

# Mental Health and Decision-Making Participation of Adolescent Orphans: A Pilot Study

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## Abstract

**Background:** Mental health has been brought to attention lately, with the increase of mental health problems during adolescence. In Indonesia, it is reported that one-third of adolescents develop mental health disorders. Childhood grief, separation from the family, child labor, or abuse affect the orphans' mental health, including their decision-making participation.

**Purpose:** As a pilot study, this study would like to investigate the mental health conditions and decision-making participation among orphans in one orphanage in Mojokerto district, East Java, Indonesia.

**Methods:** This cross-sectional study utilizes the Depression Anxiety Scale Youth version (DASS-Y) and Child and Adolescent Participation in Decision Making Questionnaire (CAP-DMQ). Thirty-five adolescent orphans of one orphanage in Mojokerto were recruited using convenience sampling. The frequency of respondents' mental health and decision-making participation were measured, and the mean differences between each group of sociodemographic factors were measured using the Mann-Whitney U test or the Kruskal Wallis test. Association between mental health and decision-making participation was calculated using Chi-square test.

**Results:** The results show that 40% of respondents were categorized as having mild mental health problems, including depression, anxiety, and stress. Mental health problems are mostly found in males (22.90%) and elementary school (20%). The participation of the orphans in decision-making is considered good, with a median of 25.5. The bivariate analysis concludes the association between anxiety, age, grade, and decision-making participation ( $p=0.024$ ,  $p=0.029$ ,  $p=0.029$ , respectively).

**Conclusion:** Taken together, attention to orphans, especially adolescents, and their problems are necessary to reduce the health discrepancies within these vulnerable groups. Broader respondents are needed to understand the complete picture of mental health conditions among Indonesian adolescent orphans, including late adolescents.

**Keywords:** anxiety, decision-making, depression, mental health, stress

## Introduction

The World Health Organization defines mental health as "a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. It is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape our world. Mental health is a basic human right. And it is crucial to personal, community, and socio-economic development" (WHO, 2022). In Indonesia, it was reported that 6% of the Indonesian population have mental health disorders, such as emotional and mood disorders, with only 10% of them

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having access to health facilities (Arjadi et al., 2016; ASEAN, 2016).

Mental health issues have become a main concern worldwide, as reported by UNICEF in 2019 that 166 million adolescents have mental health problems, including depression, anxiety, bipolar, eating, autism spectrum, conduct, substance use, idiopathic intellectual disability, attention deficit hyperactivity disorder (ADHD) and a group of personality disorders (UNICEF, 2021). It is reported that one-third of Indonesian adolescents (15.5 million) had mental health problems in 2022 (UGM, 2022).

During adolescence, changes in emotional, physical, and social conditions might affect the mental health of adolescents. This period is important for social and emotional development, which affects their ability for problem-solving, coping, personal relations decision-making, etc. There are four elements in decision-making participation, which are space, voice, audience, and influence. Every child and adolescent has a right to form and express their views, to be listened to, and if appropriated, their view can be acted upon (Lundy, 2007). Therefore, support from the environment, such as family and school, is important. However, some children and adolescents might not have this support, including orphans.

Humanitarian Relief Foundation reports that 140 million children are orphans, either paternal, maternal or double orphans. This number is estimated to increase by 10,000 children per day, with the highest number of orphans in Africa, Asia, Latin America, Eastern Europe and Central Asia (Nar, 2021). The number of orphans in Indonesia is still not well-recorded. In 2021, 191,696 children stayed in orphanages, with 8,882 paternal orphans; 40,321 maternal orphans, and 5,048 double orphans as reported by the Ministry of Social Affairs Republic of Indonesia (MoSA, 2021b). However, this number increased due to the COVID-19 pandemic. In 2021, the Minister of Social Affairs of Republic of Indonesia reported 4,043,622 orphans (paternal, maternal, and double orphans) received the social endowment fund (MoSA, 2021a). Unfortunately, there are several problems reported regarding orphanages, such as the physical building, the nanny or the mentor, lack of funding, physical and sexual abuse, etc. (Disassa & Lamessa, 2021; Rohta, 2021; Yousif, 2020). Indonesia Statistic Bureau (BPS) reported that there are 47 orphanages in Kabupaten Mojokerto with 2,472 orphans (Mojokertodistrict, 2022).

