



# Age Differences and Self-Concept Predict Indonesian Females' Mental Health

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## Abstract

**Background:** The biopsychosocial challenges make females more prone to experiencing mental problems that can lead to extensive repercussions, affecting multiple generations because of their significant roles in a family and society. However, mental health problems in Indonesia are still not handled optimally, and the expenses for their medical care are not inexpensive. It's important to explore factors that influence mental health in order to reduce costs. So, this study aims to identify the influences of age differences and self-concept on females' mental health in the general population of Indonesian adults.

**Methods:** The study employed cross-sectional research, utilizing an uncontrolled quota sampling method and collecting data via an online survey.

**Result:** Mental health can be predicted based on the self-concept ( $p < 0.001$ ) and age differences ( $p < 0.01$ ) of Indonesian females. Females with a significant problem of mental health are 0.76 times less likely to have a high self-concept than moderate self-concept, whereas females with no significant problem of mental health are 0.96 times less likely to be found in the young adult group than in the middle-year group.

**Conclusion:** Self-concept plays one of the significant factors in shaping the mental health of adult females in Indonesia, and young adult females are more vulnerable to mental problems. Further research about the implementation of self-concept enhancement related to reducing mental treatment costs is needed.

**Keywords:** Adult females, Age, Indonesia, Mental health, Self-concept.

## Introduction

Data from the United Nations reports that a third of all females face the suffering of physical, sexual, or psychological abuse during their lifetimes<sup>1</sup>. But there are also numerous instances of violence and discrimination against females that occur globally, often going unreported<sup>2</sup>. The World Health Organization (2002) asserts that disparities globally in females' well-being and mental health are significantly shaped by the prevalence of violence, both sexually and domestically, as well as discrimination among males and females<sup>3</sup>. Furthermore, individuals with poor mental health are placed in a vulnerable group associated with violence, undertreatment, discrimination, stigma, and poverty. Worldwide, mental health issues are often overlooked despite their importance to achieving the well-being and developmental objectives of a nation<sup>4</sup>, including Indonesia, where mental health problems are also not handled optimally<sup>5</sup>, and the treatment costs are also not inexpensive<sup>6</sup>. The Global Burden of Disease study in 2019 indicated that the highest prevalences of mental health problems are depression and anxiety

in Indonesia, with a higher percentage of females than males<sup>7</sup>.

Mental health challenges commonly arise from a blend of biological factors, including genetics, brain diseases/injuries, and the imbalance of neurotransmitters and steroid hormones in the human brain. Some research indicates that females may be more susceptible to mental health issues due to inherent brain differences between males and females<sup>8,9</sup>. Their emotional reactions differ based on their hormone levels and neural activity differences. Specifically, females' responses to stressful experiences are influenced uniquely by fluctuating estrogen hormone levels<sup>9</sup>. Additionally, psychosocial factors like individuals' experiences and roles in society contribute to the development of mental health issues<sup>8,10</sup>. In daily life, females often face challenging roles as caregivers for their families. Despite advancements where females have pursued similar educational and work paths as men over the last several decades, the impact of gender-related issues on psychology and behavior may vary across cultures<sup>11</sup>. These multifaceted conditions can collectively influence females' mental health.

A study by Jurewicz (2015) in the United Kingdom uncovered that mental health problems were widespread among young adults and adolescents aged 16–24 years<sup>12</sup>. In addition, in a separate investigation focusing on immigrant youth in Germany, Busch et al. (2021) found that self-concept emerged as a notable predictor of symptoms related to depression and anxiety<sup>13</sup>. Zhu et al. (2016) previously also proposed something similar in Chinese college students that mental health is directly influenced by self-concept, while social adjustment serves as a mediator between the two variables<sup>14</sup>. Wherein self-concept is a set of perceptions and reference points regarding oneself, it constitutes a central theme of personality that imparts direction to the entire life of human beings<sup>15,16</sup>. It has three parts, namely self-esteem, self-image, and the ideal self<sup>16</sup>. Individuals with a high self-concept are likely to manage their challenges effectively and communicate their emotions appropriately because of their positive feelings and belief that they are competent and loved. Conversely, those with a lower self-concept often experience insecure feelings, a preference for maintaining distance from others, a tendency towards higher aggression, and a deficiency in self-acceptance that can lead to distress, mental suffering, and loneliness<sup>17,18</sup>. Nevertheless, there hasn't yet been studied the influence of age differences on Indonesian adult females' mental health, as well as the relationship between self-concept and mental health at all ages of adulthood in the general population of females in Indonesia, as different findings may exist related to the different cultures. There are two preceding female studies in Indonesia regarding this issue; however, they are limited to middle-aged women with premenopause and menopause conditions and cover only small areas, such as a village in East Java province<sup>19,20</sup>. Therefore, this study aimed to examine the influence of age differences and self-concept on mental health in the general population of Indonesian adult females. This study hypothesized that Indonesian adult females' mental health could be predicted based on age differences and their self-concept.

