


Self-concept among Indonesian adolescents in coastal areas: A cross-sectional study

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Abstract

Background: Adolescence is a transitional phase from childhood to adulthood, characterized by various biological, psychological, and social changes. Adolescents living in coastal regions are exposed to social-environmental risk factors that can affect their emotional wellbeing, primarily due to the demanding and unpredictable nature of coastal communities. These challenging and volatile circumstances can have a negative impact on adolescents' emotions, making them more vulnerable to mental and emotional disorders.

Objective: This study aimed to examine the self-concept and its differences according to sociodemographic factors among adolescents residing in coastal areas of Indonesia.

Methods: A cross-sectional design was employed for this study, which involved 644 adolescents living in coastal regions of Indonesia, specifically in the West Sumatra and Bali provinces. The Tennessee Self Concept Scale (TSCS) 2nd Edition Short Form was used to assess self-concept from August to September 2022. Descriptive statistics, Independent-t-test, and One-way ANOVA were utilized for data analysis.

Results: The findings revealed that adolescents in coastal areas had a high level of self-concept. A statistically significant difference was discovered in the overall self-concept according to gender ($p = 0.002$). Similarly, a significant difference was observed in the physical domain based on class level ($p = 0.019$). Regarding the personal domain, significant differences were identified according to age ($p = 0.030$), class level ($p = 0.030$), parent's marital status ($p = 0.030$), father's education ($p = 0.05$), and family income ($p = 0.01$). Furthermore, in the family domain, significant differences were found based on parents' marital status ($p < 0.001$) and adolescents' residence status ($p = 0.002$). Additionally, a significant difference in the academic domain was observed with respect to gender ($p = 0.001$). However, no significant differences were noted in the moral ethics and social domains across all sociodemographic variables ($p > 0.05$).

Conclusion: This study emphasizes the need for attention from various stakeholders, including mental health nurses, to prioritize interventions to promote positive self-concept among adolescents, consider sociodemographic factors that influence self-concept, and address areas of dissatisfaction such as moral behavior and academic/work efficiency. Incorporating family support and nurturing positive parent-child relationships are also important for fostering a healthy self-concept in adolescents.

Keywords

adolescents; coastal area; Indonesia; nurses; self-concept

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Background

The prevalence of mental and emotional disorders among the Indonesian population was reported to be approximately 6.1% in 2018, affecting around 11 million individuals, as indicated by the Indonesian Basic Health Research Survey (Ministry of Health Indonesia, 2018). Furthermore, the number of high school-age adolescents in Indonesia increased by approximately 5 million, according to the Indonesian Central Bureau of Statistics in 2021. Specifically, there were 151,414 and 95,338 high school-age adolescents in West Sumatra and Bali, respectively (Badan Pusat Statistik, 2022).

If left untreated, mental and emotional disorders among Indonesian adolescents can significantly impact their social relationships, learning concentration, and personal development (Anggeani & Asyah, 2022). This is particularly important to consider during adolescence, a transformative period marked by biological, psychological, and social changes, during which an individual's self-concept is highly susceptible to influence (Kulakow, 2020; Yarmaliza et al., 2020).

Efforts have been made to support adolescents through educational initiatives within and outside school settings, but consistent and satisfactory results have yet to be achieved. Adolescents face various developmental challenges and

obstacles, including negative self-concepts. Individuals with low self-concepts tend to perceive themselves negatively and view themselves as disappointing (Agyemang & Adjei, 2020; Miles & Naumann, 2023; Saputro & Sugiarti, 2021). Therefore, understanding how self-concept is formed and its impact on adolescents is crucial for nurses who work with this population.

Self-concept plays a crucial role in shaping an individual's perception of themselves and is influenced by various factors such as their roles, relationships, and reactions from others (Katz et al., 2020; Muftianingrum & Pudjiastuti, 2019; Sasikumar & Nagooran, 2021). It encompasses different aspects, including self-image, self-ideal, self-esteem, self-role, and self-identity. For adolescents, self-concept refers to their level of self-awareness, which significantly influences their behavior and responses to the world around them (Ekhananda, 2014).

During adolescence, individuals shape their self-concept through environmental experiences and self-perception. Positive experiences can positively influence self-concept formation, while negative experiences can lead to self-blame, lack of confidence, difficulty expressing oneself, and an inability to overcome weaknesses (Folastri & Prasetyaningtyas, 2017; Mayr et al., 2020; Smith, 2019). Therefore, promoting positive self-image and addressing adolescent self-concept issues are essential roles that nurses can play in improving mental health outcomes, resilience, and self-efficacy (Dardas et al., 2020; O'Connor et al., 2019).