Orphans are related to mental health problems, emotional, and psychological distress. A study of 83 orphans in India showed that almost one-fifth of the respondents had behavioral and mental distress, one-third of them had emotional problems, and almost one-fourth of the respondents had poor conduct problems (Mahanta et al., 2022). Lack of affection is commonly faced by orphans; this can lead to attachment issues, low self-esteem, poor decision-making, and lack of decision-making

participation. The decision-making process is an important step in human life and can affect current and future life, thus participation in decision-making is part of human rights, including orphans. A study shows that poor decision-making at ages 10-11 is related to future behavioral problems. A study of 150 orphans and 150 non-orphans in Pakistan showed poor decision-making participation correlates with anxiety (Shafiq et al., 2020).

Unfortunately, there are no data regarding mental health and decision-making participation in Indonesian orphan adolescents. Therefore, this pilot study aimed to measure mental health conditions, especially depression, anxiety, and stress disorders, and decision-making among orphans in Mojokerto district, East Java, Indonesia. Its association with several sociodemographic factors such as age, sex, and education were measured to find predictive factors of mental health problems and decision-making participation.

## Materials and Methods

### Design

This cross-sectional study was conducted in June 2023, using the self-administered Depression Anxiety Scale Youth version (DASS-Y) and Child and Adolescent Participation in Decision Making Questionnaire (CAP-DMQ). This study was a pilot project for future investigation of orphans' mental health conditions.

### Sample and setting

The respondents of this pilot study were 35 early and middle adolescent orphans, aged 10-17 years old at one orphanage in Mojokerto district. This number was considered appropriate as a pilot study, where the sample size usually is not calculated (In, 2017). The information for consent was explained to the orphans and the head of the orphanage prior to the questionnaire distribution, moreover, informed consent was granted by the head of the orphanage as their guardian. The exclusion criteria were incomplete submission and orphans who rejected consent.

### Variable

The dependent variables of this study were mental health status (depression, anxiety, stress) and participation in decision-making. The independent variables included age, sex, grade, and stage of education.

### Instruments

The mental health problems, depression, anxiety, and stress were measured using Depression, Anxiety, and Stress Scale Youth version (DASS-Y) consisted of 21 questions with options in the Likert scale from not true to very true (0-3) with the score range 0-63 (Szabo & Lovibond, 2022). Child and Adolescent Participation in Decision Making Questionnaire (CAP-DMQ) consisted of 10

**Table 1. Mann-Whitney U and Kruskal-Wallis Test on Decision-Making Participations Based on Age, Sex, Education, and Grade**

CAP-DMQ Items	Lundy, 2007	Median (Interval)	Age H (p)	Sex Z (p)	Educa-tion H (p)	Grade H (p)
Information to make a decision is presented to me in a way I understand	Voice	2 (1-6)	7.099 (0.419)	-0.452 (0.651)	7.765 (0.021)	11.605 (0.170)
I am given the full information to make a decision	Voice	3 (1-5)	5.902 (0.551)	-0.802 (0.423)	0.570 (0.752)	6.848 (0.553)
I feel involved in making decisions in my life	Space	2 (1-6)	8.972 (0.255)	-0.209 (0.835)	0.567 (0.753)	10.981 (0.203)
I am given the opportunity to weigh up the pros and cons to make a decision	Space	2 (1-6)	6.663 (0.465)	-0.753 (0.451)	0.201 (0.905)	7.161 (0.519)
I have the ability to weigh up the pros and cons to make a decision	Voice and Space	2 (1-6)	15.940 (0.026)	-0.424 (0.671)	3.924 (0.141)	19.2 (0.014)
I can gather the right information to make a decision	Voice and Space	3 (1-5)	6.091 (0.529)	-2.102 (0.036)	5.390 (0.068)	8.821 (0.358)
Others ask my opinions when making decisions	Audience	3 (1-5)	13.172 (0.068)	0.000 (1.000)	4.154 (0.125)	14.988 (0.059)
Young people should be involved in the decision-making process	Audience	3 (1-4)	9.051 (0.249)	-0.870 (0.384)	8.0 (0.018)	12.916 (0.115)
When I make a decision, this is followed through by action that I want	Influence	3 (1-5)	10.285 (0.173)	-1.767 (0.077)	7.332 (0.026)	15.448 (0.051)
I make decisions on big things	Influence	2 (1-5)	6.279 (0.508)	-1.416 (0.157)	3.015 (0.221)	14.673 (0.066)
<b>TOTAL</b>		25 (17-40)	7.346 (0.394)	-0.349 (0.727)	5.345 (0.069)	16.729 (0.033)

