$)	9.05	6.77	0.839	-0.488	-0.529
Anxiety ($X_{1.3}$)	11.67	8.69	0.837	-0.343	-0.306
Stress ($X_{1.4}$)	9.68	7.86	0.896	-0.453	-0.429
Emotional Issue $X_{1.5}$)	4.65	2.41	0.685	-0.439	-0.377
Behavior Issue ($X_{1.6}$)	3.55	1.56	0.435	-0.446	-0.204*
Hyperactivity ($X_{1.7}$)	4.23	1.56	0.565	-0.450	-0.274
Peer Relationship Issue ($X_{1.8}$)	3.44	184	0.393	-0.392	-0.307
Protective Factor (Y_1)	116.36	19.74	-0.556**	-	0.589**
SE ($Y_{1.1}$)	28.68	3.91	-0.496	0.650	0.488
Family Relationship ($Y_{1.2}$)	80.55	17.15	-0.525	0.966	0.563
Pro-sociality ($Y_{1.3}$)	7.13	1.88	-0.062	0.400	0.205*
Mental Health Status (Y_2)	41.60	15.35	-0.459**	0.589**	-
Emotional Wellbeing ($Y_{2.1}$)	9.16	3.92	-0.383	0.468	0.757
Psychosocial Wellbeing ($Y_{2.2}$)	19.11	6.85	-0.453	0.561	0.906
Social Health ($Y_{2.3}$)	13.33	6.68	-0.366	0.492	0.916

Note: * $p<0.05$; **$p<0.01$

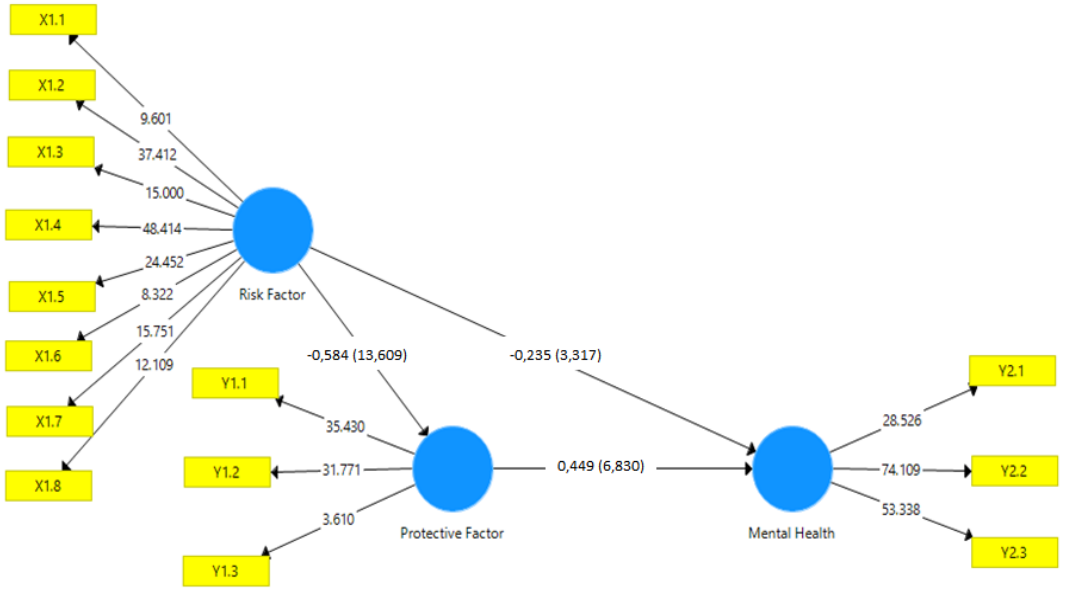

Figure 1. Pathway diagram of the study variable

Measurement Model Evaluation (Outer Model)

According to the outer model feasibility test, all indicators in this study had met the convergent validity criteria with the outer loading value of >0.50 and/or T-Statistic value of >1.96. The cross-loading value was also higher on the constructed variable for each indicator compared to the cross-loading value on other variables. In the cross-loading factor of $X._{1.1}$, the risk factor (X_1) was 0.590 higher than the cross-loading factor in other variables: protective factor (0.291) and mental health status (0.230). This finding signified that the study indicator had a good level of discriminant validity in constructing their variables. Statistical analysis also revealed the discriminant validity of the risk factor, protective factor, and mental health status was higher than 0.5 (AVE > 0.5). The composite reliability evaluation also showed that the value of the risk factor, protective factor, and mental health status variable was higher than 0.70, indicating them as the reliable indicators for the variable measurement. Thereby, each indicator in each latent variable was statistically confirmed as a valid and reliable instrument.