In Indonesia, an archipelagic nation, the coastal areas have been recognized for their positive influence on psychological well-being. Studies have shown ocean views create comfort and peace of mind (Peng et al., 2016). Additionally, coastal environments promote physical activity and social interaction, which enhance health and well-being (White et al., 2013). However, coastal areas also pose social-environmental risk factors for emotional health due to the challenging and temperamental nature of their population (Subekti & Nurrahima, 2020). This highlights the importance of studying self-concept and its sociodemographic-related factors among adolescents in the coastal areas of Indonesia.

Given the limited research on mental and emotional health in Indonesian adolescents, especially those in coastal areas, this study aimed to describe the self-concept and explore sociodemographic factors related to self-concept among adolescents in the coastal regions of Indonesia. The goal is to minimize disturbances in self-concept among adolescents and foster a positive self-concept. This research is particularly relevant for nurses working with this population as they can contribute to improved mental health outcomes, increased resilience, and enhanced self-efficacy through their understanding and support in addressing self-concept issues (Alrajhi et al., 2019; Benitez-Sillero et al., 2023; Casino-García et al., 2021; Hu et al., 2021).

Methods

Study Design

This study employed a cross-sectional design to investigate the self-concept of adolescents in the coastal areas of Indonesia, specifically in the West Sumatra and Bali provinces. The research focused on several locations within these coastal regions. In West Sumatra, the research was conducted in

Painan Pesisir Selatan, Padang Barat Padang City, and Pariaman areas. Similarly, the research sites in Bali included North Kuta in Badung District, Buleleng, and Dawan Klungkung District.

Sample/Participants

The research samples consisted of students from six public senior high schools (SMAN) located in the provinces of West Sumatra and Bali. In West Sumatra, three public senior high schools (PSHS) were included: PSHS 2 Padang, PSHS 2 Painan, and PSHS 1 Pariaman. In Bali, the three selected public senior high schools were PSHS 6 Denpasar, PSHS 1 Dawai, and PSHS 1 Kerambitan. The inclusion criteria for the samples/participants were adolescents aged 14 to 19 years old who were willing to participate. Exclusion criteria included adolescents who had a history of or were diagnosed with a mental health problem. The sampling technique used in this study was proportionate stratified random sampling to ensure representation from each school. The estimated sample size was determined using the Raosoft sample size calculator (<http://www.raosoft.com/samplesize.html>), considering a population of approximately 250,000 senior high school students in the two provinces, a margin of error of 5% and a confidence level of 99%. This calculation yielded a minimum required sample size of 662 participants. However, due to missing data, the final report included 644 participants.

Instruments

This study utilized two instruments. The first instrument consisted of demographic variables such as gender, age, class level, parent's marital status, residence status, father's education, mother's education, father's occupation, mother's occupation, and family income. The second instrument focused on measuring self-concept and was adapted from the Tennessee Self Concept Scale (TSCS) 2nd Edition Short Form developed by Fitts and Warren (1996). The Indonesian version of the TSCS was used (Ekhananda, 2014), which included six sub-dimensions of self-concept: physical self-concept, ethical-moral self-concept, personal self-concept, family self-concept, social self-concept, and academic/occupational self-concept. Permission to use and adapt the Indonesian version of the instrument was obtained from the developer.

The TSCS 2nd Edition Short Form consisted of 20 items that assessed various aspects of self-concept. These items were divided into 12 favorable and eight unfavorable statements, and participants rated their agreement using a 5-point Likert scale, ranging from 1 (very inappropriate) to 5 (very appropriate). The total score for each participant was calculated by summing the responses to the items. A pilot test was conducted with 30 adolescents to evaluate the construct validity using Pearson correlation. Based on the pilot test results, three items were found to have a correlation coefficient (r) lower than the critical value (r table value), indicating their invalidity. As a result, only 17 valid items were used in the final research instrument. The total score obtained from the TSCS 2nd Edition Short Form was used to determine the level of self-concept. The Cronbach's alpha reliability score for the TSCS 2nd Edition Short Form was calculated to be 0.83, indicating good internal consistency. A higher score on the TSCS 2nd

Edition Short Form indicated a higher level of self-concept, while a lower score indicated a lower level of self-concept.

Data Collection

Data were collected from August to September 2022 using an online questionnaire administered through Google Forms. In addition, the researchers collaborated with instructors from each of the schools involved to facilitate online meetings and recruit eligible participants who met the predetermined inclusion criteria established for the research.

Data Analysis

Data were analyzed using IBM SPSS Statistics (IBM Corp., Armonk, N.Y., USA). Descriptive statistics were used to summarize and present the data, including frequency, percentage, mean, medians, minimum-maximum value (min-max), and standard deviation (SD). Furthermore, Independent-*t*-test and One-way ANOVA were utilized to assess potential differences in adolescents' self-concept based on sociodemographic factors (gender, age, class level, parent's marital status, residence status, father's and mother's education and occupation, and family income. The predetermined threshold for statistical significance was set at $p < 0.05$.

