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Psychological distress experienced by pregnant women undergoing antiretroviral treatment: A qualitative study

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ABSTRACT

Background: *The psychological condition of pregnant women with HIV is often a significant barrier to initiating and adhering to antiretroviral therapy (ART). Psychological distress in these women, if left unaddressed, can lead to poor treatment adherence, increasing the risk of mother-to-child transmission of HIV. Managing psychological distress caused by HIV early is crucial for optimizing maternal health outcomes and reducing transmission risks.*
Objectives: *This study aims to explore the psychological distress experienced by pregnant women with HIV undergoing ART and to identify ways to improve treatment adherence and reduce the risk of HIV transmission to their children.*
Methods: *A qualitative research design with a descriptive phenomenological approach was used. Participants were selected through purposive sampling based on specific inclusion and exclusion criteria. Data were collected from five participants through semi-structured, in-depth interviews. Data analysis was performed using ATLAS.ti software.*
Results: *Four main themes emerged from the data: psychological factors, sociocultural influences, stressors, and life pressures. The study revealed that pregnant women undergoing ART experience significant anxiety, particularly concerning lifelong medication use and the potential transmission of HIV to their babies.*
Conclusions: *Pregnant women undergoing ART are highly vulnerable to anxiety, driven by concerns about their health and the possibility of transmitting HIV to their children. Family support plays a crucial role in helping mothers manage their anxiety, improve ART adherence, and cope with their psychological distress. Additionally, the legal and religious status of marriage was identified as a key factor contributing to stress, further increasing the risk of anxiety and depression among participants.*

KEYWORD: *HIV/AIDS; pregnant women; psychological distress; anxiety*

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INTRODUCTION

Psychological distress is a state where a person has unpleasant emotional experiences caused by many factors, such as: anxiety, depression, panic disorder, and stigma (1) especially when undergoing medical treatment (2). Psychological distress such as depression, mental health problems, and emotional stress are often barriers to initiating therapy (3), which can affect patient treatment adherence and the effect of treatment itself (4,1).

Pregnant women are always at risk and vulnerable to various diseases. HIV-positive pregnant women can threaten the safety of the mother and the baby in her womb (4). HIV sufferers need treatment with antiretrovirals to reduce the number of HIV viruses in the body so as not to become the AIDS stage (5), In addition, it can also extend and improve the quality of life and possibly reduce the transmission of HIV (6).

Pregnant women with HIV often feel psychologically distressed about being pregnant and living with HIV at the same time (7). Continued psychological distress can lead to mental illness, and debilitate the mother's life. In low-income countries, where mental health services are limited, women may be at risk of major negative consequences such as disruption of family life, social life, and suicidal ideation if psychological distress due to HIV is not addressed early. This can lead to suboptimal adherence to treatment (4). It can also affect the level of care provided by the mother to the baby and increase mother-to-child transmission of HIV (7).

HIV/AIDS in Indonesia has been reported by 498 (97%) districts and cities out of 514 districts and cities in Indonesia. The number of HIV cases reported from 2005 to March 2021 tends to increase every year. The five provinces with the highest number of HIV/AIDS are DKI Jakarta (71,473), East Java (65,274), West Java (46,996), Central Java (39,978), and Papua (39,419). Meanwhile, the five provinces with the highest number of AIDS are Papua (24,483), East Java (21,445), Central Java (13,418), DKI Jakarta (10,799), and Bali (9,125)(8).

The prevalence of HIV in pregnant women in the South African region as one of the countries with a high number of HIV sufferers reaches 30% (9). HIV screening in pregnant women during antenatal check-ups has been implemented as one of the programs to prevent HIV transmission from mother to fetus. Approximately 18% to 37% of women living with HIV are diagnosed during pregnancy (10). In 2019, there were 85% of HIV-positive pregnant women receiving antiretroviral treatment (9). In the period January - March 2021, the percentage of pregnant women with HIV / AIDS in Indonesia was 20.9%, where 520,974 pregnant women took an HIV test, and 1,590 pregnant women were found to be HIV positive and 395 people received antiretroviral treatment. In addition, the number of babies born to HIV-positive mothers was 99 babies and 7 babies were confirmed HIV- positive (8). Based on research that women often face challenges

