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MORALITY BEFORE KNOWLEDGE

Quality of life of children with HIV/AIDS in meeting their developmental stages based on WHOQOL-100

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ABSTRACT
Background: The number of HIV/AIDS children in Indonesia is rising, impacting their low quality of life. World Health Organization Quality of Life-100 (WHOQOL-100) is necessary to assess their life perceptions. Improving their quality of life requires a lifespan perspective to understand their development. This study aims to describe HIV/AIDS children's quality of life using WHOQOL-100 and how it aligns with their developmental stages. **Methods**: This study employs a literature review method, as defined by Knopf (2006), to synthesize existing research on the quality of life of children with HIV/AIDS. It follows Neuman's (2014) process of identifying, filtering, and analyzing relevant studies using WHOQOL-100 as a framework. The review focuses on journals from 2014-2024, selecting studies that involve children under 21, to draw broad conclusions and identify gaps in research. **Findings**: The findings reveal that children with HIV/AIDS have issues such as pain, poor nutrition, sleep problems, cognitive issues, low self-esteem, and caregiver burden. Early ART treatment, strategies against social stigma, good financial management, adequate healthcare access, and spiritual support are crucial for the children with HIV/AIDS. Inadequate caregiving, financial oversight, mismatched spiritual support, social stigma, and health issues hinder their development. **Conclusion**: Social support from caregivers and government health services play a crucial role in improving the quality of life for children with HIV/AIDS. However, not all children meet their developmental stages, highlighting the need for caregiver support, peer interactions, and consistent health services. **Novelty/Originality of this Study**: This study offers a unique perspective on the quality of life of HIV/AIDS-affected children in Indonesia by utilizing the WHOQOL-100 to explore how developmental stages influence their well-being, highlighting the importance of early treatment, caregiver support, and addressing social stigma in enhancing their quality of life.

KEYWORDS: children; HIV/AIDS; quality of life; life span; WHOQOL-100.

1. Introduction

According to the Ministry of Health of the Republic of Indonesia (Ministry of Health of the Republic of Indonesia, 2019), HIV (Human Immunodeficiency Virus) is a "RNA class retrovirus that specifically attacks the human immune system". The Centers for Disease Control and Prevention (CDC, 2024) says that Acquired Immunodeficiency Syndrome (AIDS) is an advanced stage of HIV infection and is a set of diseases or conditions that cause immunity to decline. Without proper and routine treatment, people with HIV/AIDS are at risk of developing opportunistic infections that can hurt various organs such as the skin, digestive tract, lungs, and brain (Ministry of Health, 2019). One of the treatments for HIV/AIDS is antiretroviral therapy (ART). This therapy combines different types of drugs that can inhibit reverse transcriptase so as to prevent the virus from making copies of itself,

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inhibit proteases, and control enzymes in HIV that spread infectious viral particles (Gehlert & Browne, 2012).

The Ministry of Health of the Republic of Indonesia (2019) says that one of the ways of HIV transmission is HIV transmission from mother to fetus or baby. According to the Indonesian Ministry of Health (2019), 90% of children get HIV because it is transmitted from the mother. This transmission occurs when there is inflammation, infection, or damage to the placental barrier. The Indonesian Ministry of Health (2019) explains that there are methods to prevent mother-to-child transmission of HIV (PMTCT), namely with a comprehensive and sustainable approach from before pregnancy, during pregnancy, to after pregnancy, including handling babies born to mothers with HIV. This requires early detection or screening of HIV in pregnant women. In addition, children with HIV/AIDS need to be diligent in ART therapy so that their HIV does not experience worse health complications.

It is important for HIV/AIDS children to have a good quality of life so that they can manage their health conditions well and achieve well-being. Barsky (2010) said that quality of life is an ethical principle to promote general human well-being, including physical and mental health, happiness, spiritual satisfaction, family and social support, job satisfaction, satisfaction, a clean environment, and others. Adi (2013) also explained that the context of quality of life in conducting community interventions is the condition of life felt by individuals or communities. Quality of life is defined by the World Health Organization (WHO, 2012) as "an individual's view or understanding of their position in life influenced by the cultural context and value system in which they live". Their quality of life is influenced by intentions, desires, provisions, and concentrations that are considered important. This notion encompasses various aspects, including physical health, psychological state, level of independence, social relationships, personal beliefs, and interactions with the surrounding environment. Perez & Luquis (2008) also refer to the WHO for the definition of quality of life but they emphasize that spiritual or personal beliefs and culture have an important influence on an individual's quality of life, especially in the education of the individual's health recovery process.