Structural Model Evaluation (Inner Model)

The Q^2 value was 0.9295. This value was close to the value of 1, that signified the criteria of goodness-fit model had been fulfilled by the proposed structural model. Further, this value indicated that the model explained the information from the collected data as much as 92.95%, 7.05% of the information would be elucidated by the errors or other unstudied variables.

Study Hypothesis Analysis

Statistical analysis revealed several major findings:

(1) Risk factor delivered negative and significant effect on the mental health status among the participants. This finding was confirmed by the negative value of the path coefficient (-0.235) and the value of statistical-t (3.317) that higher than the value of the t-table (1.96). These statical values inveterate the negative and significant effect of the risk factor on the mental health status among the adolescents. Lower risk factor would generate higher mental health status among the adolescents.
(2) Risk factor delivered negative and significant effect on the protective factor. The path coefficient had a negative value of -0.548 with the value of t-statistic of 13.609 that higher than the t-table value (1.96). Lower risk factor would enhance the performance of the protective factor.
(3) Protective factor delivered positive and significant effect on the mental health status. The path coefficient had a positive value of 0.449 with the value of t-statistic of 6.830 that higher than the t-table value (1.96). Thereby, higher quality of protective factor would generate higher mental health status among the adolescents.
(4) Protective factor (Y_1) mediated the risk factor effect on the mental health status. It secondarily brought significant and negative effect on the mental health status (Y_2). These finding was confirmed by the mediation statistical test that found the significant effect of the C, D, and A. Therefore, this finding revealed the empirical evidence that the risk factor (X_1) would modify the mental health status (Y_2) through the presence of the protective factor (Y_1). Lower risk factor that complemented by proper protective factor would improve the mental health status and vice versa.
(5) Protective factor (Y_1) was characterized by its partial effect as a mediator of the risk factor. This finding signified that the protective factor variable (Y_1) was not a determinant variable on the risk factor effect on the mental health status.

This study also conducted additional statistical analysis on the direct, indirect, and general effect of the variables on the mental health status. The path coefficient of the direct, indirect, and total effect of the risk factor on the mental health status was -0.235, 0.262, and 0.497, respectively. These values indicated that the indirect impact of the risk factor was greater than its direct impact. Further, this finding signified that the risk factor would modify the mental health status among the adolescents, however its indirect effect through the involvement of the protective factor had been delivered greater impact on the mental health status among the participants. Lower risk factors that complemented by adequate protective factors may construct higher mental health status. In the opposite situation, higher risk factor and the absence of protective factor would alter the mental health status among the adolescents. This finding subsequently addressed the final hypothesis in this study:

(6) Risk factor had the highest total effect compared to the protective factor on the mental health status. Hence, this finding highlighted the dominant effect of the risk factor on the mental health status compared to the protective factor.

Our findings revealed that a lower risk factor correlated with a higher mental health status among the adolescents. Bullying, depression, anxiety, stress,

emotional issue, and behavioral issues was included in the risk factor variable analysis. These risk factors delivered a significant and negative effect on the mental health status. This finding was parallel with a study conducted by (Praptikaningtyas *et al.*, 2019). They discovered that depression significantly correlated with the suicidal ideation and social functional declines in adolescent's life. Similarly, another study also confirmed that anxiety would cause more issues in the social relationships, that was also an essential part of mental health well-being (Verawaty & Widiastuti, 2020). Mental health status is highly affected by the social well-being. It is presented by the ability to adapt in new environment and establish effective communication with others. Hence, chronic anxiety without a proper medical assistance may prevent their capability in achieving optimal mental well-being. Further, bullying as an indicator from the risk factor may also generate a poor mental health status (Chang *et al.*, 2013; Cowie & Myers, 2017; Varela *et al.*, 2021).

Bullying has been generating severe anxiety and depression symptoms that interferes the emotional, physical, and social health in the adolescence period (Chu et al., 2019). Studies reported that people who experienced bullying had stated more anxiety symptoms than other due to the response of fight or flight. Maladaptive coping mechanism would lead to anxiety, depression, stress, and other issues that may trigger more serious emotional and psychological problems (Richard, 2002). If it remains unresolved, this situation would alter their mental personal development and escalate various psychological symptoms, such as constant hopelessness feeling (García-Moya *et al.*, 2019; Verhulp *et al.*, 2017). Health promotion activities are urgently required to create resiliency among adolescents in navigating their tough times and overcoming any challenges and difficulties in their life.

According to the second hypothesis, our finding reported that a lower risk factor would contribute to a higher protective factor. The presence of bullying and depression indicator in the risk factor may result in a lower level of self-esteem (Fitriah & Hariyono, 2019). A study had demonstrated the bullying as a major factor of the low level of self-esteem among the adolescents. A low level of self-esteem could interfere their skill in establishing a sufficient social connection with their peers (Saniya, 2019).