that prevent them from adhering to treatment because they experience stigma and discrimination, as well as fear of disclosure (11). Prenatal anxiety was found to be higher in women with HIV and there was no difference after delivery. Postpartum anxiety was predicted as a cause of postpartum depression among women with HIV (12). According to Yousuf et. al., 2020 symptoms of depression and anxiety are always found among women living with HIV, because emotional disturbances related to acceptance or attention obtained from the public are not appropriate (13). Therefore, it can be said that women have more difficulty accepting their HIV status and bear a heavier burden than men. In his research, Ashaba et al., 2017 recommended that to reduce the risk of psychological distress in women, especially during the perinatal period, psychosocial challenges that interfere with women's ability to engage in HIV care and adhere to antiretrovirals should be explored and then addressed at the community level. Based on this, researchers felt the need to explore information related to psychological distress in pregnant women undergoing antiretroviral therapy (11). This study aims to explore information about the psychological distress of pregnant women undergoing antiretroviral therapy in order to improve maternal adherence to treatment and reduce mother-to-child transmission of HIV.

MATERIALS AND METHODS

This study employed a qualitative research methodology with a descriptive phenomenological study approach that aimed to obtain information about the psychological stress faced by pregnant women undergoing antiretroviral therapy.

Participants were selected using purposive sampling technique based on inclusion and exclusion criteria. Inclusion criteria consisted of: pregnant women undergoing antiretroviral therapy, registered in the Jayapura District Health Office work area, mothers who could interact and communicate fluently verbally. While the exclusion criteria included: mothers who were not willing to become participants and mothers who experienced significant mental disorders that could interfere with the interview process or data analysis were excluded from this study.

A total of 5 participants participated in this study. The Hospital Anxiety and Depression Scale (HADS) instrument was used to measure the level of anxiety and depression of the participants, then continued with semi-structured in-depth interviews conducted face-to-face with an average interview duration of 30-50 minutes. The interview process is supplemented by the use of an audio recorder to ensure that every detail of the conversation is accurately documented. Additionally, the researcher also takes field notes to record observations related to non-verbal expressions, the surrounding environment, and social interactions that occur during the interview. If during the research process, a participant is

unable to complete the interview or withdraws from the study, the researcher has several strategies to address this situation: 1) The researcher will replace the withdrawing participant with another participant who meets the inclusion and exclusion criteria. The researcher will ensure that this replacement process is conducted while maintaining the quality and validity of the data; 2) If a participant is unable to complete the interview but the data collected is significant, the researcher may decide to include this data in the analysis, providing context and limitations regarding the data's incompleteness; 3) If it is not feasible to replace the participant, the researcher may choose to proceed with the analysis using the remaining participants and acknowledge the limitation of the sample size in the final research report.

In this study, triangulation methods were not employed. While triangulation is often used to enhance the credibility and validity of research findings by cross-verifying data from multiple sources or perspectives, in this study, data from a single source namely, in-depth interviews was relied upon. However, the validity and reliability of the findings were still ensured through rigorous data collection and analysis procedures. For instance, the use of the HADS instrument provided a standardized initial assessment of participants' psychological states, and the thorough documentation of interviews (audio recordings and field notes) ensured that the data was rich and detailed. Additionally, the researcher engaged in reflexive analysis throughout the process, continuously reviewing the data to identify patterns and themes, which adds to the credibility of the study even in the absence of triangulation methods.

The data collected were analyzed using ATLAS.ti software, and ethical clearance for this research was obtained from the Educational Institution and Ethics Committee of Universitas Islam Sultan Agung Semarang, with No. 233/VI/2023/Komisi Bioetik.

RESULTS AND DISCUSSION

RESULTS

Participants came from 2 health facilities in Jayapura Regency. The age range was 20-29 years old with the last education ranging from high school to university, working in the domestic sphere or as a housewife, the majority of mothers were undergoing their second pregnancy with gestational age in trimester 2 to trimester 3, the majority of mothers had been HIV positive for more than 1 year, all mothers were unmarried with an average monthly income below the provincial minimum wage, and 3 mothers showed anxiety symptoms or a score ≥8 based on the HADS anxiety scoring instrument, anxiety symptoms were related to the mother's education level.