One of the instruments that can be used to assess quality of life is the WHOQOL-100 developed by the World Health Organization (WHO) which stands for World Health Organization Quality of Life. The number 100 indicates that the first version of this instrument had 100 questions used to measure various aspects of quality of life. Each aspect of the WHOQOL-100 can be described as a description of behavior, condition, ability or potential, or subjective perception. These aspects encompass six domains as outlined by WHO (2012). The first domain is physical capacity, which includes factors such as pain and discomfort, energy and fatigue, as well as sleep and rest. The second domain is psychological well-being, covering positive feelings, cognitive functions such as thinking, learning, memory, and concentration, along with self-esteem, body image and appearance, and the presence of negative emotions. The third domain is the Level of Independence, which assesses mobility, the ability to perform daily activities, dependency on medication or treatment, and work capacity. The fourth domain focuses on Social Relationships, involving personal relationships, social support, and sexual activity. The fifth domain is the Environment, addressing aspects such as physical safety and security, the home environment, financial resources, access to healthcare and social services, opportunities to acquire new information and skills, participation in recreational or leisure activities, the physical environment (including pollution, noise, traffic, and climate), and transportation. Finally, the sixth domain is Spirituality, Religion, or Personal Beliefs, reflecting individual values and spiritual well-being.

Children with HIV/AIDS who initially have a low quality of life can experience improvements over time. According to the life span perspective, children's development takes place in different stages throughout their lives (Santrock, 2012), which are influenced by biological, cognitive, and socioemotional processes that shape their life styles and experiences. As such, HIV/AIDS children will also continue to grow and develop, opening up opportunities for them to experience improved quality of life in the future. For children

under 18, there are three main developmental periods. Early childhood, which takes place between the ages of 2-5 years, is the stage where children begin to learn independence, recognize letters, and spend time playing with peers. Middle and late childhood, aged 6-11 years, is characterized by the primary school period, where children begin to develop basic skills such as reading, writing, and arithmetic, and demonstrate self-achievement. Meanwhile, adolescence, occurring at ages 12-21, is characterized by puberty, which includes significant physical and hormonal changes. The development within each of these stages contributes to the potential for improving a child's quality of life.

According to the United Nations Program on HIV/AIDS (UNAIDS, 2023), the average HIV/AIDS epidemic data in Indonesia (aged 0-14 years) in 2010 was 9,100 people, in 2015 was 15,000 people, and in 2022 was 18,000 people. This shows that the number of HIV/AIDS children continues to increase every year and the quality of life is low. If this problem is not addressed, the number of HIV/AIDS children in Indonesia will continue to grow. HIV/AIDS children have the right to enjoy a quality of life physically, psychologically, and socially in accordance with their stage of development as affirmed in the 1989 Convention on the Rights of the Child (Susilowati, 1999). To improve the quality of life from low to high, these children need support in biological, cognitive, and socio-emotional development appropriate to their stage of development.