Ethical Considerations

The study obtained ethical approval from the Research Ethics Committee of the Faculty of Medicine at Andalas University, Padang, Indonesia (Approval number: 843/UN.16.2/KEP-FK/2022). Prior to participation, informed consent was obtained from all participants. In addition, detailed information regarding the study objectives, procedures, confidentiality, and the right to withdraw at any time before data collection was concluded was provided to the participants. Following this information, participants willingly agreed to participate by signing a consent form. This ensured that all participants were well-informed about the study and voluntarily chose to participate, respecting their autonomy and rights.

Results

Characteristics of the Participants

A total of 644 adolescents participated in this study, with an average age of 16.19 years ($SD = 0.96$). Among the participants, 306 (47.5%) were male, and 338 (52.5%) were female. The majority of the participants fell into the middle adolescence age group of 15-17 years (93.1%), and the largest proportion were in the 3rd-year class level (38.4%). In regards to living arrangements, the majority of the respondents lived with their parents (87.7%), and the majority had married parents (86.2%).

Table 1 Participants' characteristics ($n = 644$)

Variable		f	%	Mean (SD) Min-Max
Gender	Male	306	47.5	
	Female	338	52.5	
Age	14 years	15	2.3	M = 16.19 (SD = 0.96) Min-Max = 14-19
	15 years	145	22.5	
	16 years	232	36.0	
	17 years	208	32.3	
	18 years	37	5.7	
	19 years	7	1.1	
Class Level	1 st year	200	31.1	
	2 nd year	197	30.6	
	3 rd year	247	38.4	
Parent's Marital Status	Married	555	86.2	
	Divorced	43	6.7	
	Single parent	46	7.1	
Residence Status	With parents	571	87.7	
	Other families	42	6.5	
	Alone	31	4.8	
Father's Education	Illiterate	2	0.3	
	Elementary	34	5.3	
	Junior high school	54	8.4	
	Senior high school	333	51.7	
	Diploma	221	34.3	
Mother's Education	Illiterate	7	1.1	
	Elementary	48	7.5	
	Junior high school	62	9.6	
	Senior high school	310	48.1	
	Diploma	217	33.7	
Father's Occupation	Others	137	21.3	
	Civil servant	105	16.3	
	State employee	4	0.6	
	Private employee	128	19.9	
	Self-employee	223	34.6	
	Honorary worker	4	0.6	
	Retired	19	3.0	
	Unemployed	24	3.7	

Table 1 (Cont.)

Mother's Occupation	Others	38	5.9	
	Civil servant	98	15.2	
	State employee	0	0	
	Private employee	77	12.0	
	Self-employee	142	22.0	
	Honorary worker	7	1.1	
	Retired	5	0.8	
	Unemployed	277	43.0	
Family Income	<RMW	349	54.2	M = IDR 2455124 (SD = 465343) Min-Max= IDR 500000 - IDR 7000000
	>RMW	295	45.8	

Note: IDR= Indonesian Rupiah, RMW= Regional minimum wage per month

Regarding parental education, a significant percentage of respondents' fathers (51.7%) and mothers (48.1%) had completed high school education. In addition, the majority of respondents' fathers were self-employed (34.6%), while a significant portion of their mothers were unemployed (43.0%). Furthermore, the majority of parents had an income below the regional minimum wage (54.2%) (Table 1).

Level of Self-concept and Its Domain

The study respondents had a high level of self-concept, as indicated by their mean self-concept and domain scores. The overall self-concept score for adolescents had a mean of 58.45 (SD 7.05). Examining the individual domains, adolescents scored a mean of 3.12 (SD 1.00) in the physical domain, 7.23 (SD 1.49) in the moral-ethical domain, 13.09 (SD 2.19) in the personal domain, 14.31 (SD 14.0) in the family domain, 7.54 (SD 1.60) in the social domain, and 13.15 (SD 1.94) in the academic/work domain. Overall, the study's findings highlight the adolescents' positive self-concept and provide valuable insights into their perceptions across different domains of their lives (Table 2).

Table 2 Level of self-concept and its domain (n = 644)

Self-Concept	Mean	SD	Min-Max	Level
Physical	3.12	1.00	1-5	High
Moral-Ethics	7.23	1.49	2-10	High
Personal	13.09	2.19	8-20	High
Family	14.31	2.56	6-20	High
Social	7.54	1.60	2-10	High
Academic/Work	13.15	1.94	8-20	High
Overall	58.45	7.05	34-85	High

Description of Self-concept Domain

Table 3 presents the findings from the different domains of self-concept. Starting with the physical domain, the item "I am an interesting person" had a mean score of 3.12 (SD 1.00), and the majority of adolescents (54.0%) selected the neutral choice. These results indicate that most adolescents are uncertain about considering themselves interesting.