There are 4 themes obtained from the results of data analysis, namely: 1). Psychological factors, with the sub-theme of psychological defense. 2) Sociocultural factors, with sub-themes of social support and

Table 1. Characteristics of participants

Participant code	Age (year)	Last education	Work	Pregnancy	Gestational age	Long-term HIV infection	Marital status	Monthly income	HADS score
P1M	26	HIGH SCHOOL	Domestic Domain	2	28 weeks (TM 3)	> 1 year	not married	≤ Rp. 3.000.000	≥8 (anxiety)
P2Y	27	Higher Education	Domestic Domain	2	23 weeks (TM 2)	> 1 year	not married	≤ Rp. 3.000.000	≤7 (normal)
P3A	26	Higher Education	Domestic Domain	2	17 weeks (TM 2)	≤ 1 year	not married	≤ Rp. 3.000.000	≤7 (normal)
P4M	21	HIGH SCHOOL	Domestic Domain	2	26 weeks (TM 3)	> 1 year	not married	≤ Rp. 3.000.000	≥8 (anxiety)
P5Y	27	HIGH SCHOOL	Domestic Domain	1	27 weeks (TM 3)	≤ 1 year	not married	≤ Rp. 3.000.000	≥8 (anxiety)

Source: Primary Data

marital status. 3) Stressful Factors, with sub-themes of feelings of pregnant and HIV-positive women, feelings of disappointing loved ones, feeling tired of undergoing treatment, and having anxiety symptoms. 4) Life Stress Factors, with sub themes of feelings that cause anxiety.

Psychological factors

Psychological defense

This sub-theme describes the ability of pregnant women undergoing antiretroviral therapy to deal with unpleasant things. The majority of participants in this research have psychological defenses against themselves by staying away from sources of pressure, as expressed by participants below:

"Usually, when I feel angry and emotional, I sit on a mountain like that" (P4M).

"…sit quietly far away, in a quiet place and then give myself peace of mind" (P1M).

"…I'm leaving, I don't want to meet people yet" (P5Y).

"Yes, I prefer to be alone. I don't like noise or crowds at gatherings, sometimes there's a lot of gossip, so just bring myself to stay indoors" (P2Y).

"Just playing on my cellphone, I'm not daydreaming. sometimes sleeping, or looking for a job, folding clothes. I don't like daydreaming" (P2Y).

"…for ordinary things. but not for private matters, because I don't easily trust people" (P2Y).

Other participants have a form of self-defense because of the people they love. As stated by participant 3, that is:

"...but mom is very strong. That's why I don't feel like I have the heart, so I feel enthusiastic, so why should I be weak if I have a mother whose motivation is strong for me. "So I think that, this

disease is not a burden for me to have a life so I think it's normal, so just be grateful (mother cried with gratitude)" (P3A).

Participants 2 and 4 tried to strengthen themselves by saying the following sentences:

"…why do I think too long" (P4M).

"…I thought, I'm not the only one who is sick like this. There are still many people out there who are sick like me, who take medicine every day" (P2Y)

"…so it feels normal, so be grateful, so maybe this is a blessing (mother smiles) so just be grateful" (P3A).

"…there are a few who know, I don't care …" (P2Y)

The psychological defense sub-theme shows that the majority of participants try to strengthen themselves in various ways to avoid sources of pressure that can cause stressors.

Sociocultural Factors

Social support

The social support sub-theme describes the forms of social support received by pregnant women who are HIV positive and undergoing antiretroviral therapy, that is form of encouragement, support, attention and help received from husbands, parents, brothers, sisters, friends, neighbors and health workers. The following is the mother's statement regarding the social support she received:

"Husband and my mother.." (P2Y)

"Sometimes I'm alone, I get angry at home, saying I don't have to be alone. I sat alone, dong said bro, what are you daydreaming about? Don't make it myself" (P1M).

"…from mom and sister. Husband, Now supportive, early start not. do not accept" (P4M).

"Husband scolds, husband reminds me, have you taken medicine or not? I said no, he immediately got angry and then said you can't do that, you have to take medicine so I asked him back, have you taken medicine or not? so we usually take medicine at 9 o'clock" (P1M).

"…we both remind each other. If the medicine has run out, if not I will take it, my husband will definitely come and take it…" (P3A).

"Yes, the support from my mother is extraordinary, but don't be discouraged, be enthusiastic" (P3A).

"…that mother knows that I am strong, so that mother always says that you know that when you have a child you are strong, so it's like... oh my the spirit is there, but the emotion of that spirit is what I can't hold back and that's why I always cry. he cried directly in front of mom, but mom always said that mom knows that your child is strong. That mother is truly an angel for me (mother sobs)" (P3A).

"Mother, I'll give you some advice. Mother-in-law always gives advice …" (P1M).

"…Mother gives advice, I treat it like my

own daughter.." (P1M).

"Yes, mom. Mother tells stories of strength. (mother accompanies)" (P4M).

"…Mom and sister at home also give encouragement" (P2Y).

"Tell me to take my medicine diligently, my sister doesn't get angry and doesn't stay away from me" (P4M).

"…I'm struggled from stage 4 until I recovered like this. In an environment where I get love from the people closest to me, I am really looking forward to this pregnancy" (P2Y).

