

# ปัจจัยที่สัมพันธ์กับความผาสุกทางใจของผู้ติดเชื้อเอชไอวี เมืองบันดุง อินโดนีเซีย

## Factors Related to Psychological Well-being among Persons Living with HIV in Bandung, Indonesia

นิพนธ์ต้นฉบับ

Original Article

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### บทคัดย่อ

### Abstract

**วัตถุประสงค์:** เพื่อศึกษาความผาสุกทางใจและทดสอบความสัมพันธ์กับปัจจัยที่เกี่ยวข้อง ได้แก่ การรับรู้ตราบาป ความหวัง ความเชื่อและการปฏิบัติทางศาสนา และการรับรู้การสนับสนุนทางสังคมของผู้ติดเชื้อเอชไอวี **วิธีการศึกษา:** กลุ่มตัวอย่างเป็นผู้ติดเชื้อเอชไอวีจำนวน 100 คนที่มารับบริการแผนกผู้ป่วยนอกที่สถานบริการทางการแพทย์ ในเมืองบันดุง ประเทศอินโดนีเซีย กลุ่มตัวอย่างได้มาโดยวิธีการสุ่มกลุ่มตัวอย่างแบบง่าย เก็บข้อมูลโดยใช้แบบสอบถามแบบให้ตอบด้วยตนเอง ประกอบด้วย 1) แบบวัดข้อมูลส่วนบุคคล, 2) แบบวัดความผาสุกทางใจ, 3) แบบวัดการรับรู้ตราบาปในผู้ติดเชื้อเอชไอวี, 4) แบบวัดความหวังในผู้ใหญ่ 5) แบบวัดเกี่ยวกับศาสนา และ 6) แบบวัดการสนับสนุนทางสังคม ได้ค่าความเที่ยง ของครอนบาคแอลฟาของแบบวัด 2 ถึง 6 เท่ากับ 0.84, 0.86, 0.83, 0.88 และ 0.86 ตามลำดับ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงบรรยายและหาค่าสัมประสิทธิ์สหสัมพันธ์ของเพียร์สันและสัมประสิทธิ์สหสัมพันธ์แบบแยกส่วน **ผลการศึกษา:** พบว่าความผาสุกทางใจในภาพรวมของกลุ่มตัวอย่างอยู่ในระดับปานกลาง มีค่าเฉลี่ยเท่ากับ 172.56 (ส่วนเบี่ยงเบนมาตรฐาน = 24.25) จากการวิเคราะห์สัมประสิทธิ์สหสัมพันธ์แบบแยกส่วน โดยควบคุมตัวแปร เพศ อายุ และจำนวนปีของการติดเชื้อเอชไอวี พบว่าความผาสุกทางใจมีความสัมพันธ์ทางบวกอย่างมีนัยสำคัญกับศาสนา ( $r = 0.26, P < 0.05$ ), ความหวัง ( $r = 0.63, P < 0.01$ ), และการรับรู้การสนับสนุนทางสังคม ( $r = 0.67, P < 0.01$ ), และมีความสัมพันธ์เชิงลบกับการรับรู้ตราบาป ( $r = -0.63, P < 0.01$ ). **สรุป:** ผลการวิจัยนี้ช่วยส่งเสริมความเข้าใจเกี่ยวกับความผาสุกทางใจ และปัจจัยที่เกี่ยวข้อง ในบริบทของผู้ติดเชื้อเอชไอวี ชาวอินโดนีเซีย ผู้ให้บริการด้านสุขภาพควรตระหนักถึงความสำคัญในการพัฒนารูปแบบการดูแลที่ช่วยลดการรับรู้ตราบาป ตลอดจนการเสริมสร้างความหวัง ความเชื่อและการปฏิบัติทางศาสนา และการรับรู้การสนับสนุนทางสังคม อันจะช่วยเพิ่มความผาสุกทางใจของผู้ติดเชื้อเอชไอวี

