Research Article

THE IMPACT OF MULTIGROUP ETHNIC IDENTITY AND COLLECTIVE SELF-ESTEEM ON COLLEGE STUDENTS' MENTAL HEALTH: A STRUCTURAL EQUATION MODELING APPROACH

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This study examines the associations between Multigroup Ethnic Identity (MEI), Collective Self-Esteem (CSES), and mental health outcomes in a multicultural context. A sample of 305 Indonesian university students was used to explore how MEI is related to CSES dimensions—identity-based self-esteem, group membership esteem, private self-regard, and public self-perception—and indirectly linked to mental health, measured by the Mental Health Continuum-Short Form (MHC-SF). Validated psychometric tools were used for data collection, and partial least squares structural equation modeling (PLS-SEM) with bootstrapping (5,000 resamples) analyzed relationships and mediating effects. Results showed significant positive correlations between MEI and all CSES dimensions; however, only the public dimension of CSES mediated the association between MEI and mental health, emphasizing the role of societal validation and public image in psychological well-being. While private, membership, and identity dimensions of CSES were positively linked to MEI, they did not mediate mental health outcomes. These findings highlight MEI as a psychological and community resource that supports resilience in diverse intergroup settings. Practical implications suggest fostering MEI in educational and professional environments to promote self-esteem, inclusivity, and well-being.

***Keywords**: Collective Self-Esteem, mental health outcomes, Multicultural environment, Multigroup Ethnic Identity, Structural equation modeling*

1. Introduction

Indonesia is a multicultural and multi-ethnic country. As of 2021, the government has recorded as many as 17,000 islands, with 1,340 tribes, more than 300 ethnic groups speaking 840 languages, and adhering to six religions (Herwandito et al., 2024; Mawardi, 2024). Ethnic identity

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is a significant dimension in the development of individual identity, particularly within a multicultural context. The process of exploring and committing to ethnic identity is often challenging, especially among students in the transitional phase of adult life. As a dynamic subgroup of society, university students encounter an ethnically, culturally, and socially heterogeneous environment.

Indonesia is a collectivist society deeply characterized by its rich multicultural and multi-ethnic composition, with approximately 17,000 islands hosting over 300 ethnic groups speaking 840 languages and practicing six different religions (Herwandito et al., 2024; Mawardi, 2024). This diverse setting often results in research findings that diverge from those in more individualistic Western societies (Herdian et al., 2024). In such a complex social landscape, the development of individual and collective identities, such as Multigroup Ethnic Identity and Collective Self-Esteem, becomes particularly salient. University students, as a dynamic subgroup, experience unique challenges in exploring and committing to their ethnic identities amidst this rich diversity. The process is influenced by the broader collectivist culture, which emphasizes group harmony and cohesion, shaping their social interactions and personal identity development within this heterogeneously structured environment. This setting provides opportunities for intercultural interaction but also has the potential to lead to identity conflicts that can impact their psychological well-being. According to social identity theory by Tajfel et al. (1986), ethnic identity is defined as part of a social identity that offers a sense of membership in a particular group. Phinney (1990) describes ethnic identity as "a sense of belonging to a particular ethnic group, along with the attitudes and feelings that accompany this sense of belonging." In the context of Multigroup Ethnic Identity, individuals navigate and integrate their affiliations with multiple ethnic groups, leading to a rich and diverse identity that reflects their unique experiences and backgrounds. Cultural and social influences, such as participation in cultural events, use of native language, and familial ethnic socialization, significantly impact ethnic identity. These activities enhance both the exploration and commitment to one's ethnic group (Mehrotra et al., 2020). Language serves as a crucial marker of ethnic identity, particularly in multilingual societies, shaping ethnic identity through cultural practices and social interactions (Gilbar, 2023; Hemat & Heng, 2012).

1.1 Multigroup Ethnic Identity and Mental Health

Previous research has demonstrated that a strong ethnic identity can provide psychological protection against external stressors such as racial discrimination and interpersonal conflict (Phinney, 1992; Verkuyten, 2018). Conversely, identity conflict or neglect of ethnic identity can increase the risk of mental health issues such as depression and anxiety (Umaña-Taylor et al., 2006). Cultural diversity, especially ethnicity, has a complex relevance and relationship with mental health; there are many clinical problems, such as anxiety and depression, and social problems, such as bullying, that are manifested in verbal or non-verbal language expressions and can vary across different ethnicities (Sarkar & Punnoose, 2017). Numerous cases of violence and PTSD (Post-Traumatic Stress Disorder) due to ethnic conflicts in Indonesia have become a serious concern, particularly because of their widespread impact on society (Cookson et al., 2010). Notable ethnic conflicts, such as those in Sampit (between the Dayak and Madurese tribes), West

Kalimantan, and Maluku in the late 1990s to early 2000s, resulted in thousands of fatalities, including over 9,000 deaths in the conflict in Maluku, Indonesia.