"…from this illness I am still struggling until I finish my studies, until now I have a good husband, have a family and have a good husband. I think it's normal …" (P2Y).

"…so we as a family like to get together, eat together (mother said happily)" (P3A).

Apart from receiving support from the nuclear family (husband, parents and older siblings), participant 2 also received support from fellow PLWHA:

"Yes, it is common for people with PLWHA status to diligently take medication …" (P2Y).

Support from health workers was also frequently mentioned by participants:

"Only from your nurse" (P5Y).

"…but when I consulted the doctor, went to the doctor, to the midwife concerned, if that was okay, I did it. "So it feels normal, so be grateful, so maybe this is a blessing (mother smiles) so just be grateful" (P3A).

"..but after I confirmed with the nurse for confirmation, I had a situation like this after I took the medicine but the statement from the nurse was that it was an adjustment according to the ARV we were taking" (P3A).

"So the nurse said, it's not just because the mother is at home, maybe the husband is like that (mother cries but forces herself to laugh)" (P3A)

"Sister's words reminded me of Mama's words.." (P3A).

"…for medical purposes, the service is extraordinary, very supportive, helps us, understands us better, that's all. (P3A).

Participant 3 stated that he felt more comfortable with health workers in current health services:

"…I'm afraid that if I'm far away, I'll take the medicine from here, then I'll be confused. I mean, I'll be overwhelmed later, I'll be afraid there, so I'll be afraid to leave this area. When I get another place, I have to adapt again. What I hope is like the officers here, is it going to be like that there, I'm afraid not. that's what I'm afraid of" (P3A)

Apart from that, participant 5 received support only from health workers because the participant did not have the courage to reveal his status to his immediate family:

"No, only doctors give encouragement but I don't know if I can't be enthusiastic" (P5Y).

"No, mostly a nurse, but I don't always

meet a nurse" (P5Y).

Participants who do not receive full social support, especially from their immediate family, make participants feel depressed about their situation. As expressed by participant 2:

> *"What I expect from my family is only good communication, because I get offended quickly. especially when I brought up the matter of my illness, I immediately started crying (my mother's eyes started to fill with tears and she wanted to cry). "There was that one time with my younger sister, until she gave me a status boost on Facebook (mother was sobbing and crying)"* (P2Y).

Apart from that, there is also the mother's sense of responsibility to fulfill the expectations of the people around her, so that the mother cannot reject or ignore the hopes of the people who have provided motivation to the mother, as expressed by participant 1:

> *"If I don't take medicine I feel guilty, because everyone recommends taking medicine"* (P1M).

Based on the sub-theme of social support above, it shows that high family support can prevent mothers from psychological pressure in the form of symptoms of depression and symptoms of anxiety such as the inability to face a problem.

Marital status

The marital status sub-theme describes the legal status of the mother's relationship with her partner, according to religion and law. In the participant demographic data, all participants admitted that they were not legally or legally married. As stated by participant 3:

> *"I have to get married, because I'm not married yet. great support from my parents for me to get married"* (P3A).
>
> *"...(mother thinks) well, for me personally... what I hope is that I have to get married, because I'm not married yet. "There was great support from my parents for me to get married, that's a religious teaching, but because I've violated it, this is a warning to me for going too far or something, so that's my hope."* (P3A)

The marital status sub-theme shows that there is great hope from the mother to have a relationship that is religiously valid and legally valid.

Factor of Stressfull

Feelings of pregnant and HIV positive women

This sub-theme describes the things felt by pregnant women who are positive for HIV infection and undergoing antiretroviral therapy. Participants said they were worried or afraid that their baby would be infected with the HIV virus, were sad, anxious, dis-appointed, rejected their condition, and hoped for recovery. The following are the expressions of participants who feel sad because they are pregnant and are HIV positive:

> *"In my feelings, there is fear, the same as*

first if I don't want to. can't accept it. I'm afraid that I will harm my child, because there is a virus in my body. I'm afraid my child will be infected" (P3A).

"There is fear, anxiety, fear that the baby will also be infected. I didn't believe that I was infected, I felt sad, devastated, almost from taking medicine to not taking medicine it was 5 months. because I don't believe it" (P4M).

"I am very sad (mother starts sobbing/ crying) why did I get this disease" (P5Y).

"…I was waiting for this pregnancy, but apparently (mother cried)…" (P5Y).

"First I know I'm happy to be pregnant, but I think about the risks because of this disease, there's a little fear too. But now it's normal, enjoying pregnancy, don't want to think anything wrong" (P2Y).