**Objectives:** To examine psychological well-being and test its relationships with perceived stigma, hope, religiosity, and perceived social support among persons living with HIV. **Method:** A simple random sampling technique was used to recruit 100 HIV outpatients who received services from two care centers located in Bandung, Indonesia. Data were collected using self-report questionnaires including 1) demographic questionnaire, 2) Psychological Well-Being scale, 3) HIV stigma scale, 4) the Adult Trait Hope Scale, 5) Religiosity scale, and 6) Personal Resource Questionnaires (PRQ2000). Cronbach's alpha coefficients of scales no. 2 - 6 were 0.84, 0.86, 0.83, 0.88, and 0.86, respectively. Descriptive statistics, Pearson's product moment and partial correlation coefficients were employed to analyze the data. **Results:** Psychological well-being was at moderate level with the mean total score of 172.56 ( $SD = 24.25$ ). From the analysis of partial correlation coefficient controlling for gender, age and years of having HIV, there were positive relationships between psychological well-being and: religiosity ( $r = 0.26, P < 0.05$ ), hope ( $r = 0.63, P < 0.01$ ), perceived social support ( $r = 0.67, P < 0.01$ ), and negative relationship between psychological well-being and perceived stigma ( $r = -0.63, P < 0.01$ ). **Conclusion:** The results provide a better understanding towards psychological well-being and its related factors among persons living with HIV in Indonesia. Its results underscore the need for healthcare providers, nurses in particular to develop proper intervention aimed at reducing stigma and enhancing hope, religiosity and social support since these would help promote psychological well-being among these persons.

**คำสำคัญ:** ความผาสุกทางใจ, ผู้ติดเชื้อเอชไอวี, อินโดนีเซีย

**Keywords:** psychological well-being, persons living with HIV, Indonesia

## Introduction

Infection of Human Immunodeficiency Virus (HIV) is a serious disease and it has become a growing issue in the world. Since the epidemic started in 1985 to 2013, approximately 78 million people had been infected with HIV and there were 38 million people died of AIDS-related illnesses. In 2013, it was estimated that 35 million people

were living with HIV and 2 million people became newly infected and 1.5 millions people died of AIDS.<sup>1</sup>

Since April 1987 to June 2014, there had been approximately 198,500 people living with HIV and 55,600 of them had AIDS in Indonesia. The people died of AIDS were estimated and reported about 9,700 cases in June 2014. A number of people living with AIDS with age of 20 to 29 years

are estimated to be 18,200 people, of 30 to 39 years old to be about 16,000 people, and of 40 to 49 years old to be around 5,900 people; while those in the other age groups are lower. These data indicated that the HIV cases in Indonesia are still high in the productive age. Furthermore, West Java is in the fourth rank regarding the number of HIV cases of all provinces in Indonesia, namely with 12,000 persons with HIV and 4,100 AIDS.<sup>2</sup>

According to data from the Ministry of Health of Indonesia in March 2013, there were 337 people living with HIV and 2,075 people living with stage of AIDS in Bandung. These data are still high in comparison to other cities in West Java.<sup>3</sup> The research conducted in Bandung, Indonesia revealed that about 50 % of people with HIV reported lower psychological well-being.<sup>4</sup> People living with HIV are not only confronted with physical problems but also psychological well-being problem that can occur even in the asymptomatic stage or when the patients do not acknowledge the physical problems.

People living with HIV often experience stress, anxiety and depression which can cause impacts to the patient themselves, their families, and communities.<sup>5,6</sup> This psychological distress can also occur in family, friends, and people in their communities.<sup>6</sup> The majority of people living with HIV continue to suffer with the disease, and this has an impact on their well-being.<sup>7</sup>

From the constitution of the World Health Organization, health is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.<sup>8</sup> This definition emphasizes that well-being is one indicator of health of an individual. In addition, psychological well-being is one of the components which cannot be ignored in order to achieve the quality of life. According to Ryff & Keyes<sup>9</sup>, psychological well-being is a multidimensional construct consisting of 6 dimensions which includes self-acceptance, positive relation with others, autonomy, environmental mastery, purpose in life, and personal growth. These 6 dimensions of psychological well-being have been studied in communities and national probability samples including the persons living with HIV.<sup>4,10</sup> Based on the 6 dimensions, persons who used condom for sexual protection had a higher psychological well-being. This study was consistently with the study employing these 6 dimensions to measure psychological well-being among person living with HIV whose ages ranged from 20 to 34 years in Indonesia.

The result showed that 50 percent of participants had higher psychological well-being in all six dimension of psychological well-being.<sup>4,10</sup>

There are multiple factors contributing to psychological well-being. These factors can be classified into internal and external factors.<sup>4,9,10</sup> Internal factors examined in this study will focus on perceived stigma, hope, and religiosity. For external factor, perceived social support was examined.