Notes: bold indicates p value < 0.05.

**Table 2. Association between Sociodemographic Factors with Depression, Anxiety, Stress, and Decision-Making Participation**

Sociodemographic Factors	Depression X <sup>2</sup> (p-value)	Anxiety X <sup>2</sup> (p-value)	Stress X <sup>2</sup> (p-value)	Decision-making participation X <sup>2</sup> (p-value)
Age	16.252 (0.914)	26.334 (0.024)	14.606 (0.571)	100.945 (0.914)
Sex	1.664 (1.000)	1.438 (0.943)	1.144 (1.000)	10.809 (0.943)
Education	3.845 (0.600)	9.724 (0.086)	2.691 (0.943)	24.400 (0.771)
Grade	20.823 (0.543)	29.461 (0.029)	15.765 (0.943)	119.389 (0.600)
Decision-making participation	47.900 (0.114)	53.490 (0.029)	40.963 (0.029)	-

Notes: bold indicates p value < 0.05. P-values were calculated using Monte Carlo.

questions and was used to measure the decision-making participation of children and adolescents with options in the Likert scale from strongly agree to strongly disagree (1-6) with the score range 10-60 (O'Hare et al., 2016). The questionnaires were translated by two medical doctors and one social science expert. The reliability for depression was 0.709, anxiety 0.766, stress 0.655, and decision-making participation 0.613.

### Intervention

No intervention was performed prior data collection.

### Data collection

Data were collected at one orphanage in Mojokerto district. The election of the orphanage and the respondents used convenience sampling. Six medical doctors explained the questions to the small groups of respondents (4-5 respondents) before the respondents filled in the survey independently.