In addition, participants 1, 2, and 5 said that they did not dare to tell their parents directly about their HIV status.

"Mom is the one who gives advice, I treat her like my own daughter. "Yesterday my father was sick, the doctor asked my mother but my father gave me a doctor's code so the doctor didn't tell me" (P1M).

"Husband and mother, husband's family doesn't know about this disease" (P2Y).

"…I'm afraid to tell my mother and husband" (P5Y).

Apart from that, participant 1 revealed that being pregnant and being positive for HIV infection was not a problem for her, but her mother hoped for a cure. Following are the participant's expressions:

"It's not a problem, I'm just happy" (P1M).

"Just normal, no other thoughts. Just want healing" (P1M).

This sub-theme shows feelings of fear, sadness, anxiety, disappointment, and rejection of the mother's current condition, namely being pregnant and positive for HIV infection.

Feeling tired of undergoing antiretroviral treatment

The sub-theme of feeling tired from undergoing treatment reveals the mother's psychological condition regarding the treatment that the mother is undergoing and must be consumed every day and carried out for the rest of her life. From the results of interviews conducted with 5 participants, 1 participant expressed feelings of difficulty undergoing treatment because his family did not know his HIV status. Here's the statement:

"Yes... because I have to take medicine secretly every day. I'm also afraid that my family will finally find out" (P5Y)

Other participants also stated that there was a feeling of fatigue, but the participant realized that the benefits of undergoing antiretroviral treatment could help prevent HIV transmission from herself to her baby. As expressed as follows:

"Just at first, now I'm used to it" (P4M).

"Yes, I feel like that, but it will also be a hard feeling to let go" (P1M)

"Sometimes I feel bored. I'm so tired of taking medication, especially for the rest of my life, but I'm still enthusiastic. there

are loved ones who still need me (mother smiles) It's been 4 years now, I think it's normal, like I don't think there's a virus in my body (mother tells me happily), so I think as long as I take medicine, I have that feeling" (P2Y)

"So I prioritize having children over having myself, so it's like I'm afraid if I don't take the medicine, not afraid, which means it has to be on time (the mother explains while emphasizing the word must) for the sake of the child" (P3A).

"If I don't take medicine, my child will get infected, so I have to drink it so he will be fine" (P5Y).

Participant 3 expressed his fear of HIV treatment, which requires patients to take a lot of medication, as follows:

"Eee... in my opinion, ee I have heard about this disease, because I had a nephew who died just this month. Ee... he said he was tired of taking this medicine because there was a lot, but when I came here, I only took one medicine. maybe he said he got a lot of medicine, kaah, there's still a lot of medicine. until he is looked after at the hospital in Yoka" (P3A).

This sub-theme shows that HIV treatment undertaken by pregnant women causes feelings of fatigue. The mother is able to undergo treatment with support from the people closest to the mother. Apart from that, the amount of medication consumed by the mother can also influence the mother's interest in undergoing treatment.

Feelings of disappointing loved ones

The sub-theme of feelings of disappointing loved ones describes the mother's feelings of guilt towards the people closest to her. All participants felt they had disappointed their parents, especially female parents.

"I was honest with mom, because I was afraid that mom would be disappointed. "It's the same here at home, mom here too, I don't dare to be honest because I'm afraid mom will be disappointed, the two pendam barrels are for her own second barrel" (P1M).

"Once, when I was sick, my mother was busy. Mom has gardening activities so it's hampered by taking care of me. I was seriously ill at that time. I'm stage 4…" (P2Y).

"So if you say you feel guilty, you feel really guilty, mama (while wiping tears that fall) (crying)" (P3A).

"I feel, (mother thinks for a long time)… sad, constantly afraid, crying for almost 1 month. I disappointed my parents.." (P4M).

"That feeling definitely exists, especially parents. especially starting to know that I was positive, disappointed, sad, yes, I cried together with the nurse, yes I was so devastated, it was like I didn't expect it. I live at home, it's never been like this (mother's eyes filled with tears) how is that possible" (P3A).

"…but because the family doesn't know. I have to look normal" (P5Y).

Apart from feeling guilty towards their

parents, participants also felt guilty towards their children, as expressed by participants 3 and 5 below:

"…but indeed the feeling of guilt is towards my child" (P3A).

"Yes (mother starts sobbing) I was waiting for this pregnancy, but it turns out (mother cries)...I don't know what to do, I'm afraid my child will catch this disease" (P5Y).

The sub-theme of feelings of disappointing loved ones shows that the mother feels like she is a burden on her family.