Perceived stigma is one of the significant factors related to both psychological distress and psychological well-being among persons living with HIV. According to previous studies, 27% of persons living with HIV had experienced severe forms of stigma<sup>11</sup> and 40% reported lower psychological well-being.<sup>12</sup> In these studies, stigma was negatively correlated with psychological well-being among persons with HIV.<sup>11,12</sup>

Hope is another factor associated with psychological well-being.<sup>13,14</sup> It is regarded as an internal strength which helps enhance human motivation to achieve their goals, desires, and higher level of psychological well-being. Hope is positively associated with psychological well-being. Those persons living with HIV who reported lower hope also had lower psychological well-being.<sup>11,14</sup> In the previous study, persons who had severe depression had experienced 2.7 times significantly poorer quality of life especially in psychological domain.<sup>13</sup>

Additionally, religiosity is also a factor associated with psychological well-being. It was operationalized as religious gatherings attendance, belief salience and frequency of prayer. The previous study among Pakistani Muslims showed a negative relationship between religiosity and loneliness ( $r = -0.85$ ) and between religiosity and anxiety ( $r = -0.51$ ). Whereas, a strong positive relationship was found between religiosity and life satisfaction ( $r = 0.76$ ).<sup>15</sup> Furthermore, a study conducted by Dalmida<sup>16</sup>, also showed a significant negative relationship between religious practices and depressive symptoms ( $r = -0.24, P < 0.05$ ). In addition, the higher religiosity was associated with the less depressive symptoms.

Psychological well-being among persons living with HIV is not only influenced by internal factors but also by external factors. One of the prominent external factors contributing to psychological well-being is social support.<sup>17</sup> Social support is essential in maintaining and enhancing the individual's well-being both in particularly psychological well-being. High

social support was negatively associated with psychological distress such as stress, depression and anxiety and positively associated with psychological well-being among persons living with HIV.<sup>17</sup> Moreover, support from family/friends was negatively associated with depression and anxiety, and positively correlated with psychological well-being.<sup>18</sup> Support received from friends helps decrease the negative impact of HIV.<sup>19</sup> Social support was significantly correlated with quality of life among persons living with HIV.<sup>20</sup> Furthermore, self-reported emotional social support was negatively associated with depression, and internalized shame and emotional social support were significant predictors of depression after controlling for gender, age, income, and education.<sup>21</sup>

Despite the evidence of research which supports the relationships between perceived stigma, hope, religiosity and perceived social support with psychological well-being, there was no study conducted to examine these relationships in Indonesia, to the knowledge of the researchers. Further, Indonesian has their own beliefs, culture and social characteristics, which might not be similar to other population. Therefore, to address this gap, the present study aimed to examine psychological well-being of HIV patients and its association with select factors, i.e., perceived stigma, hope, religiosity, and perceived social support. Empirical evidence obtained from this study would provide better understanding towards psychological well-being and its related factors for health professionals and nurses in particular. This could help them to plan for proper intervention aiming at enhancing psychological well-being among the people living with HIV.

## Methods

### Design and study settings

This descriptive correlation study aimed to examine psychological well-being and test its relationships with perceived stigma, hope, religiosity, and perceived social support among persons living with HIV. This study was conducted with HIV patients who visited outpatient department of the two care service centers (anonymous) in March 20 to April 9, 2015. These care centers belong to the non-government organization (NGO) located in Bandung, Indonesia. These care service centers providing special HIV clinics encompassed of medical treatment, general

consultation and specific counseling service for HIV patients. These care centers open from Monday to Friday and working time begin at 8.00 am till 5.00 pm and will be closed on Sunday and public holidays.

### Sample

The sample consisted of 100 HIV patients. They were recruited using simple random sampling technique. They were randomly selected from the list of outpatients who visited these two care service centers for follow-up. These patients came for follow-up with their counselors or physicians in order to have health check-up, medications, and consultation if needed. The inclusion criteria for these participants included: 1) diagnosis by physician as having HIV positive for at least 1 year, 2) age ranging from 18 - 59 years old, 3) no mental illness as diagnosed by psychiatrist, and 4) being able to read, write and understand Indonesian language. This sample size was determined based on the formula by Thorndike's. It was calculated as  $(10(5) + 50) = 100$ . So the sample in this study included 100 persons living with HIV.<sup>22</sup>

### Instruments

Data were collected using the following questionnaires.