## Methods

This cross-sectional study employed an observational analytic design, utilizing an online survey method to collect data from females aged 19 years and older. The sampling technique employed was uncontrolled quota sampling by dividing Indonesia into two regions, west and east. Participants were selected according to the Indonesian population percentage residing on the two major islands, Java Island (which represents the Indonesian west area and the highest population

percentage of Indonesia) and Sulawesi Island (which represents the highest population percentage of the Indonesian east area), and certain minor islands/provinces such as Bali, Nusa Tenggara, and East Kalimantan, collectively representing over 65% of the total Indonesian population<sup>21</sup>.

The survey Google form was disseminated across each province of the major islands and the minor islands/provinces via the WhatsApp application, using assistance from social networks, to get at least 200 participants for more stable analysis results. The two Indonesian versions of self-reported online questionnaires had previously undergone validation and demonstrated reliability within a valid sample population, exhibiting high internal consistency levels. The Brief Symptoms Rating Scale-5 (5 items; measuring the common mental problems such as the symptoms of stress, depression, and anxiety) with Cronbach's alpha = 0.881 and the Berzonsky-Fitts Self-Concept Scale (13 items; measuring the aspects of physical, psychological, social, family, and moral-ethics) with Cronbach's alpha = 0.798, respectively<sup>18,22,23</sup>.

The data in this study, which exclusively involved female participants, constituted a segment of the broader research dataset. The overall research, including this specific subset, received approval from the local Institutional Review Board. Informed consent was obtained from all the participants. After examining the data using descriptive statistics and verifying if the variables met all assumptions, binomial logistic regression analysis was performed to identify the influence of age differences and self-concept on mental health in Indonesian adult females.

## Result

A total of 206 female participants in Indonesia took part in the study. The descriptive data revealed that the skewness and kurtosis values for both variables fell within the normal range, suggesting that the population follows a normal distribution.

Table 1 presents information on the characteristics of the 206 adult female participants, ranging in age from 19 to 67 years, with an average age (standard deviation) of 36.7 (12.9). They comprised 122 individuals in the young adults category (59.2%), 83 in the middle years category (44.5%), and 1 in the later years category (1.8%). Most had a middle education level (80.1%) from senior or vocational high school, an associate degree, or an undergraduate degree. The participants were predominantly brought up in and resided in urban settings. In addition, the descriptive analysis results also found that the scores of no significant mental problem and significant mental problem ranged from 0 to 9, with a mean score (standard deviation) of 4.3

(2.7), and 10 to 20, with a mean score (standard deviation) of 13.7 (3.2), respectively. The high self-concept scores range from 40 to 52, with a mean score (standard deviation) of 43.6 (3.0). On the other hand, the moderate self-concept scores range from 26 to 39, with a mean score (standard deviation) of 35.1 (3.4).

**Table 1.** Characteristics data on Indonesian female participants in Indonesia (N=206)

Characteristics		N	%
Age group	Young adults (19-40 years)	122	59,2
	Middle years (41-65 years)	83	40,3
	Lates years (>65 years)	1	0,5
Marital status	Not married	90	43,7
	Married	108	52,4
	Death divorce	1	0,5
	Divorce	7	3,4
Education level	Low	2	1
	Middle	165	80,1
	High	39	18,9
Occupation	Not working	86	41,7
	working	120	58,3
Place of living	Urban	157	76,2
	Suburban	37	18
	Rural	12	5,8
Mental health	No significant problem	154	74,8
	Significant problem	52	25,2
Self-concept	High	120	58,3
	Moderate	86	41,7
	Low	0	0

Figure 1 indicates the participant number differences between a significant mental health problem and no significant mental health problem, where the difference is greater in the middle years than in young adults. The number of participants with significant mental health problems among young adults was almost three times higher than in the middle years.