Has symptoms of anxiety

The anxiety symptoms sub-theme shows the results of the HADS instrument scoring for the 5 participants, 3 participants were detected as experiencing symptoms of anxiety, namely participants 1, 4 and 5. Apart from the results of the HADS instrument scoring, anxiety symptoms were also revealed in the statements of several participants, such as:

"There was, all of a sudden, like sitting down and then suddenly the talking father immediately stood up and slapped his face inward. I don't know what made me like that. I can't be bothered a little, I still do it like that" (P1M)

"Sleepy but I can't sleep" (P4M)

"Yes, I'm sleepy but I can't sleep" (P5Y)

"I'm doubtful, I'm afraid they will know my status" (P5Y)

"I'm alone sometimes, looking for a quiet place" (P5Y)

"Once, when I first found out and was taking the medicine, I had this feeling that made me anxious. I can't be comfortable like I usually rest. I thought too much so I didn't sit and couldn't rest properly in those few months" (P3A)

"Aloof sometimes but not too much" (P3A)

Based on the anxiety symptoms sub-theme, it shows that the anxiety symptom most often experienced by pregnant women who are HIV positive and undergoing antiretroviral therapy is insomnia.

Life Stress Factors

Feelings that cause anxiety

The sub-theme of feelings that cause anxiety shows the mother's emotional state because she only focuses on one thing in her life. The majority of participants were worried about the condition of themselves and their children. As stated by participants 1, 3, 4, and 5 below:

"…if you're worried, just think about the future" (P1M).

"Just about children…" (P4M).

"The fear that the baby will also be infected, the first child only survived 4 days (when he was 4 days old he died immediately)" (P4M)

"I think it's fitting that when you're alone you think about how long you'll live or not. sometimes remembering my child who died, I feel guilty" (P4M).

"I just think about myself, I don't know what to do anymore" (P5Y).

"What I think is that I have myself (mother laughs). Secondly I think that I have parents and I have children because I already have a son who is 4 years old" (P3A).

Apart from that, participant 5 also stated that his anxiety was due to fear that his family would find out about his HIV status. This is because participant 5 did not have the courage to open up to his family about his HIV status.

"I'm also afraid that my family will finally find out" (P5Y).

Based on the sub-theme of feelings that cause anxiety, it shows that the majority of participants are worried about the condition of themselves and their children.

DISCUSSION

Psychological factors

Psychological defense is a form of the ability of pregnant women undergoing antiretroviral therapy to face unpleasant things. The majority of participants in this study had psychological defenses against themselves by staying away from sources of pressure, building self-confidence and strengthening themselves in various ways to avoid sources of pressure that could cause stressors.

Psychological defense arises because of the anxiety experienced by a person in facing stress or sources of pressure. Anxiety is the body's natural reaction to stress which is actually useful for making a person more careful and alert (14). However, the habit of distancing oneself from sources of pressure, being excessively careful and alert will interfere with daily activities. The impact can develop the character of withdrawing from the surrounding environment, being alone, and giving rise to an attitude of not easily trusting other people. As stated by a participant:

"…sit quietly far away, in a quiet place and then give yourself peace of mind" (P1M, anxiety).

"…I'm leaving, I don't want to meet people yet" (P5Y, anxiety).

"Yes, I prefer to be alone. I don't like noise or crowds at gatherings, sometimes there's a lot of gossip, so just bring yourself to stay indoors" (P2Y, not anxiety).

The results of this research are in line with the results of research conducted by Silva et al., 2018 which shows that the self-defense mode most often used by HIV/AIDS patients is a self-defense mode that focuses on emotions. Emotions are defined as an effort to respond to events that happen to someone (15). According to Krisdayanti & Hutasoit, 2019 in his literature review, it shows that self-defense strategies are developed by HIV sufferers because they are faced with mental health problems, decreased quality of life, and stigma that occurs in society (16). Additionally, according to Luciano, 2012 person's personality and behavioral problems arise due to symptoms of anxiety and depression (17).

Research from Rodriguez-Garcia et al., 2011 shows that other self-defense efforts

that are often carried out to fight HIV are self-defense efforts carried out through people who are trusted as a comfortable place to release anxiety and fear about HIV disease '(18). In addition, according to research from Lee et al., 2014 worship is an effort that is considered capable of fighting HIV disease. The positive values and trust that are built in God Almighty give confidence that HIV is a destiny that is God's power sent to him (19). This is in line with the statement given by participant 3, that is:

> *"…so it feels normal, so be grateful, so maybe this is a blessing (mother smiles) so just be grateful"* (P3A, not anxiety).