Moving on to the moral-ethics domain, the item "I'm an honest person" had a mean score of 3.53 (SD 0.87), and the majority of adolescents (45.7%) again opted for the neutral choice. Similarly, for the item "I am satisfied with my moral behavior," the mean score was 3.70 (SD 0.90), with 36.8% of adolescents selecting the neutral choice. These findings suggest that most adolescents struggle to believe in their satisfaction with moral behavior.

In the personal domain, the item "I am such a good person as I should be" had a mean score of 3.74 (SD 0.87), and the

appropriate choice was preferred by the majority of adolescents (37%). For the item "I am content to be who I am," the mean score was 4.01 (SD 0.99), and 32% of adolescents selected the appropriate choice. Conversely, on the item "I hate myself," the mean score was 2.39 (SD 1.26), with 33.5% of adolescents opting for the very inappropriate choice. Additionally, the item "I'm not the person I want to be" had a mean score of 2.94 (SD 1.18), and the neutral choice was preferred by most adolescents (36.5%). These results indicate that while adolescents generally perceive themselves as good individuals, they struggle with self-acceptance and feeling like the person they aspire to be.

Moving on to the family domain, the item "I am part of a happy family" had a mean score of 3.64 (SD 1.12), and the appropriate choice was selected by 30.0% of adolescents. For the item "I am satisfied with my family relationships," the mean score was 3.82 (SD 1.14), with 35.9% of adolescents choosing the perfectly appropriate choice. Conversely, on the item "I understand my family as it should be," the mean score was 4.00 (SD 0.86), and the inappropriate choice was preferred by most adolescents (39.4%). Additionally, the item "I didn't behave the way my family expected" had a mean score of 2.85 (SD 1.12), with the neutral choice being selected by the majority of adolescents (39.8%). These findings suggest that while adolescents generally perceive positive family relationships, they may feel a lack of understanding and struggle to meet their family's expectations.

In the social domain, the item "I can get along well with other people" had a mean score of 3.77 (SD 0.96), with 36.3% of adolescents choosing the appropriate choice. Similarly, for the item "I'm a friendly person," the mean score was 3.77 (SD 0.93), and the appropriate choice was selected by 34.9% of adolescents. These results indicate that most adolescents perceive themselves as having positive relationships with others.

Lastly, in the academic/work domain, the results across all item descriptors indicate that the majority of adolescents (>40%) selected the neutral choice. This pattern was observed for the items "I am able to do school questions well," "Learning something new is easy for me," "I'm not as smart as the people around me," and "Doing school lessons is difficult for me." These findings suggest that the majority of adolescents struggle to believe in their academic abilities and learning efficiency. It indicates a need for targeted interventions and support systems to foster self-belief, confidence, and academic growth among these individuals, ultimately contributing to their overall development and success in educational pursuits.

Table 3 Description of each item of the self-concept domain ($n = 644$)

Self-Concept Domain	Mean	SD	Very Inappropriate f (%)	Not Appropriate f (%)	Neutral f (%)	Appropriate f (%)	Perfectly Appropriate f (%)
Physical							
I'm an interesting person	3.12	1.00	55 (8.5)	58 (9.0)	348 (54.0)	118 (18.3)	65 (10.1)
Morals – Ethics							
I'm an honest person	3.53	0.87	11 (1.7)	36 (5.6)	294 (45.7)	206 (32.0)	97 (15.1)
I am satisfied with my moral behavior	3.70	0.90	10 (1.6)	30 (4.7)	237 (36.8)	233 (36.2)	134 (20.8)
Personal							
I am such a good person as I should be	3.74	0.87	6 (0.9)	27 (4.2)	233 (36.2)	238 (37.0)	140 (21.7)
I am content to be who I am	4.01	0.99	12 (1.9)	34 (5.3)	142 (22.0)	206 (32.0)	250 (38.8)
I hate myself	2.39	1.26	216 (33.5)	128 (19.9)	185 (28.7)	61 (9.5)	54 (8.4)
I'm not the person I want to be	2.94	1.18	85 (13.2)	136 (21.1)	235 (36.5)	106 (16.5)	82 (12.7)
Family							
I am part of a happy family	3.64	1.12	37 (5.7)	52 (8.1)	190 (29.5)	193 (30.0)	172 (26.7)
I am satisfied with my family relationships	3.82	1.14	37 (5.7)	34 (5.3)	166 (25.8)	176 (27.3)	231 (35.9)
I understand my family as it should be	4.00	0.86	7 (1.1)	13 (2.0)	162 (25.2)	254 (39.4)	208 (32.3)
I didn't behave the way my family expected	2.85	1.12	83 (12.9)	149 (23.1)	256 (39.8)	92 (14.3)	64 (9.9)
Social							
I can get along well with other people	3.77	0.96	13 (2.0)	40 (6.2)	192 (29.8)	234 (36.3)	165 (25.6)
I'm a friendly person	3.77	0.93	12 (1.9)	27 (4.2)	219 (34.0)	225 (34.9)	161 (25.0)
Academic/Work							
I am able to do school questions well	3.41	0.87	15 (2.3)	51 (7.9)	309 (48.0)	195 (30.3)	74 (11.5)
Learning something new is easy for me	3.15	0.98	39 (6.1)	93 (14.4)	307 (47.7)	143 (22.2)	62 (9.6)
I'm not as smart as the people around me	3.55	0.97	16 (2.5)	52 (8.1)	264 (41.0)	185 (28.7)	127 (19.7)
Doing school lessons is difficult for me	3.05	0.95	32 (5.0)	125 (19.4)	329 (51.1)	98 (15.2)	60 (9.3)