Previous findings and literature studies highlighted the sufficient effect of the protective factors on the adolescent's mental well-being (Muris, 2016). Adolescent with a high mental health status tends to show satisfaction and positive attitude toward their self-identity, establish effective communication and connection with the surrounding, perform their daily activity and errand adequately, and demonstrate sufficient adaptation strategies with their environment and stressors (Keyes, 2014). Further, a good level of psychological health would encourage an individual empowering themselves to achieve certain goals and deal with self-related issues, which in turn constructs effective coping strategies to manage the conflicts outside themselves (Triana, Keliat, Wardani, *et al.*, 2019). However, a poor skill in establishing sufficient social connections could decrease the social functional capability due to the inadequate coping strategies.

Effective social functional capability among the adolescents closely associated with the self-perception to adequately function in the social environment settings and their peer communities. Adolescents who constantly contribute to their surrounding tends to show normal behavior with no behavioral or emotional issues (Traylor *et al.*, 2016). This finding also indicated the need of mental health promotion activities to maintain the adolescent's social function and mental well-being.

This study also found that protective factor had brought a positive and significant effect on the mental health status. This finding signified that a higher protective factor correlated with a higher mental health status. Further, we also found a positive correlation between the level of self-esteem and mental health status. This finding was in line with a study conducted by Triana, Keliat, & Sulistiowati (2019) that discovered a significant correlation between the level of self-esteem and mental well-being. A higher level of confidence drives the capacity to enthusiastically think and discover ways to deal with the stressors. These adaptive coping mechanisms would protect adolescent's mental well-being (Triana, Keliat, Wardani, *et al.*, 2019). An adequate level of self-esteem develops adaptive defense mechanisms due to the effective coping strategies that affect positive behavior in adolescent's social life.

A lower protective factor generated a poor mental health status among the adolescents. This study evaluated several protective factors such as self-esteem, family relationship quality, and pro-sociality. Adolescent with a low level of self-esteem typically has a lack of confidence and negative perception about one self that commonly ends with anxious feeling, poor social function, depression, violent behavior, or suicide ideation (Hwang *et al.*, 2016). Several studies also identified the low level of self-esteem among children or adolescents with depression, anxiety, and other mental illnesses (Keane & Loades, 2017; Retnowati & Munawarah, 2009). These findings confirmed that adolescents with low level of self-esteem are vulnerable of mental health issues.

The family relationship quality also delivered a positive and strong influence on the mental health status. A high-quality family relationship would generate a higher mental health status. Adolescent tends to feel closer to their parents and family in early adolescence. In late adolescence, they become more emotionally separated with their family and establish closer connection with their peers. Similarly, a study from (Jou, 2012; G. F. Moore *et al.*, 2018) also confirmed the positive and significant correlation between the high quality family relationship and mental health well-being of each family members.

A higher level of prosocial also connected with a higher mental health status. Several studies had demonstrated the capability of the high pro-sociality in maintaining the psychological wellness (Herdiyanto *et al.*, 2016; Marbun & Setiawan, 2019). Pro-sociality constructs positive perception and attitude toward themselves and their surroundings, encourages better decision making process, and conducts a meaningful personal development (Herdiyanto *et al.*, 2016).

A lower risk factor together with a higher protective factor generated a higher mental health status. Finding also signified that the indirect effect of the risk

factor through the protective factor mediation would bring more significant impacts on the mental health status. Hence, a lower risk factor with a higher protective factor produced a higher mental health status among adolescents. In the opposite situation, a higher risk factor and a lower protective factor would generate a lower mental health status.

This finding also signified that protective factor would play a significant role prior its indirect influence on the mental health status. Similarly, previous study also discovered the effect of risk factors, such as stress, in declining the mental health status. However, the existence of an adequate perception of self-esteem and capability would assist an individual to cope with the stressors and maintain their mental health well-being, without significantly affected by the risk factors (Moore & Ramirez, 2016). In the other hand, a poor psychological health would initially alter the self-esteem level, then subsequently induced depressed feelings (Retnowati (2004) in Urbayatun & Widhiarso, 2012).

Protective factors such as self-esteem, family relationship quality, and pro-sociality are the supporting components of mental resiliency among the adolescents (Preston & Rew, 2022). This finding was parallel with the previous studies that highlighted the effect of self-esteem optimization and family/sosial system approach on the psychological symptoms and mental health well-being improvement (Padilla-Walker, Millett, & Memmott-Elison, 2020). Although a mental health issue may be found in the initial step, the adaptive coping mechanism would assist the construction of a proper self-control behavior and maintain the mental well-being (Harrison *et al.*, 2021).