With that in mind, this discussion aims to look at the quality of life of children with HIV/AIDS during the developmental stages of childhood and adolescence by knowing the extent of previous research that addresses this issue. Research by Perumbil Pathrose et al. (2023) showed that although the overall quality of life of children with HIV/AIDS is better than other chronically ill children, the quality of HIV/AIDS children is lower compared to the general healthy population. Factors affecting their quality of life include low socioeconomic status, immunologic status, and advanced clinical stage. Research by Adefalu et al. (2018); Srinatania & Karlina (2021); Swastika & Masykur (2017); Yumi & Umma, Husnia Auliyatul Andarini (2018) show that HIV/AIDS children in Indonesia experience various problems, such as delayed HIV diagnosis, physical changes such as fatigue and frequent illness, and emotional impacts such as fear and sadness. They also often face social discrimination, economic difficulties for HIV care, psychiatric problems, and challenges in adhering to ART treatment. Research by Latipah & Milanda (2021) highlights that social stigma significantly affects their quality of life with the potential to lower the immune system. Research by Pramadhani & Allenidekania (2022); and Pratiwi et al. (2023) emphasized the importance of social support in improving the quality of life of HIV/AIDS children. This support can increase their self-confidence and motivate them to face life with HIV/AIDS. In Hartanti's research (2017); and Muharman & Jendrius (2019) explained that this main social support comes from the family. The obstacle faced by HIV/AIDS children is access to health services.

For this reason, the government can play a role by providing health programs and adequate information about HIV/AIDS. Previous research has explained the importance of discussing the issue of quality of life of children with HIV/AIDS so that in-depth analysis is needed to connect and compare the situation and perspective of the quality of life of children with HIV/AIDS in their developmental stages comprehensively. From the identification of previous problems, this writing research aims to describe the quality of life of children with HIV/ AIDS based on WHOQOl-100 and describe the quality of life of children with HIV/AIDS in fulfilling their developmental stages based on WHOQOL-100.

2. Methods

The writing of this study in this research uses the literature review method. According to Knopf (2006), literature review is a writing or work on a topic that is summarized and evaluated. One form of literature review is a case study. According to Neuman (2014), a case study is an in-depth analysis of a large amount of information about several units or cases for one period or across several time periods. According to Gerring (2004), case studies can be used in literature reviews as secondary data. Gerring continued that literature reviews

with case studies are used to integrate the results of individual studies and combine individual cases into a single data set. Based on this description, this research uses a literature review with a case study by accumulating and analyzing several cases to compare so as to find the answer to the researcher's question.

This research also uses academic journals related to the topic to be researched. The selection of journals as the main reference in the analysis of this research was carried out through several stages. First, journal searches were conducted using databases such as Scopus, ScienceDirect, PubMed, and Google Scholar. The keywords used were “quality of life” and “children living with HIV/AIDS” or in Indonesian “quality of life” and “children with HIV/AIDS”. The search was limited to journals published between 2014-2024. After that, journals were selected whose titles were related to the topic of quality of life of children with HIV/AIDS. Furthermore, journals that sampled children with HIV/AIDS under the age of 21 were selected, in accordance with Santrock's definition of adolescence. The selection continued by reviewing the journal abstracts, ensuring that the explanations were appropriate to the topic under study. Of the journals that had been screened based on the abstract, only journals that had a detailed description of the quality of life of children with HIV/AIDS and were relevant to be analyzed using the WHOQOL-100 assessment were selected as primary references. After the journals were selected, the analysis was carried out through several stages, namely: First, writing a case identification that includes the title, author, sample, and findings. Second, categorizing cases based on the age of the sample. Finally, conducting a case review using the WHOQOL-100 framework and the WHOQOL-100 assessment.

3. Results and Discussion

3.1 Case 1: Coping strategies of child caregivers

Case 1 is entitled quality-of-life (QoL) of Indonesian children living with HIV: The role of caregiver, burden of care, and coping by Putera et al. (2020). Thesample of this case is caregivers of HIV/AIDS children aged 2-18 years. The findings are that caregiver coping variables have an influence on children's quality of life. Caregivers use coping that focuses on emotions, namely reframing, passive appraisal, and spiritual support. This led the caregiver to be overprotective of her child, resulting in delays in child development, social limitations, and neglect.

Emotion-focused coping helps caregivers deal with stress, but can limit their ability to solve problems. As a result, caregivers tend to avoid dealing with their children's problems. This avoidance behavior contributes to delays in children's cognitive and emotional development. Social restrictions also occur when caregivers limit interactions to protect their children from stigmatization and discrimination. This overprotective behavior also reduces children's opportunities to develop social skills and resilience. This study emphasizes the need for interventions that support adaptive coping strategies. Psychoeducation for caregivers can help them balance emotional and problem-focused coping strategies, while community sensitization can reduce stigma so that children can engage in more social interactions. Effective interventions can improve the quality of life of caregivers and children. Future research could explore the cultural factors that influence the way Indonesian family caregivers cope with the situation. This understanding could form the basis for tailored support programs to optimize children's development.