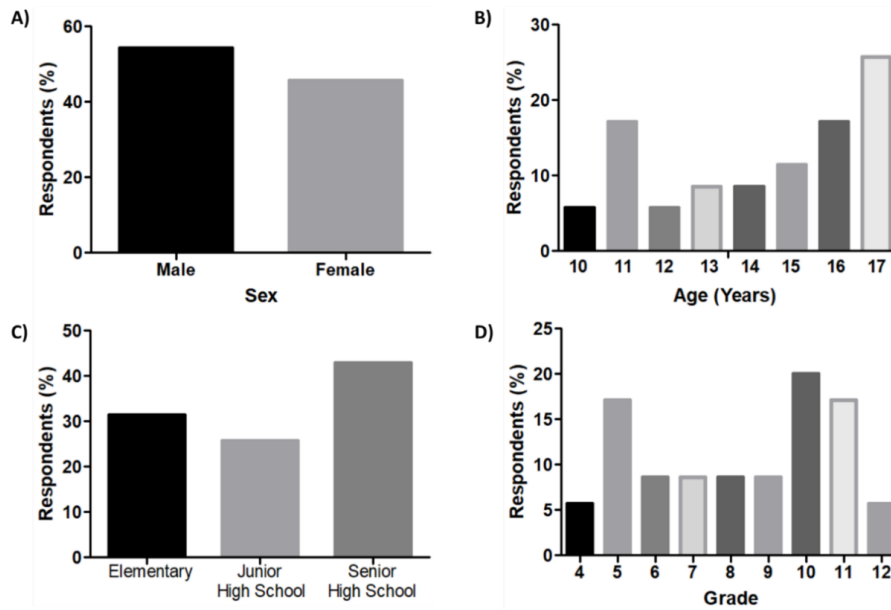


Figure 1. Characteristic of respondents. (A) Sex, (B) Age, (C) Education, (D) Grade

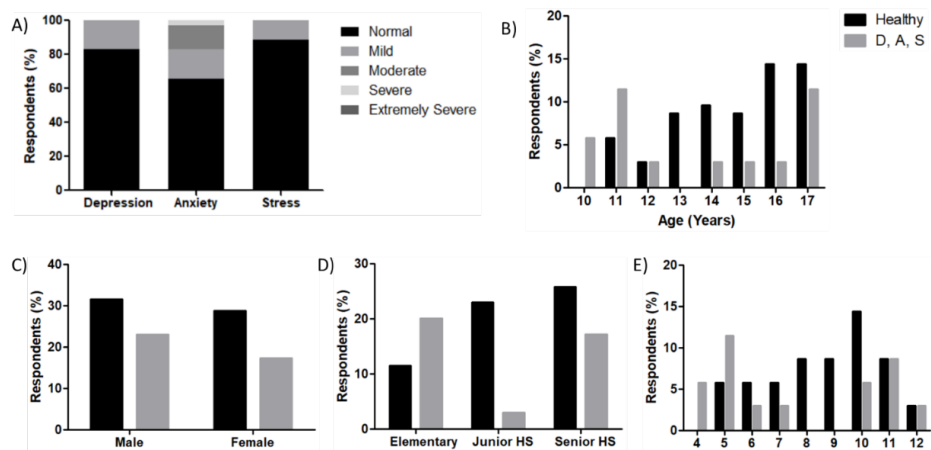


Figure 2. Mental Health (Depression (D), Anxiety (A), and Stress(S)) Condition. (A) Overall mental health status, (B) Incidence of mental health problems based on age, (C) Incidence of mental health problems based on sex, (D) Incidence of mental health problems based on education, (E) Incidence of mental health problems based on grade

### Data analysis

Only the complete submission was used for data analysis. The DASS-Y responses were calculated following the guidelines for each category, which were depression, anxiety, and stress. Total scores for each category were further obtained and divided into five groups of severity: normal, mild, moderate, severe, and extremely severe. The total score of CAP-DMQ was calculated, with a lower score indicating good decision-making participation. To understand the components of decision-making participation, CAP-DMQ was broken down into four elements of decision-making participations, space, voice, influence, and audience. The median of each

question in CAP-DMQ was further compared for each sociodemographic factor using Mann-Whitney U or Kruskal-Wallis test. The association between mental health with sociodemographic factors and decision-making participants was analyzed using SPSS 25.00 (IBM, Chicago, IL). Data were visualized using GraphPad Prism 5.0 (GraphPad Software Inc., La Jolla, CA).

### Ethical consideration

This study followed the declaration of Helsinki and was approved by the Ethical Committee of Faculty of Medicine, Universitas Airlangga number 127/EC/KEPK/FKUA/2023.

## Results

### Characteristic of Respondents

Thirty-seven responses were received and only 35 responses were valid and analyzed. Two responses were not included due to incomplete submission. The majority of the respondents were male (Figure 1A), with median age of 15 (10-17) years old (Figure 1B). During the study period, the median of respondents' education was junior high school (Figure 1C) at grade 9 (4-12, Figure 1D).