**Figure 1.** Bar chart of age group and mental health in Indonesian females

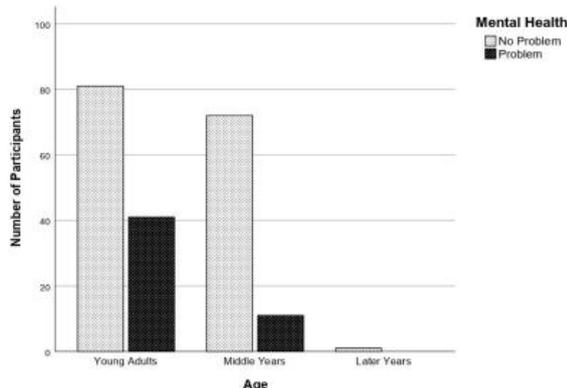


Figure 2 exhibited the medium cases of moderate self-concept with no significant mental health problems and the low cases of high self-concept with significant mental health problems. The participants who had a high self-concept with no significant mental health problem were almost 2.5 times larger than those who had a moderate self-concept with no significant mental health problem. While the participants who had a significant mental health problem were the opposite, the participants with a moderate self-concept were larger than the participants with a high self-concept. Most participants with a high self-concept had no significant mental health problems.

**Figure 2.** Bar chart of self-concept and mental health in Indonesian females

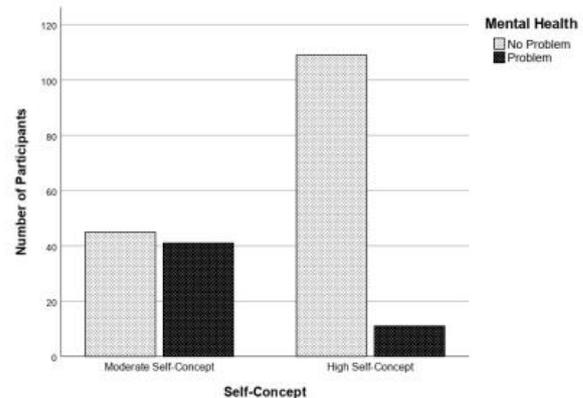


Figure 3 shows that in the middle year group, the number of participants who had a moderate self-concept was almost three times smaller than that of participants who had a high self-concept, while in the young adults' group, they showed the opposite: the participants who had a moderate self-concept were slightly higher than those who had a high self-concept. Young adults had a higher moderate self-concept than the middle year group, while the high self-concept was higher in the middle year group than young adults.

**Figure 3.** Bar chart of age group and self-concept in Indonesian females

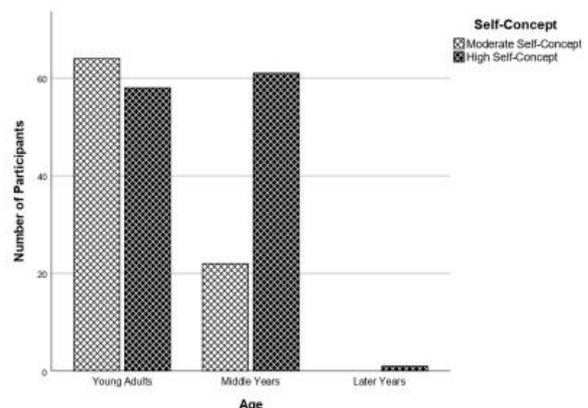


Table 2 showed that mental health (significant problem or no significant problem) can be predicted based on the self-concept ( $p < 0.001$ ) and age differences of Indonesian females ( $p < 0.01$ ). Participants with a significant problem of mental health are 0.76 times less likely to have a high self-

concept than a moderate self-concept, whereas participants with no significant problem of mental health are 0.96 times less likely to be found in the young adult group than in the middle-year group. The differences between both age groups are marginal.

**Table 2.** Binomial logistic regression analysis summary for age and self-concept predicting mental health in Indonesian women ( $\alpha$  level  $\leq .05$ )

Statistic Result	B	SE	Wald	df	p-Value	Exp(B)	C.I. 95%	
Self-Concept	-.271	.050	29.502	1	.000	.762	.691	.841
Age Differences	-.047	.018	7.003	1	.000	.955	.922	.988

## Discussion

The findings depicted in Figure 1 align with those presented in Table 2, indicating that young adult females experiencing substantial mental health issues outnumbered their counterparts in the middle years group. This may be explained by the young adult phase, spanning from 19 to 40 years old. Many Indonesian women navigate the challenges associated with pregnancy, breastfeeding, raising children, taking care of the elderly, pursuing education and careers, as well as victimization of violence and discrimination, which encompass various impacts, including neurochemical alterations in the brain and psychosocial issues. Furthermore, the cases of sexual and domestic violence toward females, especially young females in Indonesia, are high<sup>24</sup>. Mental health problems and a shortage of well-being have been global trends in recent decades, mainly affecting young females and girls<sup>25</sup>. However, it cannot be denied that in the middle years, typically spanning from 41 to 65 years old, females face hormonal and physical changes such as premenopause and menopause syndromes that may exert negative impacts psychologically as well<sup>26</sup>.