3.2 Case 2: Accessibility and quality of adequate health services

Case 2 entitled quality of life of children with HIV infection by Adnyana et al. (2019), The sample of this case is HIV/AIDS children aged 2-18 years and their caregivers. The findings are that HIV/AIDS children get efforts from the government to prevent the spread of HIV infection, the application of HAART methods in HIV infection, and free medical supplies for HIV people. This case discusses that the older and longer the illness period of

children, the lower their quality of life. In addition, there is no relationship between the quality of life of HIV children and clinical and immune categories.

However, psychological factors such as stigma and discrimination were found to significantly impact children's emotional well-being. Social isolation and reduced participation in daily activities also contributed to lower quality of life. This research emphasized the importance of psychosocial support systems for children living with HIV. This study shows that community education programs can help reduce stigma and increase social acceptance. In addition, empowering caregivers with knowledge and emotional support can improve the overall well-being of children and their families. These findings underscore the need for a holistic approach to improve the quality of life of HIV-infected children.

3.3 Case 3: The influence of socio-demographics, clinical stage, and nutrition on the quality of life of children with HIV/AIDS

Case 3 is entitled health-related quality of life among HIV Infected Children and its association with socio demographic, clinical and nutritional variables: a comparative approach written by Ogbonna-Nwosu et al. (2022). The casesample was HIV/AIDS children aged 5-18 years and their caregivers. The control group consisted of non-HIV/AIDS children aged 7 years and above and their caregivers. The findings were that HIV/AIDS children did not go to school because they had to go to the hospital. Furthermore, children with upper class SES status had a lower quality of life and children with male gender had a lower quality of life. Furthermore, the higher the caregiver burden , the lower the child's quality of life and the higher the perceived illness, the lower the quality of life.

These results highlight the complex interplay between socio-demographic factors and the well-being of children with HIV/AIDS. Additionally, inadequate nutrition was found to exacerbate health complications, further impacting quality of life. Therefore, comprehensive care programs that address educational needs, caregiver support, and nutritional interventions are crucial for improving the overall well-being of these children.

3.4 Case 4: Older children with HIV/AIDS have higher quality of life

Case 4 is entitled health-related quality of life in Polish children and adolescents with perinatal HIV infection-short report by Zielinska-Wieniawska et al. (2020). This casesample is a comparison between 56 perinatal HIV/AIDS children aged 6-18 years (PHIV+ group) with a control group of 24 children who were exposed to HIV in the womb but not infected with HIV (PHEU group) and a control group of 43 children who were not exposed to HIV in the womb (HUU group). The findings were that the quality of life of children with HIV/AIDS improved systematically with age because there were objective improvements in clinical conditions from ARV treatment and coping strategies for parents and older children were more effective. The results of this case also showed that children with HIV/AIDS in CDC category C had worse physical functioning.

This suggests that effective ARV therapy plays a crucial role in improving the health-related quality of life of older children with HIV/AIDS. In addition, older children tend to have better emotional regulation and social adjustment, which contributes to a more positive outlook on life. These findings underscore the importance of continuous medical care and psychological support to optimize the well-being of children growing up with HIV/AIDS.

3.5 Case 5: Assessment of quality of life among children with HIV/AIDS in Uganda

Case 5 is entitled quality of life among perinatally HIV-affected and HIV-unaffected school-aged and adolescent Ugandan children: a multi-dimensional assessment of wellbeing in the post-HAART era by Nkwata et al. (2017). This casesample is a comparison between HIV/AIDS children and a control group of children without HIV since the womb (perinatal)

aged 6-18 years. The findings were that HIV/AIDS children have a low quality of life due to fatigue, learning disabilities, tendency to avoid school attendance because of the need to go to the hospital. They have low self-esteem due to strict treatment, care, and death of caregivers. HIV/AIDS children are able to get along with other children. They have access to health services. However, HIV-related stigma continues to adversely affect the child's quality of life.