### Mental Health Status, Decision-Making, and Its Determinant Factors

The results showed that 40% of the respondents were categorized to have depression, anxiety, and stress, with anxiety being the most frequent mental disorder among the orphans (34.29%). The severity of anxiety was varied from mild to severe, while mild depression occurred in 17.14% of the respondents, and 11.43% of them had mild stress (Figure 2A). This finding was in a similar trend, with higher percentage in the current study, with WHO and I-NAHMS that found anxiety was the most prevalent mental health disorders among adolescents, with the most common symptoms including panic, worry, changes in mood, social phobia, etc. (UGM, 2022; WHO, 2021).

Moreover, the mental health problem was found highest at 11 and 17 years old (11.40 and 11.40, respectively), with males (22.90%) having a higher incidence compared to females (17.10%) (Figure 2B-C). Orphans in elementary school showed the highest incidence to have depression, anxiety, or stress, followed by senior high school and junior high school orphans (20%, 17.10%, and 2.90%, respectively, Figure 2D). In addition, based on the grade school, orphans in the grades 5th (11.40%) and 11th (8.60%) were found to have the highest incidence compared to other grades (Figure 2E). This finding was in a different trend as reported by WHO which concluded older adolescents were more likely to get mental disorders compared to the younger adolescents (WHO, 2021), while I-NAHMS did not find any differences between younger and older adolescents (UGM, 2022). This difference may be caused by the different status of respondents.

The total score of CAP-DMQ was from 17 to 40, with a median of 25, and a mean of 25.5. This indicated that the participation in decision-making of the orphans was good, with only three respondents having a total score of more than 30. When the CAP-DMQ was broken down into four elements of decision-making participations, namely space, voice, influence, and audience, the median ranged from agree (2) to somehow agree (3) which showed that the respondents' right to be listened, to be supported, to be considered, and to be involved in decision-making process was fulfilled. Using Mann-Whitney U test and Kruskal-Wallis test, there were mean differences of Q1 between orphans in elementary school, junior high school, and senior

high school students ( $p = 0.021$ ), where senior high school students more agreed that the information is presented in an understandable way. Moreover, the middle age adolescents and higher grade more agreed that they can consider both the positive and negative aspect to make a decision (Q5,  $p = 0.026$  and  $p = 0.014$ , respectively). Interestingly, female orphan adolescents were more likely to be able to collect information to make the decision (Q6,  $p = 0.036$ ). Orphan adolescents in senior high school and elementary school more agreed on child participation in decision-making than those in junior high school (Q8,  $p = 0.018$ ). They also more agreed if their decision is followed with action (Q9,  $p = 0.026$ ). Overall, there were statistical differences in total score of decision-making participations based on grade, where the students studying in grade 11 and 12 were more likely to have lower score or having good participations in decision-making (Table 1).

Moreover, its association with the sociodemographics of the respondents and decision-making participation was further analyzed using Monte Carlo simulation. The bivariate results showed that anxiety was associated with age, grade, and decision-making participation ( $p = 0.024$ ,  $p = 0.029$ ,  $p = 0.029$ , respectively), while stress was associated with decision-making participation only ( $p = 0.033$ ). There was no association between sociodemographic factors with depression and decision-making participation (Table 2).

## Discussion

Adolescence is divided into early adolescence (10 to 13 years), middle adolescence (14 to 17 years), and late adolescence/young adulthood (18 to 21 years and beyond). With this broad range of age, the problems faced by each stage might be different. During early and middle adolescence, physical changes, especially puberty, might cause anxiety among adolescents. Emotions, including the feeling of independency, curiosity, decision-making, and problem-solving, also develop during early and middle adolescence. While in late adolescence, it is more likely the physical development is completed while the emotions are still developing. Some problems during the earlier stage might affect further development (Backes & Bonnie, 2019).

Mental health disorders during adolescence are known to be correlated with impaired mental health problems in the next stage of age. It is also related to the poorer quality of life, and affects the decision-making process (Cáceda et al., 2014; Schlack et al., 2021). Changes during adolescence might give pressure to mental conditions (Backes & Bonnie, 2019), including the prone groups, such as orphans. Moreover, participation in decision-making is part of human rights, where every child and adolescent has the right to express their view, to be listened to, and if appropriate, their view taken into action. Therefore, it is important to investigate orphans' participation regarding their life, which will affect



their future (Lundy, 2007).