So it can be concluded that the psychological defenses that are formed within a person, if not carried out effectively and purposefully, can cause stress which has an impact on broader mental health problems.

Sociocultural factors

Sociocultural factors are one of the predisposing factors which are factors that are a source of stress that can influence individuals in dealing with stress (20). Sociocultural factors in this research relate to social support, relationships and communication with partners, family, friends or neighbors and marital status. The results of the research found by the researchers showed that pregnant women who underwent antiretroviral therapy who received encouragement, support, attention and help from the surrounding environment such as: husband, parents, brothers, sisters, friends, neighbors and health workers could prevent the mother from psychological pressure. in the form of depressive symptoms and anxiety symptoms.

Minimal family support is always associated with increased anxiety symptoms (21) and antenatal depression in PLWHA(22). Research results from Hailemariam, 2015 reported one of the participants said that his child avoided him after disclosing his HIV status to his family. So the mother becomes very depressed and worried that the family's attitude towards her is more troublesome than the problem itself, namely being positively infected with HIV. Research result Liu et al., 2014 which states that depression and anxiety in PLWHA can be reduced by the presence of high social support (24). According to Krisdayanti & Hutasoit, 2019 in his literature review, active family and community support for HIV sufferers can help improve the quality of life of PLWHA (16). Apart from that, social support influences the effectiveness of self-defense carried out by HIV sufferers (16). Women living with HIV generally have morerely on social support and they have more psychological distress than men (25). Social support from family and society becomes more stable for pregnant women in the third trimester or towards the end of their pregnancy and makes the burden on the mother's life less (26). In their research Xiaowen et al., 2018 said that social support strategies should focus on overcoming symptoms of anxiety and depression to be able to provide improved health outcomes for

pregnant women living with HIV. Additionally, social support interventions are only applicable when symptoms of anxiety and depression are managed effectively. So it can be concluded that support from people closest to the mother can help the mother overcome symptoms of anxiety and depression (25). The research results showed that all participants were not legally or legally married. Participants expressed a desire to have a relationship that is religiously valid and legally valid. The research results show that generally anxiety symptoms are associated with the mother's relationship status with her partner (22). Single women are at higher risk of experiencing depression, anxiety, and comorbidities compared to married women (22). In addition, other research states that divorced women are found to be more likely to experience depression and anxiety. This illustrates that broken families or insecure marital ties increase the risk of developing depressive symptoms (13).

Pressure Factor (*Stressfull*)

Feelings of Pregnant Women and Being HIV Positive

The results of this study showed that the majority of participants had concerns or fear that their baby would be infected with the HIV virus, were sad, anxious, disappointed, and rejected their condition. This high level of stress poses a risk of triggering other mental health issues such as anxiety and depression. The prevalence of depression and anxiety is higher among pregnant women, indicating that pregnancy is a vulnerable period for experiencing depres-sive and anxiety disorders (22)(27).

Anxiety disorders and depression occur at a higher rate in pregnant and HIV-positive women than in the general population and no differences occur after delivery (12). This is in line with research results which show that symptoms of depression and anxiety are always found among women living with HIV, due to emotional disturbances related to the acceptance or attention received from the public (13). Unmanaged stress can affect adhe-rence to ARV treatment, which in turn can negatively impact the health of both the mother and the fetus (27). Fear, worry and psychological tension often interfere with their lives when they think about their future lives and the lives of their children. They are always worried when they think that the virus they have will be transferred to their children during pregnancy and while breastfeeding. A mother said she thought more about her life and had the intention to commit suicide, but when she thought about her child's future life, she reversed her decision to end her life. Most mothers have a pessimistic attitude towards their future lives and the lives of their children. There is no significant difference in the experience of anxiety and depression in pregnant or postpartum women (23).

Feelings of Disappointing Loved Ones

If the feelings of pregnant and HIV positive mothers describe the mother's feelings towards herself and their children in

the future, feelings of disappointing loved ones are more focused on the mother's feelings towards the people around her, especially her family. The results of this research found that all participants said they had disappointed their parents, especially female parents. The mother felt that she was putting more of a burden on her parents because they had to take care of her who was sick.

The results of research revealed by Xiaowen et al., 2018 stated that older pregnant women usually have more burdens in caregiving and family obligations (25). This may indicate that older women do not have parents who can take care of them, but rather they are the ones who take care of the lives of their parents and their children. This statement still needs to be proven again in further research, because it is still rare to find similar statements. The majority of research results found describe the acceptance that HIV-positive pregnant women receive from their families.