This stigma often contributes to social isolation and emotional distress, further reducing their overall well-being. In addition, fear of discrimination can make children hesitate to adhere to treatment schedules. Addressing stigma through community education and psychosocial support is crucial to improving the quality of life of these children.

3.6 Case 6: Quality of life of HIV/AIDS children living in a specialized HIV/AIDS community

Case 6 entitled quality of life and psychosocial wellbeing among children living with HIV at a care home in Southern India by Lang et al. (2014). Thesample of this case is HIV/AIDS children aged 5-12 years and their caregiversat Sneha Care Home (SCH), Bangalore, India. The findings were that HIV/AIDS children in SCH had good health and quality of life due to the high level of support from SCH. Furthermore, the quality of life decreased as the child aged according to the child's report but in contrast to the caregiver's report. The physical health of HIV/AIDS children in SCH indicates that the maintenance of health services in SCH is appropriate.

These inconsistencies between children's and caregivers' reports suggest differences in perceived difficulties as children grow older. Older children may experience increased emotional and social pressures, which may affect their perceptions of quality of life. Therefore, personalized psychological support is essential to address the changing needs of children living with HIV/AIDS as they transition into adolescence.

3.7 Case 7: Effect of SES and clinical stage on children with HIV/AIDS

Case 7 entitled health-related quality of life in perinatally HIV infected children in the Netherlands by Cohen et al. (2015). Thesample of this case is perinatal HIV/AIDS children aged 8-18 years and have a lower SES compared to the average SES of the Dutch community. These children will be compared with a control group of healthy children who have the same age and SES as HIV/AIDS children.

The findings were that HIV/AIDS children performed worse on intelligence and information processing speed. School absenteeism due to clinic visits decreased their quality of life. However, there was no association between immunity and quality of life and age of starting cART was not associated with quality of life. However, there is multidisciplinary care by several experts for every HIV/AIDS child in the Netherlands. This comprehensive care approach helps address the educational and psychosocial challenges faced by these children. Despite lower SES, access to high-quality health care reduces health disparities. These findings highlight the importance of equitable access to health care in improving the quality of life of children with HIV/AIDS.

3.8 Case 8: Stigma of children with HIV/AIDS

Case 8 entitled HIV-related stigma and health-related quality of life among children living with HIV in Sweden by Rydström et al. (2016). Thesample of this case is perinatal HIV/AIDS children aged 8-18 years in Sweden. The findings were that HIV/AIDS children experienced low stigma related to negative self-image, worried about public attitudes, and worried about information disclosure. There is a negative relationship between HIV stigma and quality of life because children have difficulty in recognizing anticipated stigma. HIV/AIDS children also do not experience high internalization of stigma.

Based o the explanations of the eight cases, a table of cases was created, grouped by periods of child and adolescent development, namely early childhood to adolescence

consisting of case 1 and case 2, middle and late childhood to adolescence consisting of case 3, case 4, case 5 and case 6, and adolescence consisting of case 7 and case 8. The findings suggest that the social support system in Sweden can help reduce the impact of stigma on self-image. The communication and open education about HIV/AIDS in the community contributes to a decrease in the level of stigma. Raising awareness can improve the quality of life of children with HIV/AIDS.

3.9 Quality of life of children with HIV/AIDS based on WHOQOL-100

3.9.1 Physical capacity domain

In the physical capacity domain, there is an explanation of the aspects of pain and discomfort, energy and fatigue, and sleep and rest. From the three aspects, it can be said that children with HIV/AIDS need sufficient energy and satisfactory rest so that children do not feel fatigue in carrying out activities in their daily lives. To achieve this, children need help from caregivers to ensure that children get proper nutrition and adequate sleep by not giving a lot of workload and helping with children's school work.