Differences in Self-Concept According to Socio-Demographic Characteristics

Table 4 shows significant differences were found in various domains of self-concept according to sociodemographic variables. A statistically significant difference was discovered in the overall self-concept based on gender ($p = 0.002$). Similarly, a significant difference was observed in the physical domain based on class level ($p = 0.019$). Concerning the personal domain, significant differences were identified in relation to age ($p = 0.030$), class level ($p = 0.030$), parent's marital status ($p = 0.030$), father's education ($p = 0.05$), and family income ($p = 0.01$). Furthermore, in the family domain, significant differences were found based on parents' marital status ($p < 0.001$) and adolescents' residence status ($p = 0.002$). Additionally, a significant difference in the academic domain was observed with regard to gender ($p = 0.001$). However, no significant differences were noted in the moral ethics and social domains across all sociodemographic variables ($p > 0.05$).

Discussion

This research aimed to describe the self-concept and its relation according to sociodemographic factors in adolescents living in coastal areas in two main provinces in Indonesia. The study findings indicated that coastal area adolescents had a high self-concept category. However, it was also observed that most adolescents were dissatisfied with their moral behavior, unable to be the person they wanted to be, unable to behave as their families anticipated, and unable to complete their academic/work efficiently.

The study's findings further revealed significant differences were found in various domains of self-concept based on sociodemographic variables. There was a significant

difference in the overall self-concept based on gender. Additionally, the physical domain exhibited a significant difference based on class level. In the personal domain, significant differences were identified in relation to age, class level, parent's marital status, father's education, and family income. Furthermore, the family domain showed significant differences based on parents' marital status and adolescents' residence status. Moreover, a significant difference in the academic domain was observed with regard to gender. However, no significant differences were found in the moral ethics and social domains across all sociodemographic variables.

This study's strength lies in its focus on describing the self-concept and its associated factors among adolescents living in coastal areas. Previous studies have indicated that coastal communities face social-environmental risk factors for emotional health (Subekti & Nurrahima, 2020) and are positively associated with neuroticism traits (Militaru et al., 2023). Considering the importance of self-concept in adolescence, which is influenced by various social, physical, emotional, academic, and family characteristics, this study contributes valuable insights (Echeberria et al., 2018; Park et al., 2018; Povedano-Diaz et al., 2020; Ramos-Díaz et al., 2017).

The study results demonstrate that male and female adolescents living in coastal areas have different self-concept scores, consistent with previous research by Muftianingrum and Pudjiastuti (2019). Stereotypes and societal factors can contribute to emotional disturbances among male adolescents in coastal areas, according to Subekti and Nurrahima (2020). In contrast, women typically have higher academic and family self-concepts, while men tend to have higher emotional and physical self-concepts (Amado-Alonso et al., 2018; Echeberria et al., 2018; Kulakow, 2020; Parise et al., 2019). However,

other determinants, such as parents, peers, and the learning process, have been identified as influential in forming the self-concepts of adolescents (Folastri & Prasetyaningtyas, 2017). Age further accentuates these differences, and factors such as peer relationships and academic achievement play a role (Herrera et al., 2020; Xie et al., 2019).

The study also reveals significant differences between self-concept and attachment to parents, including parents' marital status and residence status. Adolescents with a strong attachment to their parents tend to develop self-worth,

affection, and positive relationships. Secure attachments with parents contribute to self-confidence, the experience of affection, and a sense of not being lonely (Perez-Fuentes et al., 2019). Adolescents with a respectful and trusting relationship with their parents exhibit open attitudes and are likelier to express their thoughts and concerns. Therefore, the attachment between parents and adolescents plays a catalytic role in shaping adolescents' self-concept, and parents are encouraged to provide their children with undivided attention to support their self-concept development.