#### *Demographic Questionnaire*

This questionnaire was developed by the researchers. It consisted of questions to assess demographic characteristics of the participants including their age, gender, marital status, education background, occupation, living status, and number of years of having HIV.

#### *Psychological Well-being Scale*

Psychological Well-being Scale developed by Ryff and Keyes<sup>23</sup> was used in this study to measure psychological well-being among persons living with HIV. The scale comprised of 42 items that evaluate psychological well-being across 6 dimensions including self-acceptance, positive relation with others, autonomy, environmental mastery, purpose in life, and personal growth. Each dimension consists of 7 items. These items could be positive and negative statements. Each statement used a 6-point Likert-type scale ranging from strongly disagree (1) to strongly agree (6). Psychological well-being of the total scale and each dimension was presented using mean score.

Possible scores for the total score ranged from 42 to 252. For each dimension, it ranged from 7 to 42 with higher scores indicated higher psychological well-being. The levels of psychological well-being are classified into low, moderate and high levels based on method postulated by Polit & Beck.<sup>24</sup> According to this method, the highest possible score was minus the lowest score and then divided by 3. The reliability using Cronbach's alpha coefficient in the study conducted by Dierendonck<sup>25</sup> with HIV patient was 0.90. An internal consistency reliability found in this sample was high (Cronbach's alpha coefficient for the whole scale of 0.84).

#### ***HIV Stigma Scale***

The Stigma Scale developed by Sowell and colleagues<sup>26</sup> was used to assess stigma as perceived by the persons living with HIV. This measure contains 13 items with a 4-point Likert-type scale ranging from 1 to 4. The items designed to determine how often the respondents had thoughts and feelings of being stigmatized because of their illness. This is a summated scale with total scores ranging from 13 to 52, with higher scores equating greater stigma. The levels of perceived stigma were also classified into low, moderate and high levels by dividing the total possible scores by three.<sup>24</sup> This scale was used to measure perceived stigma among persons living with HIV.<sup>27</sup> The scale had internal consistency with a Cronbach's alpha coefficient of 0.83. In this study, the scale yielded a high internal consistency reliability (Cronbach's alpha coefficient of 0.86).

#### ***The Adult Trait Hope Scale***

The Adult Trait Hope Scale developed by Snyder<sup>28</sup> was used to measure hope among persons living with HIV. This scale consisted of 8 items designed to assess hope. It was divided into 2 subscales including agency (i.e., goal-directed energy) and pathways (i.e., planning to accomplish goals). Of the 8 items, 4 make up the Agency subscale with a total score of this subscale ranging from 4 to 32, with higher scores indicating higher levels of agency thinking. The pathways subscale score consisting of 4 items and scores on this subscale ranged from 4 to 32, with higher scores indicating higher levels of pathways thinking.

Total hope scores consisted of pathways and agency subscales. Scores ranged from 8 to 64, with higher scores representing higher hope levels. Each item uses an 8-point Likert-type scale ranging from 1-definitely false to 8-definitely

true. To interpret the results, the total possible scores of hope were also divided into three levels using the method described by Polit & Beck.<sup>24</sup> This scale was used to measure hope among persons living with HIV in the study conducted by Smith<sup>29</sup> and a Cronbach's alpha coefficient of 0.90 was found. In our study, the scale achieved a high internal consistency reliability (Cronbach's alpha coefficient of 0.83).

#### ***The Religiosity Scale***

The Religiosity Scale developed by Achour and colleagues<sup>30</sup> was used to measure religiosity among persons living with HIV. This scale contains 11 items designed to measure strength of religious faith by specifically reflected by beliefs and worship aspects. The scale uses a five-point Likert-type response format, ranging from 1-strongly disagree' to 5-strongly agree. Scores ranged from 11 to 55 where the higher score indicated more religiosity. For interpretation, total score for this religiosity was divided into three levels based on the method postulated by Polit & Beck<sup>24</sup>. This scale was used to assess religiosity in psychological well-being in the study conducted by Achour and colleagues<sup>30</sup>, with its internal consistency Cronbach's alpha coefficient of 0.92. In this study, a high internal consistency reliability was still achieved with a Cronbach's alpha coefficient of 0.88.