In addition, to reduce the pain and discomfort of HIV/AIDS, the child needs effective ART treatment and discipline the child not to skip ART treatment. To achieve this, help from caregivers is not enough, so it needs help from the government, especially in the health sector, to provide adequate health services in order to find appropriate treatment for HIV/AIDS children. Collaboration between healthcare providers and caregivers is essential to maintain a child's physical health. Regular health check-ups and continuous monitoring of ART effectiveness can help prevent complications. In addition, community support programs can provide resources to assist caregivers in meeting children's physical needs.

3.9.2 Psychological domain

In the psychological domain, there is an explanation of the aspects of thinking, learning, memory and concentration, self-esteem, and body image and appearance. In the psychological domain, children with HIV/AIDS have delayed cognitive development and low self-esteem. To change this, children with HIV/AIDS need support from caregivers in the form of a parenting style that is not overprotective so that children can learn to have their own autonomy and have academic achievement which can then increase their self-esteem. In addition, children with HIV/AIDS need help from the government to make school policies that can meet the developmental needs of children with HIV/AIDS so that they are not left behind academically and the government needs to conduct counseling about HIV/AIDS so that children with HIV/AIDS can make friends with peers without having to worry about HIV/AIDS status.

Psychological interventions, such as counseling and cognitive behavioral therapy, can also help children build resilience and improve emotional well-being. Peer support groups can provide a safe space to share experiences and reduce feelings of isolation. In addition, educational programs that encourage a stigma-free environment are essential for promoting positive self-image and social inclusion.

3.9.3 Domain of level of independence

The level of independence domain describes the aspects of dependence on medication or care and work capacity. In the level of independence domain, children with HIV/AIDS are highly dependent on ART treatment, so children need to get this treatment as early as possible in order to reduce the risk of disease complications. However, there are some children who are not diligent in taking ART treatment, so it is necessary for the government to provide counseling about ART treatment to families of HIV/AIDS children.

In addition, *caregivers* need to discipline their HIV/AIDS children to take ART treatment to prevent disease complications. Furthermore, the working capacity of

HIV/AIDS children as students is very low. For this reason, HIV/AIDS children need help from the government to create school policies that can meet the developmental needs of children with HIV/AIDS so that they are not left behind academically. *Caregivers* also need to teach their children things related to academics to fill the child's academic void at school.

3.9.4 Social relationship domain

In the social relationship domain, there is an explanation of the social support aspect. Based on the results of the analysis, the social relationship domain is the most dominant domain of the other WHOQOL-100 quality of life domains. This is because social support, especially from caregivers, makes changes to the quality of life of children with HIV/AIDS in other domains. Children with HIV/AIDS are in the early stages of development so they need social support, especially from caregivers as the child's main social agent, to guide them to have an optimal development process. Depending on the caregiver 's parenting style towards children with HIV/AIDS, children can have high or low quality. A more detailed explanation can be seen in the following subchapters.

3.9.5 Environmental domain

In the environment domain, there are explanations regarding aspects of financial resources, health and social services: accessibility and quality, and opportunities to obtain new information and skills. In the environmental domain, one of the most dominant aspects in the quality of life of children with HIV/AIDS is the role of the government in providing health services and HIV/AIDS information counseling. This is because health services can make children's physical capacity better and information counseling can make children with HIV/AIDS and the general public know about HIV/AIDS so that HIV/AIDS stigma can be reduced.

In addition, meeting the needs of children with HIV/AIDS requires sufficient financial resources. For this reason, caregivers as responsible holders of financial resources need to oversee the use of financial resources in accordance with the needs of children. In some families there are families who have low SES so that assistance from the government is needed to allocate funds for the needs of children with HIV/AIDS.

3.9.6 Domain of spirituality/religion/personal beliefs

In this domain, it is explained that the coping strategies used by caregivers are emotion-focused coping . One form of coping is spiritual support. It can be explained that this spiritual support is not very helpful in overcoming the problems received by children with HIV/AIDS so that spiritual support makes the quality of life of children with HIV/AIDS decrease. In the domain of spirituality, few cases discuss it. There needs to be an increase in research that discusses the quality of life of children with HIV/AIDS in the domain of spirituality.