This study showed that anxiety was the most common mental health problem among the respondents with an incidence of 34.29%. This finding was in a similar trend, with higher percentage in the current study, with WHO and I-NAHMS finding anxiety was the most prevalent mental health disorder among adolescents, with the most common symptoms including panic, worry, changes in mood, social phobia, etc. (UGM, 2022; WHO, 2021). Interestingly, anxiety also found to be most common mental health problems among mothers in Indonesia (d'Arqom, 2021).

The incidence of mental health issues was associated with age, grade, and decision-making ability. This finding supported a study of 150 orphans and 150 non-orphans in Pakistan which showed anxiety was more common in orphans. However, our finding did not find association between sex and mental health issues, which was different from a study in Pakistan that found female orphans were more likely to develop anxiety compared to male orphans (Shafiq et al., 2020). Our findings were also in line with a study of 470 adolescent students in India that found the incidence of anxiety was higher compared with depression and stress, and it was higher in female adolescents with a peak age of 18 years old (Sandal et al., 2017). This was in line with our study that found an association between anxiety and age, but not depression and stress. This study also was in a different trend as reported by the WHO which concluded older adolescents were more likely to get mental disorders compared to younger adolescents (WHO, 2021), while I-NAHMS did not find any differences of mental health problems with age and sex (UGM, 2022). Moreover, our study was different from the finding of a study of 461 Malaysian adolescents that concluded younger age was associated with adolescent depression (Ibrahim et al., 2022).

In addition, an interesting study during the COVID-19 pandemic showed that even though depression and anxiety doubled during the pandemic, in the later pandemic phase, the incidence of two mental health problems was more common in older adolescents (Racine et al., 2021). Moreover, since the grade of the study was also in line with age, our study found an association between grade and anxiety.

Anxiety is also associated with decision-making in the general population and adolescents. Adolescents with behavioral problems are more likely to make poor decisions and delay aversion (Bentivegna et al., 2022). Moreover, a study in Pakistan found anxiety was associated with poor decision-making (Shafiq et al., 2020). Our study also found similar results, in which there was a significant association between anxiety and decision-making participation. The decision-making process is affected by several determinants, including cognitive and emotional processes, personal experience, personality, and social context (Hicks et al., 2013; Savioni et al.,

2023). Losing parents in early life, childhood grief, separation from the family, new living situation, child labor, or abuse are several factors that influence the emotional experience of orphans and might affect the decision-making process among individuals (Dorsey et al., 2015). Our findings showed that middle adolescents, female, higher education level, and higher grade had better, to some extent, decision-making participations.

As a pilot study, this study described the mental health disorders, which were depression, anxiety, stress, and decision-making participation among adolescent orphans in one orphanage in Mojokerto district. Despite its limitations, including a small sample size, and no comparison with non-orphans adolescents, this study showed the incidence of mental health problems among adolescent orphans that might affect their future lives and mental health.

## Conclusion

The increasing mental health problems among adolescents in the world, including Indonesia, prove that attention from policy-makers is needed for people with mental health issues. Childhood mental well-being is one of the determinant factors for good mental health during adulthood. Lack of affection among orphans might lead to poor decision-making and lack of decision-making participation. It is important to ensure orphans' right to be involved in the decision-making process that might affect their future. To reach health equity, attention to orphans and their problems is necessary to reduce the health discrepancies within this vulnerable group. Broader respondents are needed to understand the complete picture of mental health conditions among Indonesian adolescent orphans, including late adolescents.

## Declaration of Interest

The authors have no conflicts of interest.

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## Data Availability

The datasets are available upon request.