The higher number of significant mental health problems among young adult females may also be linked to their self-concept. As shown in Figure 3, young adults had a higher moderate self-concept than the middle years group, while the high self-concept was higher in the middle years than young adults. This finding revealed that self-concept significantly predicts mental health (Table 2). In line with Figure 2 as well, which showed most females with high self-concept had no significant mental health problems, this finding revealed the significant role of self-concept in overcoming the problems of mental health among adult females in Indonesia, both young and middle-aged. It is confirmed by three previous findings, videlicet one is among male and female college students in China<sup>14</sup>, and two of them are studies in the female middle-aged population in Indonesia, which examine the associations between self-concept and stress level as well as self-concept and females' anxiety in facing menopause,

respectively<sup>19,20</sup>. Efforts to prevent mental problems, including primary, secondary, and tertiary prevention, are critical, particularly among young adult females, because mental conditions during the previous age period can significantly influence future mental well-being in subsequent stages of life<sup>11,12</sup>.

Moreover, Figure 2 shows there were females with a moderate self-concept who had no significant mental health problems (medium cases) and a high self-concept who had significant mental health problems (low cases), indicating other factors besides self-concept also influence females' mental health. This study was conducted during the COVID-19 pandemic with some limiting conditions that couldn't be avoided. There was only one female sample with a later-years category and no sample with a low self-concept. It may be because the hardships of the pandemic can hinder vulnerable people, such as the elderly and those with low self-concept, from participating. Furthermore, the number of adults with low self-concept in the general population may be small. A study in Japan among adolescents to later years proposes that self-concept score enhancement is in line with increasing age<sup>27</sup>, affirming that a higher self-concept may be a majority in this adult female population rather than a lower self-concept. In addition, the nature of people with low self-concept, keeping their distance from others, and a tendency towards higher aggression can also reduce or strengthen the reasons for not participating in this study voluntarily<sup>17,18</sup>.

Regarding relevance for clinical practice, it can be said that although most females are often behind the scenes, they play essential and decisive roles in families, particularly caring and nurturing. Therefore, the well-being and mental condition of females also determine the prosperity of a family, a society, and even a nation<sup>4,11</sup>. The prevalence of mental health issues among females can have far-reaching consequences, spreading negative impacts across generations. This is often a result of their biopsychosocial challenges, which render them more susceptible to such issues<sup>8,10</sup>. By exploring the factors that can influence mental health in females,

we can overcome mental health problems from various aspects, not just relying on medication alone (e.g., pharmacotherapy) or other limited interventions that are usual, so it can speed up the steady recovery of mental problems, reduce unnecessary treatment costs, and achieve human well-being. However, regarding the application of self-concept enhancement to mitigate expenses associated with mental health treatments, additional investigations are still required. Furthermore, this study has some other limitations, as it used only the online survey without combining it with direct observation techniques and didn't determine the causality between variables because of the cross-sectional method. Future research that implements self-concept enhancement in mental health treatment by using an experimental study with a longitudinal approach method, choosing different instruments, and conducting the research among a wider population of males and females are good planning options for studies.

## Conclusions

In conclusion, this current study found that mental health can be predicted based on age differences and self-concept in the general population of Indonesian females. Increasing age and self-concept are associated with a reduction in the likelihood of mental health problems in an adult general population of females, both young and middle-aged, in Indonesia. Moreover, self-concept can become one of the significant factors in preventing and treating mental health problems in females, wherein young adults are the more vulnerable population to mental problems that require increased attention from professionals, policymakers, and societies, even though the susceptibility difference is slight between both age groups.

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Cheng-Chung Chen passed away on January 12, 2023. The details are recorded in the Taiwanese Journal of Psychiatry 2023;37(1):5-7 <https://doi.org/10.4103/tpspsy.8.23> under the titled "In Memoriam: Cheng-Chung Chen, M.D., Ph.D., 1957-2023".

## Author Contribution

Study design : AH, CCC  
Data acquisition : AH  
Data analysis : AH  
Manuscript writing : AH, CCC

## Ethical Clearance

The study received ethical clearance from the Ethics Committee of the Faculty of Medicine, Public Health, and Nursing of Gadjah Mada University, Yogyakarta, with protocol number KE/0148/02/2022.

## Competing Interests

There is no competing interest in conducting this study.

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