Table 4 Differences in self-concept based on sociodemographic variables ($n = 644$)

Variable	Overall	p	Physical	p	Morals Ethics	p	Personal	p	Family	p	Social	p	Academic/ Work	p
	Mean \pm SD		Mean \pm SD		Mean \pm SD		Mean \pm SD		Mean \pm SD		Mean \pm SD		Mean \pm SD	
Gender^a														
Male	58.91 \pm 7.93	0.002*	3.17 \pm 1.01	0.321	7.22 \pm 1.52	0.398	12.90 \pm 2.21	0.448	14.69 \pm 2.43	0.560	7.64 \pm 1.54	0.239	13.30 \pm 2.17	0.001*
Female	58.02 \pm 6.12		3.08 \pm 0.99		7.24 \pm 1.47		13.26 \pm 2.16		13.97 \pm 2.63		7.46 \pm 1.66		13.01 \pm 1.70	
Age^b														
14	59.33 \pm 5.78	0.772	2.93 \pm 1.10	0.112	7.47 \pm 0.99	0.342	12.87 \pm 1.18	0.030*	14.60 \pm 2.19	0.973	8.47 \pm 1.50	0.325	13.00 \pm 2.10	0.780
15	58.17 \pm 6.53		2.92 \pm 1.05		7.06 \pm 1.41		13.33 \pm 2.28		14.19 \pm 2.65		7.50 \pm 1.59		13.17 \pm 1.74	
16	58.81 \pm 8.19		3.16 \pm 0.98		7.22 \pm 1.61		13.24 \pm 2.31		14.40 \pm 2.65		7.55 \pm 1.66		13.25 \pm 2.14	
17	58.06 \pm 6.12		3.23 \pm 0.93		7.27 \pm 1.47		12.75 \pm 1.95		14.27 \pm 2.41		7.47 \pm 1.57		13.07 \pm 1.79	
18	58.56 \pm 5.64		3.19 \pm 1.02		7.68 \pm 1.15		12.84 \pm 2.27		14.30 \pm 2.63		7.70 \pm 1.46		12.86 \pm 1.91	
19	60.85 \pm 11.90		3.14 \pm 1.67		7.14 \pm 2.03		14.71 \pm 2.81		14.57 \pm 3.15		7.57 \pm 1.81		13.71 \pm 3.09	
Class Level^b														
1 st year	58.80 \pm 7.40	0.827	2.98 \pm 1.10	0.019*	7.19 \pm 1.50	0.245	13.36 \pm 2.33	0.030*	14.37 \pm 2.71	0.459	7.63 \pm 1.66	0.554	13.29 \pm 1.98	0.414
2 nd year	58.56 \pm 7.82		3.13 \pm 0.94		7.12 \pm 1.57		13.16 \pm 2.27		14.45 \pm 2.50		7.56 \pm 1.67		13.15 \pm 2.08	
3 rd year	58.07 \pm 6.05		3.24 \pm 0.94		7.35 \pm 1.426		12.81 \pm 1.97		14.16 \pm 2.49		7.46 \pm 1.51		13.04 \pm 1.79	
Parent's Marital Status^b														
Married	58.70 \pm 6.96	0.069	3.14 \pm 0.98	0.746	7.25 \pm 1.45	0.572	13.01 \pm 2.19	0.030*	14.57 \pm 2.37	<0.001*	7.58 \pm 1.58	0.294	13.15 \pm 1.95	0.095
Divorced	57.30 \pm 8.10		3.09 \pm 1.06		7.16 \pm 1.79		13.91 \pm 2.09		12.12 \pm 2.99		7.37 \pm 1.64		13.65 \pm 2.12	
Single parent	56.50 \pm 6.81		3.02 \pm 1.16		7.02 \pm 1.66		13.26 \pm 2.14		13.20 \pm 3.06		7.24 \pm 1.79		12.76 \pm 1.49	
Residence Status^b														
With parents	58.64 \pm 7.18	0.063	3.13 \pm 0.99	0.406	7.26 \pm 1.50	0.239	13.10 \pm 2.21	0.714	14.42 \pm 2.51	0.002*	7.57 \pm 1.61	0.246	13.17 \pm 1.99	0.727
Other families	56.02 \pm 5.48		2.95 \pm 1.18		6.86 \pm 1.42		13.14 \pm 2.14		13.00 \pm 2.64		7.14 \pm 1.58		12.93 \pm 1.52	
Alone	58.06 \pm 6.01		3.26 \pm 0.77		7.19 \pm 1.51		12.77 \pm 1.78		14.13 \pm 2.99		7.61 \pm 1.54		13.10 \pm 1.42	
Father's Education^b														
Illiterate	54.50 \pm 6.36	0.530	3.50 \pm 2.12	0.350	7.00 \pm 1.41	0.961	12.00 \pm 0.00	0.05*	13.00 \pm 1.41	0.224	7.50 \pm 2.12	0.875	11.50 \pm 0.70	0.144
Elementary	57.35 \pm 7.32		2.88 \pm 1.03		7.21 \pm 1.49		13.44 \pm 2.29		13.71 \pm 3.03		7.41 \pm 1.65		11.71 \pm 1.67	
Junior high school	59.70 \pm 7.88		2.98 \pm 1.20		7.33 \pm 1.41		13.83 \pm 2.50		14.56 \pm 2.72		7.48 \pm 1.65		13.52 \pm 2.10	
Senior high school	58.40 \pm 7.22		3.18 \pm 1.02		7.25 \pm 1.56		12.94 \pm 2.22		14.18 \pm 2.66		7.61 \pm 1.63		13.24 \pm 2.03	
Diploma	58.41 \pm 6.53		3.11 \pm 0.89		7.18 \pm 1.42		13.08 \pm 2.02		14.55 \pm 2.27		7.48 \pm 1.55		13.02 \pm 1.79	