#### ***Personal Resource Questionnaire (PRQ2000)***

Personal Resource Questionnaire (PRQ2000) developed by Weinert<sup>31</sup> was used to measure social support of persons living with HIV. The PRQ2000 included 15 items whose answers ranging from 1-strongly disagree to 7-strongly agree. Possible total scores can range from 15 to 105, with higher scores indicating higher levels of social support as perceived by the respondents. In this study, the level of social support as perceived by the persons living with HIV was also divided into three levels using the method postulated by Polit and Beck.<sup>24</sup> This scale was used to measure perceived social support among persons living with HIV<sup>31</sup> With a high internal consistency reliability based on Cronbach's alpha coefficient of 0.83. In our study, the scale yielded a Cronbach's alpha coefficient of 0.86.

#### ***Quality of the instruments***

For validity, since all the scales used in this study were validated and conducted with the patients living with HIV, the researchers used all scales without modification.

The original questionnaires were in English, so they were all translated into Indonesian version following the procedure postulated by Cha, Kim, and Erlen.<sup>32</sup> In this translation procedure, the original English version was translated into Indonesian version by the first person, then the Indonesian version was back-translated into English version by the second person. Both English versions of the instruments (the original and the back-translated version) were further reviewed and compared for equivalency by the third person.

For internal consistency reliability, all questionnaires were tested with 30 persons with characteristics similar to the sample. All of scales used in this study had good reliability as suggested by the Cronbach's alpha coefficient accompanying each scale as mentioned above.

### Data collection procedure

Data collection was conducted after the research proposal was approved by Ethical Approval Committee Faculty of Nursing, Burapha University, Thailand (IRB No. 25-01-2558). The letters from Faculty of Nursing, Burapha University were sent to the directors of the two Care Service Centers located in Bandung, Indonesia. After the permission was granted, a researcher (A. Somana) and a research assistant began to recruit the sample. First the researcher and research assistant visited the clinics at the same time for each different care service center. Sample was recruited by simple random sampling technique from the list of the patient record. Second, the researcher and research assistant met the participants either when they were waiting for the physicians or counselors, or during the waiting for prescriptions filled. The participants were informed about purpose, method, procedure, benefit, and anonymity and confidentiality of the study before the consent form was signed. Third, data were collected by the researcher asking the participants to fill the questionnaires in a private room. It took about 40 minutes to complete the entire questionnaire. The duration for data collection was about one month, on Monday to Friday from 8.00 am to 2.00 pm at the two centers. Last, after the participants completed the questionnaire, the researcher and the research assistant checked for the information completeness.

### Data analyses

Descriptive statistics including demographic information, psychological well-being, perceived stigma, hope, religiosity,

and social support among persons living with HIV were used. Pearson's product-moment correlation coefficient and partial correlation coefficient were used to explore the association between psychological well-being and selected factors including perceived stigma, hope, religiosity, and perceived social support. The alpha level of statistical significance was set at 0.05.

The strength of the size of correlation coefficients was based on Burn and Grove<sup>33</sup>, where positive relationships were classified as weak, moderate and strong based on the correlation coefficients of 0.00 to less than 0.30, 0.30 to 0.50, and more than 0.50, respectively; while negative relationships were classified based on the absolute values of the negative correlation coefficients in an identical order as those of positive relationships.

## Results

All 100 questionnaires were completed and returned. The demographic characteristics of the participants were presented in Table 1. The majority of participants were male, married, and in the age group of 30 - 39 years old with an average age of 31.48 years (SD = 5.63). More than half of

**Table 1** Demographic characteristics of the participants (N = 100)

Variables	Number (n)	Percentage (%)
Age (Years old) <i>M</i> = 31.48; <i>SD</i> = 5.63; <i>Min</i> = 19; <i>Max</i> = 45		
19 - 20	39	39
30 - 39	54	54
40 - 49	7	7
Sex		
Male	54	54
Female	46	46
Marital status		
Single	38	38
Married	40	40
Divorced	16	16
Widowed	6	6
Education background		
Primary high school	2	2
Junior high school	26	26
Senior high school	54	54
College	12	12
University	6	6
Occupation		
Private company employee	49	49
Business owner	10	10
Unemployed	41	41
Living with		
Husband/wife	10	10
Husband/wife and kid	24	24
Parent	39	39
Other family	22	22
Extended family	5	5
Years of having HIV <i>M</i> = 6.17; <i>SD</i> = 4.21; <i>Min</i> = 2; <i>Max</i> = 21		

them had completed senior high school (54%), and were still working, and 39% of the participants lived with their parents. The average number of years of having HIV was 6.17 years.