## References

- Arjadi, R., Nauta, M. H., Scholte, W. F., Hollon, S. D., Chowdhary, N., Suryani, A. O., & Bockting, C. L. (2016). Guided Act and Feel Indonesia (GAF-ID) - Internet-based behavioral activation intervention for depression in Indonesia: Study protocol for a randomized controlled trial. *Trials*, 17(1), 455. <https://doi.org/10.1186/s13063-016-1577-9>
- ASEAN. (2016). *ASEAN Mental Health System*. ASEAN. <https://asean.org/wp-content/uploads/2016/12/55.-December-2016->

- ASEAN-Mental-Health-System.pdf
- Backes, E. P., & Bonnie, R. J. (Eds.). (2019). The promise of adolescence: Realizing opportunity for all youth. *National Academies Press*. <https://www.ncbi.nlm.nih.gov/books/NBK545476/>
- Bentivegna, F., Flouri, E., & Papachristou, E. (2022). Reciprocal associations between affective decision-making and mental health in adolescence. *European Child & Adolescent Psychiatry*. <https://doi.org/10.1007/s00787-022-02096-2>
- Cáceda, R., Nemeroff, C. B., & Harvey, P. D. (2014). Toward an understanding of decision making in Severe mental illness. *The Journal of Neuropsychiatry and Clinical Neurosciences*, 26(3), 196-213. <https://doi.org/10.1176/appi.neuropsych.12110268>
- d'Arqom, A., Sawitri, B., Nasution, Z., & Lazuardi, R. (2021). "Anti-COVID-19" medications, supplements, and mental health status in Indonesian mothers with school-age children. *International journal of women's health*, 13, 699-709. <https://doi.org/10.2147/IJWH.S316417>
- Disassa, G. A., & Lamessa, D. (2021). Psychosocial support conditions in the orphanage: Case study of Wolisso project. *International Journal of Child Care and Education Policy*, 15(1), 12. <https://doi.org/10.1186/s40723-021-00089-3>
- Dorsey, S., Lucid, L., Murray, L., Bolton, P., Itemba, D., Manongi, R., & Whetten, K. (2015). A Qualitative study of mental health problems among orphaned children and adolescents in Tanzania. *J Nerv Ment Dis*, 203(11), 864-870. <https://doi.org/10.1097/nmd.0000000000000388>
- Hicks, P., Steele, J. C., & Spencer, S. M. (2013). Decision making processes and outcomes. *J Aging Res*, 2013, 367208. <https://doi.org/10.1155/2013/367208>
- Ibrahim, M. F., Wan Ismail, W. S., Nik Jaafar, N. R., Mohd Mokhtaruddin, U. K., Ong, H. Y., Abu Bakar, N. H., & Mohd Salleh Sahimi, H. (2022). Depression and its association with self-esteem and lifestyle factors among school-going adolescents in Kuala Lumpur, Malaysia [Original Research]. *Frontiers in Psychiatry*, 13. <https://doi.org/10.3389/fpsy.2022.913067>
- In, J. (2017). Introduction of a pilot study. *Korean J Anesthesiol*, 70(6), 601-605. <https://doi.org/10.4097/kjae.2017.70.6.601>
- Lundy, L. (2007). 'Voice' is not enough: Conceptualising Article 12 of the United Nations convention on the rights of the child. *British Educational Research Journal*, 33(6), 927-942. <https://doi.org/10.1080/01411920701657033>
- Mahanta, P., Das Thakuria, K., Goswami, P., Kalita, C., Knowler, R., Rajbangshi, M. C., Singh, S. G., Basumatary, J., & Majumder, P. (2022). Evaluation of physical and mental health status of orphan children living in orphanages in Sonitpur district of Assam: A cross-sectional study. *BMC Pediatrics*, 22(1), 722. <https://doi.org/10.1186/s12887-022-03785-2>
- Mojokertodistrict. (2022). *Number of homes and services handled (foster children) 2014 to 2022*. <https://satudatapalapa.mojokertokab.go.id/gl/dataset/jumlah-panti-dan-kelayan-yang-ditangani-anak-asuh/resource/072612dc-8e4d-4b32-ab8a-cb92c1788ec0>
- MoSA. (2021a). *Ministry of social affairs provides protection to 4 million orphans*. Ministry of Social Affairs Republic of Indonesia. <https://kemensos.go.id/kemensos-berikan-perlindungan-kepada-4-juta-anak-yatim-piatu>
- MoSA. (2021b). *Motivating children affected by Covid-19, minister of social affairs: You must not give up and desperate*. Ministry of Social Affairs Republic of Indonesia. <https://kemensos.go.id/beri-motivasi-anak-terdampak-covid-19-mensos-kalian-tidak-boleh-menyerah-dan-putus-asa>
- Nar, C. (2021). *2021 orphan report (INSAMER report, issue)*. INSAMER. <https://ihh.org.tr/public/publish/0/152/insamer-2021-yetim-raporu-eng-200425-n.pdf>
- O'Hare, L., Santin, O., Winter, K., & McGuinness, C. (2016). The reliability and validity of a child and adolescent participation in decision-making questionnaire. *Child Care Health Dev*, 42(5), 692-698. <https://doi.org/10.1111/cch.12369>
- Racine, N., McArthur, B. A., Cooke, J. E., Eirich, R., Zhu, J., & Madigan, S. (2021). Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: A meta-analysis. *JAMA Pediatrics*, 175(11), 1142-1150. <https://doi.org/10.1001/jamapediatrics.2021.2482>
- Rohta, S. (2021). Institutional care for the vulnerable children in India: The perspective of institutional caregivers. *Children and Youth Services Review*, 121, 105777. <https://doi.org/10.1016/j.childyouth.2020.105777>
- Sandal, R. K., Goel, N. K., Sharma, M. K., Bakshi, R. K., Singh, N., & Kumar, D. (2017). Prevalence of depression, anxiety and stress among school going adolescent in Chandigarh. *J Family Med Prim Care*, 6(2), 405-410. <https://doi.org/10.4103/2249-4863.219988>
- Savioni, L., Triberti, S., Durosini, I., & Pravettoni, G. (2023). How to make big decisions: A cross-sectional study on the decision making process in life choices. *Current Psychology*, 42(18), 15223-15236. <https://doi.org/10.1007/s12144-022-02792-x>
- Schlack, R., Peerenboom, N., Neuperdt, L., Junker, S., & Beyer, A. K. (2021). The effects of mental health problems in childhood and adolescence in young adults: Results of the KiGGS cohort. *J Health Monit*, 6(4), 3-19. <https://doi.org/10.25646/8863>
- Shafiq, F., Haider, S. I., & Ijaz, S. (2020). Anxiety,