Table 4 (Cont.)

Mother's Education^b														
Illiterate	59.85 ± 8.02	0.738	3.00 ± 1.00	0.244	7.14 ± 1.21	0.970	13.57 ± 2.37	0.381	15.14 ± 2.47	0.521	8.29 ± 1.38	0.343	12.71 ± 2.43	0.736
Elementary	59.00 ± 6.57		2.81 ± 1.12		7.38 ± 1.52		13.58 ± 2.01		14.15 ± 2.71		7.77 ± 1.56		13.31 ± 1.70	
Junior high school	59.35 ± 7.00		3.11 ± 1.01		7.23 ± 1.44		13.26 ± 2.51		14.71 ± 2.73		7.77 ± 1.61		13.27 ± 1.98	
Senior high school	58.20 ± 7.31		3.17 ± 0.99		7.21 ± 1.55		12.96 ± 2.23		14.19 ± 2.57		7.47 ± 1.70		13.20 ± 2.04	
Diploma	58.37 ± 6.77		3.13 ± 0.97		7.24 ± 1.44		13.09 ± 2.06		14.38 ± 2.48		7.51 ± 1.47		13.03 ± 1.83	
Father's Occupation^b														
Others	58.56 ± 6.65	0.837	3.04 ± 1.07	0.654	7.44 ± 1.54	0.310	13.19 ± 2.19	0.942	14.19 ± 2.55	0.865	7.58 ± 1.61	0.864	13.12 ± 2.00	0.285
Civil servant	58.39 ± 5.79		3.22 ± 0.88		7.30 ± 1.40		13.11 ± 1.94		14.36 ± 2.37		7.50 ± 1.57		12.90 ± 1.68	
State employee	61.75 ± 5.37		3.50 ± 1.00		7.50 ± 1.73		14.00 ± 2.16		13.25 ± 2.75		8.50 ± 1.29		15.00 ± 2.00	
Private employee	58.07 ± 7.68		3.08 ± 0.98		7.05 ± 1.61		12.98 ± 2.28		14.30 ± 2.75		7.52 ± 1.72		13.15 ± 1.91	
Self-employee	58.82 ± 7.63		3.13 ± 1.04		7.23 ± 1.44		13.09 ± 2.27		14.46 ± 2.64		7.60 ± 1.59		13.32 ± 2.08	
Honorary worker	57.75 ± 3.94		3.00 ± 0.00		6.00 ± 0.81		13.75 ± 1.50		14.75 ± 2.63		7.00 ± 1.41		13.25 ± 0.95	
Retired	57.57 ± 4.31		3.47 ± 0.77		7.16 ± 1.11		13.00 ± 2.13		13.74 ± 2.10		7.32 ± 1.00		12.89 ± 1.04	
Unemployed	56.83 ± 7.79		3.08 ± 1.01		6.96 ± 1.65		12.75 ± 2.27		14.00 ± 2.06		7.29 ± 1.80		12.75 ± 1.98	
Mother's Occupation^b														
Others	58.73 ± 8.03	0.958	2.84 ± 1.02	0.597	7.45 ± 1.67	0.685	13.42 ± 2.27	0.566	14.18 ± 2.92	0.993	7.66 ± 1.93	0.887	13.18 ± 2.20	0.526
Civil servant	57.86 ± 5.87		3.18 ± 0.96		7.22 ± 1.43		12.83 ± 1.77		14.24 ± 2.36		7.53 ± 1.39		12.86 ± 1.57	
Private employee	58.81 ± 7.38		3.13 ± 0.93		7.18 ± 1.45		13.38 ± 2.64		14.27 ± 2.99		7.71 ± 1.52		13.14 ± 1.95	
Self-employee	58.78 ± 8.10		3.08 ± 0.96		7.22 ± 1.41		13.17 ± 2.47		14.40 ± 2.61		7.49 ± 1.66		13.42 ± 2.27	
Honorary worker	58.85 ± 5.75		3.43 ± 0.53		8.14 ± 1.57		13.14 ± 1.67		13.71 ± 1.89		7.43 ± 1.13		13.00 ± 2.16	
Retired	57.00 ± 1.87		3.20 ± 1.48		7.60 ± 0.54		12.20 ± 1.48		14.20 ± 3.03		6.80 ± 0.83		13.00 ± 0.70	
Unemployed	58.36 ± 6.74		3.16 ± 1.04		7.19 ± 1.55		13.03 ± 2.04		14.34 ± 2.45		7.53 ± 1.65		13.12 ± 1.84	
Family Income^a														
<RMW	58.65 ± 7.22	0.767	3.11 ± 0.97	0.280	7.23 ± 1.49	0.868	13.29 ± 2.30	0.01*	14.18 ± 2.58	0.151	7.57 ± 1.61	0.893	13.27 ± 2.06	0.179
>RMW	58.27 ± 6.67		3.17 ± 1.02		7.25 ± 1.48		12.82 ± 1.99		14.51 ± 2.46		7.53 ± 1.61		13.00 ± 1.79	