This is important because spirituality can influence emotional resilience and coping mechanisms. Understanding how spiritual beliefs influence perceptions of illness could lead to more effective psychosocial interventions. Future research should also explore culturally sensitive spiritual practices that may improve well-being.

3.10 Quality of life of children with HIV/AIDS in meeting their developmental stages based on WHOQOL-100

3.10.1 Early childhood-adolescence

The quality of life of children with HIV/AIDS in fulfilling the stages of child development in case 1 can be explained into several points. First, the caregiver has a demanding and overprotective parenting style, which makes his child with HIV/AIDS to keep his HIV/AIDS status a secret. The caregiver 's overprotective parenting style disrupts the child's cognitive

and socioemotional development because the child becomes dependent on the caregiver and cannot have their own autonomy. Second, families of children with HIV/AIDS also have low SES because caregivers leave their jobs to care for their children so that children have limited resources to fulfill their development. Thirdly, families of children with HIV/AIDS use spiritual support when experiencing problems so it can be said that children show cognitive and socioemotional changes that can affect their spiritual development. However, this spiritual support affects the quality of life of children with HIV/AIDS to be lower. Of the three stages of child development, case 1 has not met all three stages especially in socio-emotional development. To change this, caregivers need to change their parenting style. One of them is often having coping strategies that focus on overcoming problems, namely social support and mobilizing family.

The quality of life of children with HIV/AIDS in fulfilling the stages of child development in case 2 can be explained to several points. First, children with HIV/AIDS have cognitive development that is in accordance with their developmental stages as seen from the older the age of the child, the more they know information about HIV and the impact of HIV. This is due to the length of time the child has felt pain and the child understands more about HIV infection. With the cognitive development of children who are initially still curious to be able to think critically and logically make children understand what they are experiencing and the impact of their HIV status, especially the impact on social relationships. Second, the impact of HIV/AIDS makes children, especially older children, have difficulties in socio-emotional development due to barriers in social relationships and makes their quality of life decrease. Third, the quality of life of HIV/AIDS children is higher than other research cases because of efforts by the government in disseminating information about HIV, implementing HAART methods on HIV, and free medical supplies. These efforts tend to fulfill the biological development of children but these efforts have not been able to improve the quality of life of children with HIV/AIDS to the maximum, especially in socio-emotional development. Therefore, there is a need for efforts that can empower children so that they become more confident with their HIV/AIDS status and can have social relationships with others. In addition, there needs to be an effort to change the environment of children with HIV/AIDS into a friendly environment so that they can have social relationships with others without having to feel anxiety.

3.10.2 Middle and late childhood-adolescence

The quality of life of children with HIV/AIDS in fulfilling the stages of child development in case 3 can be explained into several points. First, HIV/AIDS children have a high severity of illness and have low nutrition. This makes the biological development of children unfulfilled because children should have good nutrition in order to get susceptibility to disease. Secondly, children with HIV/AIDS also have to go to the hospital so they have to leave school. School has an influence on children's development because it provides children with a source of new ideas to form their self-awareness. As a result, they become left behind in forming self-awareness and socializing, making the development of children with HIV/AIDS unfulfilled. Third, caregivers have an unsupportive attitude towards their children with HIV/AIDS. This trait can make the child's development unfulfilled because the child has no stimulus to do academic activities and can make unreasonable decisions. Fourth, HIV/AIDS children have an upper-class SES status but their development is more unfulfilled because of improper supervision for children's developmental needs. In addition, there needs to be an effort to change the environment of children with HIV/AIDS. Therefore, the role of parents or caregivers, as adults who are more mature in their development, has a role to monitor the needs of children with HIV/AIDS appropriately.

The quality of life of children with HIV/AIDS in fulfilling the stages of child development in case 4 can be explained into several points. First, the quality of life of children with HIV/AIDS increases systematically with age because children with HIV/AIDS experience cognitive development so that the change from a period of good health in middle and late childhood to a period of critical health in adolescence can be avoided. Therefore, the

development of children with HIV/AIDS, especially biological and cognitive development, in case 4 is fulfilled. Second, caregivers of children with HIV/AIDS in case 4 have more effective coping strategies in caring for their children so that they can fulfill their children's development because caregivers have a role to support, stimulate, and monitor children's development so that they become healthier and can have their own autonomy to do things reasonably and responsibly.