We also discovered that the indirect influence of the risk factor through the protective factor on adolescent mental health was greater than its direct influence. This finding signified that the indirect effect of the risk factor through the protective factor mediation would bring a more significant impact on the mental health status. Although, adolescent is commonly having lower risk factors, inadequate protective factors would still place them in more risk of mental health issues. The indirect influence from the risk factors on their mental health status may occur due to the insufficient defense mechanism response on the risk factors. Adaptive coping mechanisms facilitated the adolescent's responses in confronting the difficulties in their daily life, thereby maintaining their mental health well-being (Konaszewski *et al.*, 2021). Further, previous studies also had discovered that risk factor affected the adolescent resiliency that would alter the psychological (Konaszewski *et al.*, 2021), emotional (Austin *et al.*, 2022), and social health (Arslan, 2021).

Adolescent population is vulnerable to physical, cognitive, and psychological changes. Thereby, presenting them as a population that prone to the mental health illnesses (Sulaiman *et al.*, 2021). Additionally, these changes have been placing them in difficult situation to accurately perceive the main source of their mental health issues. Inadequate protective factors would make the situation worse. Low self-esteem and poor family relationship quality put their mental health in more risk. It has been widely demonstrated that an individual with a high self-esteem would live with the positive mental health status. In the other hand, an individual with low self-esteem would struggle with poor mental health

status (Auttama *et al.*, 2021). Family supports also legates the proficiency to perform adequate conflict managements (Ngo *et al.*, 2021). The failures in maintaining the protective factors and lack of family support have been significantly correlated with the adolescence mental health and well-being.

Adolescence is a crucial period occupied with growth spurts and developmental changes. The failure of maintaining adaptive responses in confronting the risk factors in this period may trigger various mental health issues. The recent study found that the risk factors was delivered major influence on adolescent's mental health status. Several shreds of literature mentioned that adolescent's mental health had been constructed by three major components: emotional, psychological, and social wellness (Keyes, 2014). Most emotional issues among adolescents are generated by their poor emotional wellness. The long and unresolved emotional issues coupled with the maladaptive emotional regulation strategies or prevention would interfere the mental health well-being and their capability in achieving the goals of the developmental tasks in the adolescence period.

Bullying behavior, depression, anxiety, stress, emotional issue, and behavioral issue was included in the risk factor variable analysis. Several studies discovered the correlation between the risk factor and adolescent's mental health status (Al-Zawaadi *et al.*, 2021; Angelina *et al.*, 2021). Further, these studies also elaborated the effect of the risk factors on the severity level of the mental health illnesses. Additionally, several studies also highlighted the influence of the emotional issues, depression, anxiety, and stress on the mental well-being among the adolescents. These issues were considered as typical and dominant factors that affected the adolescent's mental health status (Clarke *et al.*, 2020; Vizard *et al.*, 2018). Risk factor delivers negative influences on the defense mechanisms among the adolescents (Brackenreed, 2010). Risk factor triggers adolescent's fragility and indecisiveness in taking decisions for themselves. This situation may affect their psychological balance due to the poor resilience (Collishaw, *et al.*, 2016). In the recent study, we found that risk factor had influenced the resiliency to take adaptive actions. Hence, these findings are accentuating the demand of risk factor management to control the risky behavior that may emerge in their surrounding environment.

Conclusion

According to these findings, we drawn several conclusions:

1. Risk factor delivered a negative and significant effect on the mental health status. Statistical analysis had confirmed that a lower risk factor contributed to a higher mental health status.
2. Risk factor brought a negative and significant impact on the protective factor. Statistical analysis confirmed that more lower risk factor would produce a higher protective factor.
3. Protective factor offered a positive and significant influence on the mental health status. Results found that a higher protective factor would increase the mental health status among the adolescents.
4. Protective factor performed as a significant mediator that affected the influence of the risk factor's impact on the mental health status. This

finding indicated that lower risk factor, together with the sufficient protective factors would maintain or increase the mental health status.
5. Risk factor through the indirect effect of the protective factor possessed a higher influence on the mental health status compared to its direct effect. This finding signified that the risk factor's indirect effect delivered a higher degree of influence on the mental health status among the adolescents.
6. Risk factor had the dominant influence on the mental health status compared to the protective factor.

Ethical Consideration

The study ethic approval was granted by The Research Ethics Committee of Faculty of Nursing, Universitas Indonesia through the ethical clearance certificate No. 265/UN2.F12.D/HKP.02.04/2018. This approval ensured the study is conducted in a responsible and ethically accountable way.

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Conflict of Interest

The authors have no conflict of interest related to the study, authorship, and/or article publication to declare.

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