Feeling Tired of Undergoing Treatment

As a result of interviews conducted with 5 participants, 1 participant expressed that he felt difficult about undergoing treatment because his family did not know his HIV status. So the mother took the medicine secretly so that the family would not know. Other participants stated that they were able to undergo treatment with support from the people closest to them. This is in line with the results of research by Camara et al., 2019 that providing psychosocial support to HIV positive patients and their families can contribute to improving their health and treatment outcomes (28).

The results of this study also found that the amount of medication consumed by the mother can influence the mother's interest in undergoing treatment. This is in line with research from Ogueji, 2021 which reported that the respondent in his research felt anxious and worried, the respondent stated that he was anxious about the fact that he was now undergoing lifelong treatment, and as a result he lost interest in activities he liked and withdrew from interactions social (7). Having poor mental health status is associated with decreased adherence to antiretroviral treatment among people with HIV. The results showed lower antiretroviral treatment adherence in adults with poor mental health (29)(30). According to Chaudhury et al., 2016, depression status at the beginning before using treatment does not influence treatment compliance, but is influenced by the incidence of depression during the treatment period. This suggests that impaired treatment compliance is caused by acute depression which occurs as a reactive phenomenon from a pre-existing history (21).

Anxiety Symptoms

The research results showed that participants often complained of sleep disturbances so they could not rest well at night. From the results of the HADS scoring instrument on the 5 participants, 3 partici-

pants were detected as having symptoms of anxiety, while the other 2 did not have symptoms of anxiety or symptoms of depression.

According to Ngocho et al., 2019, pregnancy is a vulnerable period for experiencing depression and anxiety disorders. The prevalence of depression and anxiety was also found to be higher among pregnant women (22). Being pregnant and then being infected with HIV makes the mother feel more psychologically depressed because she is pregnant and living with HIV at the same time (7). An emotional state characterized by symptoms of depression and anxiety is usually associated with somatic symptoms such as insomnia and headaches (17). In research conducted in the state of Nigeria, one of the respondents said: "when I was alone in my room, I began to think with fear about the fact that I would now live on drugs for the rest of my life. This sometimes makes me unable to sleep at night" (7). Anxiety is the body's natural reaction to stress which is actually useful for making us more careful and alert. However, anxiety can become unhealthy if it appears excessively, is difficult to control, or interferes with daily activities. This condition is known as anxiety disorder (14). The results of the study showed that anxiety symptoms in HIV positive pregnant women were 11.1% compared to 10.3% of depression symptoms (26). This shows that anxiety symptoms are more common among HIV positive pregnant women. Anxiety symptoms that are not treated properly can escalate into symptoms of depression. Screening and starting treatment early in the prenatal period to prevent an increase in symptoms and refusal of further treatment (12).

Life Stress Factors

Feelings That Cause Anxiety

The results of this research show the mother's emotional state because she only focuses on one thing in her life. The majority of participants were worried about the condition of themselves and their children. The results of this study were similar to a qualitative study exploring reported experiences of psychological distress, the researchers found a theme; worry, anxiety, depression, loneliness, and regret, self-blame, and feelings of guilt. Respondents who reported anxious concerns often shared that their main concerns were about sexual health, unborn children, and lifetime drug use (7).

CONCLUSION AND RECOMMENDATION

Anxiety is a natural reaction from the body to be more careful about a problem. Anxiety that is allowed to drag on and is not handled properly can escalate into a psychological disorder. The majority of pregnant women undergoing antiretroviral therapy have anxiety symptoms. Lifelong use of drugs, and transmission of the HIV virus from mother to baby during pregnancy causes concern and anxiety. Support received from people closest to the mother, such as the biological mother and husband,

can help the mother overcome anxiety symptoms and increase compliance with antiretroviral medication use. In addition, marital status that has not been legally or legally registered contributes to increasing the risk of symptoms of anxiety and depression in mothers.

Healthcare providers need to offer psychological services, given that the majority of pregnant women undergoing antiretroviral therapy experience symptoms of anxiety. Counseling can help these women manage their anxiety and prevent the development of more serious psychological disorders. Intervention programs that involve the family in the care process of pregnant women with HIV should also be developed and enhanced, as support from those closest to the mother has proven effective in helping her manage anxiety and improve adherence to antiretroviral medication. Additionally, considering that an unregistered marital status, either religiously or legally, can increase the risk of anxiety and depression in mothers, it is recommended that healthcare facilities collaborate with relevant institutions to provide guidance and education on the importance of having a legally recognized marriage. This can help alleviate the psychological burden on pregnant women.

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