The quality of life of children with HIV/AIDS in meeting the stages of child development in case 5 can be explained to several points. First, children with HIV/AIDS from birth have a weak immune system so they need to undergo regular treatment in the hospital to prevent complications of the disease and this treatment shows few physical symptoms of HIV/AIDS in children but they still have a low quality of life due to low sleep quality. Therefore, the biological development of children with HIV/AIDS is not maximized. As a result of low sleep quality, children with HIV/AIDS are disrupted in school activities. In addition, because children with HIV/AIDS have to go to the hospital, they cannot attend school. Secondly, children with HIV/AIDS are able to make friends with other children but they still receive stigma related to HIV/AIDS, which has a negative impact on their quality of life. Therefore, there is a need to increase awareness about HIV/AIDS to the community. Third, children with HIV/AIDS have low self-esteem due to the use of strict medication, caring for sick caregivers , and the death of caregivers so that the child's perception changes. This makes their quality of life decrease and children are not fulfilled in socio-emotional development.

The quality of life of children with HIV/AIDS in fulfilling the stages of child development in case 6 can be explained into several points. First, the physical health of children with HIV/AIDS in SCH is relatively high due to good health services in SCH. Second, children with HIV/AIDS in SCH have high social support so that their quality of life increases. Third, the quality of life of children with HIV/AIDS decreases with age according to the reports of children with HIV/AIDS because the older ones understand HIV more deeply. This may be different from the idealistic perception of children so that their quality of life decreases. Fourth, there are different reports with caregivers who state that as children get older, their quality of life increases. The difference in results betweencaregivers and children can show that parents do not fully monitor and socialize with their children. From this analysis, it can be seen that the child's development has not been fully fulfilled.

3.10.3 Adolescence

The quality of life of children with HIV/AIDS in fulfilling the child development stage in case 7 can be explained into several points. First, children with HIV/AIDS have an adequate number of CD4+ T-cells and no complications due to immune disorders because they get multidisciplinary care by doctors, nurses, psychologists and social workers and health insurance so that the biological development of children is fulfilled because children can grow and move well. Secondly, children with HIV/AIDS have poorer performance in several cognitive areas that make cognitive and socio-emotional development unfulfilled because children during the adolescence stage should be able to do more abstract and logical thinking. Third, HIV/AIDS children also often miss school because they have to go to the hospital for routine health checks. This does not meet the child's development because the child becomes behind in academics and socializing.

The quality of life of children with HIV/AIDS in fulfilling the stages of child development in case 8 can be explained into several points. First, the child in this case has a fairly high quality of life because the stigma received is low, so it can be said that the development of children with HIV/AIDS, especially socioemotional development, is fulfilled. But this happens because of the cultural context in Sweden where the general public has minimal knowledge about children with HIV/AIDS. Secondly, children with HIV/AIDS are taught by their parents to conceal their HIV status so that the child does not get stigmatized. It is not very visible whether children get personal autonomy to explore various things so that they can develop their identity regardless of their parents' decisions.

4. Conclusions

Based on the results of the analysis, the social relationship domain is the most dominant domain from other WHOQOL-100 quality of life domains because social support, especially from caregivers, makes changes to the quality of life of children with HIV/AIDS in other domains. In addition, one of the most dominant aspects in the quality of life of children with HIV/AIDS is the role of the government in providing health services and HIV/AIDS information counseling because health services can make children's physical capacity better and information counseling can make children with HIV/AIDS and the general public know about HIV/AIDS so that HIV/AIDS stigma can be reduced. Based on the analysis, it was found that not all children with HIV/AIDS in these cases fulfill their developmental stages. To meet the developmental stages of children with HIV/AIDS, it is necessary to get care from caregivers so that children have their own autonomy, need the role of peers to socialize, and need health services that can make children's health not deteriorate and children are confident with HIV status and avoid HIV stigma.

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Conflicts of Interest
The authors declare no conflict of interest.

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