^aIndependent t-test was performed, ^bOne-way ANOVA test was performed, *Significant at $p < 0.05$, RMW= Regional minimum wage per month

Limitations

This study had several notable limitations that may have affected the findings. Firstly, the current results did not provide sufficient evidence to establish causal relationships due to using a cross-sectional design. Secondly, variations in social and cultural norms among the adolescents in this study, particularly within the Minangkabau and Bali ethnic groups, might have influenced the results. It would be valuable to consider employing a qualitative research approach to address these limitations and enhance future research in this area. Qualitative methods can provide a more in-depth understanding of self-concept among adolescents and offer more comprehensive insights into their experiences. Additionally, incorporating a longitudinal design would allow for examining temporal relationships and provide a more robust basis for establishing causal links. Moreover,

expanding the sample to include a more diverse range of participants from various regions or cultural backgrounds would enhance the generalizability of the findings and provide a more representative understanding of self-concept among adolescents.

Implications for Nursing Practice

Self-concept plays a crucial role in the mental health and well-being of adolescents. It affects their personal identity, self-esteem, and ability to cope with challenges (Biolcati & Passini, 2018; Mushtaq et al., 2022; Zhao et al., 2021). Nurses and healthcare professionals should prioritize understanding the factors that influence self-concept in adolescents to develop interventions promoting positive self-concept. This study has several implications for nursing practice: First, the finding indicated that nurses and healthcare professionals working

with adolescents should prioritize interventions and programs to promote positive self-concept. This can be achieved by providing support, encouragement, and guidance to help adolescents develop a healthy level of self-worth, confidence, and self-esteem. Second, nurses should be aware of the sociodemographic factors that influence self-concept among adolescents, such as gender, class level, age, parent's marital status, parents' education, family income, and residence status. By understanding these factors, nurses can tailor their interventions and support to address specific needs related to self-concept in different demographic groups. Third, nurses should address the areas of dissatisfaction identified in the study, such as moral behavior, self-identity, meeting family expectations, and academic/work efficiency. By providing guidance and counseling, nurses can help adolescents explore strategies to improve these aspects of their self-concept and develop healthier coping mechanisms. Last, recognizing the influence of parental attachment on self-concept, nurses can play a crucial role in educating parents about the importance of nurturing positive parent-child relationships. By encouraging parents to offer their children undivided attention, support, and a safe space for self-expression, nurses can contribute to developing a healthy self-concept in adolescents.

Conclusion

The study found that adolescents generally had a high self-concept category. Sociodemographic factors such as gender, class level, age, parent's marital status, parents' education, family income, and residence status influence self-concept and its domains among adolescents. These findings highlight the need for attention from various stakeholders, including mental health nurses. It is essential to develop programs aimed at improving adolescent self-concept, focusing on the specific areas identified in this study.

Declaration of Conflicting Interest

The authors affirm that there were no financial or commercial conflicts of interest throughout this study and no competing interests with the funders.

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Authors' Contributions

All authors contributed equally in this study in substantial contributions to the conception or design of the work, analysis or interpretation of data for the work, drafting of the work, and final approval of the version to be published.

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Data Availability

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration of Use of AI in Scientific Writing

Nothing to disclose.

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