d'Arqom, A., et al. (2023)

- depression, stress, and decision-making among orphans and non-orphans in Pakistan. *Psychol Res Behav Manag*, 13, 313-318. <https://doi.org/10.2147/prbm.S245154>
- Szabo, M., & Lovibond, P. F. (2022). Development and psychometric properties of the DASS-Youth (DASS-Y): An extension of the Depression Anxiety Stress Scales (DASS) to adolescents and children [original research]. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.766890>
- UGM. (2022). *Indonesia – National Adolescent Mental Health Survey (I-NAMHS)*. P. K. Reproduksi. <https://qcmhr.org/wp-content/uploads/2023/02/I-NAMHS-Report-Bahasa-Indonesia.pdf>
- UNICEF. (2021). *Ensuring mental health and well-being in an adolescent's formative years can foster a better transition from childhood to adulthood*. UNICEF. <https://data.unicef.org/topic/child-health/mental-health/>
- WHO. (2021). *Mental health of adolescents*. <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>
- WHO. (2022). *Mental health*. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- Yousif, N. Y. (2020). Problems of orphans in the institution of social welfare a field study in the Orphanage Institution in Mosul. *Journal of Tikrit University for Humanities*, 27(11), 530-554. <https://doi.org/10.25130/jtuh.27.11.2020.25>