## Description of the study variables

### Description of psychological well-being

Psychological well-being scores in total and its 6 dimensions including purpose in life, personal growth, positive relations, autonomy, self-acceptance, and environmental mastery are described in Table 2. Psychological well-being was at moderate level with a mean total score of 172.56 (SD = 24.25). Mean score of each of the 6 dimensions was also at moderate level.

**Table 2** Psychological well-being and 6 dimensions of psychological well-being (N = 100)

Variables	Mean	SD	Actual score	Possible score	Level
Psychological well-being	172.56	24.25	129 - 239	42 - 252	Moderate
Purpose in life	31.31	4.97	19 - 42	7 - 42	Moderate
Personal growth	30.76	4.60	22 - 42	7 - 42	Moderate
Positive relations	29.64	5.72	20 - 42	7 - 42	Moderate
Autonomy	28.01	4.42	19 - 40	7 - 42	Moderate
Self-acceptance	26.60	4.95	15 - 41	7 - 42	Moderate
Environmental mastery	26.24	4.00	16 - 37	7 - 42	Moderate

### Description of selected factors

Factors related to psychological well-being consisted of perceived social support, hope, religiosity, and perceived stigma are described in Table 3 with mean scores 79.44 (SD = 10.02), 49.72 (SD = 8.79), 45.43 (SD = 6.39), and 31.48 (SD = 10.26), respectively.

**Table 3** Description of selected factors related to psychological well-being (N = 100)

Variables	Mean	SD	Actual score	Possible score
Perceived social support	79.44	10.02	54-104	15-105
Hope	49.72	8.79	8-64	8-64
Pathway	27.11	4.17	4-32	4-32
Agency	22.61	5.21	4-32	4-32
Religiosity	45.43	6.39	29-55	11-55
Perceived stigma	31.48	10.26	13-50	13-52

## Relationships between psychological well-being and selected factors

Based on Pearson's product-moment correlation coefficients, psychological well-being was significantly correlated with gender ( $r = 0.35, P < 0.05$ ), age ( $r = 0.36, P$

$< 0.05$ ), and number of years of having HIV ( $r = 0.39, P < 0.05$ ). Thus, partial correlation was used to test the relationships between selected factors and psychological well-being by controlling for gender, age and years of having HIV. The findings were shown in Table 4. The results of partial correlation showed that perceived social support and hope had significantly strong positive relationship ( $r = 0.67, P < 0.01$  and  $r = 0.63, P < 0.01$ , respectively), while religiosity had significantly weak positive relationship ( $r = 0.26, P < 0.05$ ) with psychological well-being. On the other hand, perceived stigma had significantly strong negative relationship with psychological well-being among persons with HIV ( $r = -0.63, P < 0.01$ ).

**Table 4** Partial Correlation coefficients between selected factors and psychological well-being (N = 100)

Variables	Correlation coefficients (r)
Perceived social support	0.67*
Hope	0.63*
Perceived stigma	-0.63*
Religiosity	0.26 <sup>§</sup>

\*  $P < 0.01$ , <sup>§</sup>  $P < .05$

## Discussions and Conclusions

The aims of this study were to examine psychological well-being and test its relationships with select factors among persons living with HIV residing in Bandung, Indonesia. The moderate psychological well-being was found both in the overall score and each of the 6 domains of well-being. The results obtained from this study are consistent with that from previous study conducted with HIV patients in Indonesia<sup>4</sup>, but in contrast with the results of the one conducted in Makassar, Indonesia, which reported lower psychological well-being in all domains of psychological well-being among HIV patients.<sup>34</sup>

Moderate level of psychological well-being found in this study might relate to the fact that these patients are those who continue to receive treatment, medications and consultation as indicated by having regular visits with these particular care centers. Apart from medical and psychological services they could receive, coming to these centers would also allow these patients to obtain more knowledge and experience which facilitate them to engage in better learning and adaptation from both the health care providers as well as other persons living with HIV.

In adjusting living with HIV, the persons could start to accept to live their lives despite the HIV existence. According to Schweitzer, Mizwa, and Ross<sup>35</sup>, during the state of acceptance, the persons with HIV integrate their status into self-identity and attempt to balance between altruism and self. Therefore, they could accept their conditions in living with the disorder and to have sustainable psychological well-being. According to Huppert<sup>36</sup>, having good psychological well-being does not require individuals to feel good all the time; they may at some points experienced painful emotions, e.g., disappointment, failure, and grief. This is regarded as a normal part of human life. In this study, the participants probably were able to manage both the negative and painful emotions over time.

The other possible explanation for moderate well-being might be that the majority of the participants were in the age range of 30 – 39 years (54%), being male (54%), being married (40%), having senior high education (54%), and having occupation as the private company employee (49%). Due to these characteristics, it somehow reflected that the patients would have better adjustment with life challenges. The majority of the participants were in the productive age ranging from 30 to 39 years. Although they did not have high education level, they still had their own jobs. These could help enhance their psychological well-being. In addition, these patients mainly stayed with their parents which could help stabilize state of their psychological well-being. Living with parent(s) would make them feel safe and comfortable. According to Keyes, Ryff, & Shmotkin<sup>37</sup>, psychological well-being was associated with age and education. In addition, the patients in this study were the outpatients who had good care for themselves as reflected by continuous care visits. So, this could contribute to their moderate level of psychological well-being.

#### **Relationships between psychological well-being and selected factors**

The relationships between psychological well-being and perceived stigma, hope, religiosity, and perceived social support were examined by partial correlation coefficient controlling for gender, age and number of years of having HIV. Based on this analysis, it showed that perceived stigma had significantly strong negative relationship with psychological well-being ( $r = -0.63, P < 0.01$ ). The stigma encountered by the persons living with HIV may worsen the

state of their health, especially mental health which later may become more complicated and contribute to prolonged problems which further affect their well-being. According to Stutterheim and collegeous<sup>12</sup>, stigma can cause psychological distress to the patients.

Findings from the study conducted by Varni, Miller, McCuin, & Solomon<sup>38</sup> also supported the results of this present study. The results revealed that the stigma associated with HIV poses a psychological challenge to persons living with HIV. Nevertheless, the consequences of stigma-related stressors on psychological well-being would depend on how the persons cope with the stress in relation to HIV stigma. In the above study, the result showed that stigma was associated with anxiety and depression among the participants. Furthermore, stigma-related experiences reported in above study were found in 41% of 221 HIV-infected persons. Among those who reported stigma agreed that some persons around them often behave negatively towards them, particularly when knowing that they are HIV-positive. About 29% of them reported that other people often avoid having direct contact with them because of their HIV status. From the same study, stigma-related experiences were positively associated with the time of having HIV ( $r = 0.25, P < 0.01$ ). Therefore, HIV-related stigmatization is one of significant stressors that affect both the physical and psychological health among the persons living with HIV.<sup>14</sup>

Findings of the present study also showed a strong positive relationship between perceived social support and psychological well-being ( $r = 0.67, P < 0.01$ ). The results of the present study was consistent with the study conducted in Mercubuana University, Yogyakarta, Indonesia<sup>39</sup> which showed a positive relationship between social support as perceived by the persons living with HIV and how meaningful it was to their lives ( $r = 0.89, P < 0.01$ ). The results obtained from this study were also congruent with the findings from the previous study in Ghana, which showed the association between social support and psychological well-being of people living with HIV.<sup>17</sup> The significant correlation among social support, depression, anxiety and stress were also found. Depression among the participants was significantly associated with anxiety ( $r = 0.68, P < 0.01$ ). Social support was correlated negatively with the amount of stress the patients experienced ( $r = -0.15, P < 0.01$ ) and had a significant negative correlation with anxiety ( $r = -0.52, P < 0.01$ ). According to Asante<sup>17</sup>, social support has significant

relationships with stress, depression and anxiety. Furthermore, in the study conducted by Du, Chi, Li, and Zhao<sup>40</sup>, its results showed that support from family members and friends help enhance psychological well-being. Social support might contribute to lower depression, anxiety and stress, leading to an increased psychological well-being among persons living with HIV.

The result from this present study revealed that hope had a strong positive relationship with psychological well-being ( $r = 0.63$ ,  $P < 0.01$ ). From this study, HIV patients reported high level of hope. This was also supported by results from a previous study showing that hope had positive association with psychological well-being among persons living with HIV, by serving as a mediator for alleviating distress. From 299 undergraduates of a Midwestern University, the results revealed that hope was positively related to satisfaction. Hope partially mediated the relationship between psychological well-being and psychological distress including anxiety, shame, depression, and loneliness.<sup>41</sup> According the study conducted by Hasnain<sup>13</sup>, hope and happiness contributed to 53% of significant variance for psychological well-being. In addition, in a study conducted in China comparing persons living with HIV aged 18 – 49 years and their older counterparts, they found a lower level of well-being, higher level of depression, and poorer quality of life in those who were older.<sup>42</sup> Such findings are consistent with the one in this present study where persons living with HIV in productive or working age reported both higher hope and psychological well-being.

In this study, religiosity had a significantly weak relationship with psychological well-being ( $r = 0.26$ ,  $P < 0.05$ ). Some of the possible reasons might relate to the duration of having HIV and their symptoms. The participants in this study could be able to solve the psychological problems and get back to normal stage once symptoms subside. They were more likely in the rehabilitation stage to receive medical and psychological services from the care centers. In Indonesia, religion is an important part of people's younger age, not merely in the time that each individual is trapped in the stage of life difficulty or suffering. People already have a usual stage of belief in God, and higher religiosity. Thus religiosity may weakly contribute to the relationship with psychological well-being among persons living with HIV in this study. According to the study conducted by Shalleh<sup>43</sup>, higher piety and religious zeal

contributed to a stronger belief to God, and a higher religiosity. Belief, knowledge, practice, and experience of religiosity could increase the religiosity.

Findings from other studies showed the religiosity was related to psychological well-being. In one study, 339 patients (75%) said that their illness had strengthened their faith, and they used positive religious coping strategies to cope with life difficulties.<sup>44</sup> Furthermore, from a previous study, religious coping alleviated the depressive symptom among persons living with HIV.<sup>16</sup> From this present study, it was found that participants had higher hope and no mental disorders as diagnosed by the psychiatrist. Thus, they would be able to regularly perform religion practice and this would help maintain their psychological well-being. Based on this present study, most participants reported high religiosity level. Nevertheless, no variation of religiosity among the participants may contribute to a weak positive relationship with psychological well-being. In addition, this study focused mainly on the religiosity of the participants in terms of their faith and beliefs, but slightly on religious practice. Hence, it will be interesting to investigate more in terms of their religious involvement or practice during their times living with HIV, and also how it is related to their psychological well-being.

Regarding implications, the findings of this study can be applied for clinical nursing practice and nursing research. The results obtained from this study would provide nurses and those who involve in caring for HIV patients to have better understanding towards psychological well-being, particularly in Indonesia context. In addition, the confirmation of the relationships between psychological well-being with perceived stigma, hope, religiosity and perceived social support provided the basis for nurses to develop proper interventions aiming at promoting psychological well-being among persons living with HIV. Based on this study results, interventions should emphasize on reducing stigma, enhancing hope as well as promoting more support from family members, friends, and care providers to facilitate group discussion in sharing experiences and ways to solve problems. Study findings can serve as a baseline data for further studies related to psychological well-being and enhancement of factors related to psychological well-being among persons living with HIV.

In terms of limitations, the study took place at only two care centers of a non-government organization located in



Bandung, Indonesia. In addition, the data were collected only from HIV patients who visited the care service centers with no serious complications or other chronic diseases. Patients with chronic diseases were automatically excluded as they usually visit hospitals to receive services instead of these care centers. Thus, the persons living with HIV who participated in this study were somewhat in better stage of adjusting to the illness and merely came for follow-up. Furthermore, a cross-sectional design was used to collect data and this study relied mainly on self report questionnaires. Therefore, generalization to the entire population is limited.

Since the study employed limited settings and included quite a narrow range of patient characteristics such as their health conditions and their CD4 level, further research should be conducted in multiple settings and include participants from both governmental and non- governmental care settings. In addition, more in depth data related to the physical and mental health among the patients should be collected as well. It will also be interesting to examine psychological well-being among the persons of HIV who did not come for follow-up or lost to follow-up. In addition, longitudinal design to explore the directions of the relationships among variables, study aiming at examining the predictive abilities of the select factors and experimental study aiming at examining the efficacy of related factors (i.e., perceived stigma, hope religiosity, and perceived social support) on psychological well-being are recommended.

In conclusion, this study found that the persons living with HIV in Bandung, Indonesia reported moderate psychological well-being. Perceived social support and hope were strongly related to psychological well-being, while religiosity had a weak positive relationship and perceived stigma had strong negative relationship with psychological well-being among persons living with HIV. Providing information or effective campaign in eliminating or alleviating stigma is encouraged. Health care providers, nurses in particular should play an active role in reducing stigma as well as inspiring hope and promoting more support from the patient's family members, friends and also people in their communities.

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