The separatist conflict in Aceh, Indonesia prior to 2005 also resulted in thousands of casualties, though it was more related to armed resistance. The conflict between the Dayak and Madurese tribes in Sampit, Central Kalimantan, in February 2001, led to an estimated 500 to 1,000 deaths, with 100 to 700 individuals beheaded. Riots that occurred in Jakarta and several other major cities in May 1998 targeted the Chinese-Indonesian community, resulting in an estimated 1,000 deaths. These conflicts, especially those involving physical violence, mass killings, and forced displacement, often left deep trauma.

Inter-ethnic conflicts are often triggered by differences in social, cultural, religious, or economic identities that then develop into prejudice, stereotypes, and discrimination. This type of conflict involves negative perceptions of other groups that are considered different and can escalate into greater social tensions. Such major tensions can significantly impact the mental health of the individuals and groups involved. The social tensions, prejudice, discrimination, and marginalization that arise from these conflicts can affect psychological well-being, both in the short and long term (Hadi Suyono & Nirwanasari, 2022). Groups that frequently experience discrimination can feel isolated from society, which exacerbates feelings of alienation and lack of social support (Brandt et al., 2022). Despite living amidst many ethnic differences, this diversity is united by a national identity as part of the Indonesian nation. Diverse ethnic identities are necessary to maintain existing traditions and enrich the nation's culture. Moreover, ethnic identity also plays an important role in the emergence of a sense of pride as part of the Indonesian nation, or what is known as collective self-esteem. This collective self-esteem or sense of pride can determine a person's success in interacting with other social groups (Luhtanen & Crocker, 1992).

1.2 Collective Self-Esteem and Mental Health

Collective self-esteem (CSE) is defined as the self-worth an individual derives from their membership in social groups, such as racial, ethnic, or work groups (Sharma & Agarwala, 2014; Wang et al., 2023). It is measured using the CSE scale, developed by Luhtanen & Crocker, (1992), which assesses four aspects: membership esteem, private collective self-esteem, public collective self-esteem, and the significance of group identity to the individual (Sadachar & Khare, 2013). This construct has been shown to play a pivotal role in shaping an individual's social identity and psychological health. Recent neuroscientific research using methods like resting-state functional connectivity (RSFC) and task-based functional MRI has identified several brain regions, including the ventromedial prefrontal cortex and the temporoparietal junction, which are involved in processing collective self-esteem. These studies employ advanced predictive models, such as support vector regression, to illustrate the neural foundations of how individuals perceive their worth within their groups (Wang et al., 2023).

The psychological implications of collective self-esteem are broad and varied. For instance, while individual self-esteem is consistently linked to better mental health outcomes such as lower anxiety and depression, the impact of collective self-esteem can be more nuanced. In some studies, such as one conducted with Ghanaian students, individual self-esteem was found to be

a more significant predictor of mental health outcomes than collective self-esteem (Nonterah et al., 2024). However, collective self-esteem can serve as a critical coping resource, especially for marginalized groups. It can provide a psychological buffer against the stress and discrimination these groups often face, as evidenced in studies involving male-to-female transsexuals (Sánchez & Vilain, 2009). Additionally, the influence of collective self-esteem extends into social and behavioral realms. For example, it affects consumer behavior, as seen in studies where American youths' group affiliations influenced their online shopping behaviors (Sadachar & Khare, 2013). Moreover, cultural differences play a significant role in how collective self-esteem is experienced and its implications. A comparative study between Cambodian immigrants and French Quebecois highlighted substantial differences in the levels of collective self-esteem and its correlation with personal self-esteem and perceptions of racism (Rahimi & Rousseau, 2013).

Lastly, it is crucial to distinguish between collective self-esteem and collective narcissism, though they are related concepts. Collective narcissism involves an exaggerated belief in the greatness of one's group and a desire for external recognition, often accompanied by intergroup hostility. This is generally driven by underlying insecurities about one's self-esteem (de Zavala, 2018; Eker et al., 2022; Zavala et al., 2019). Understanding this distinction is vital as collective narcissism leads to negative out-group attitudes and can support populist political policies, demonstrating the potential for collective self-esteem to result in both positive and negative social outcomes. This complex interplay between individual and collective self-esteem, and the nuanced influence of group dynamics on psychological and social outcomes, underscores the importance of further research to inform targeted interventions aimed at enhancing individual well-being and reducing intergroup conflicts.

1.3 Collective Self-Esteem as Mediator

In the college student population, ethnic diversity creates an environment in which individuals often have to navigate multigroup ethnic identities. This situation presents a particular challenge because students may experience the dilemma of maintaining their ethnic uniqueness while trying to conform to the norms of the more dominant group (Yip, 2014). In this context, the concept of collective self-esteem becomes relevant as a mediator. Collective self-esteem is an individual's evaluation of their membership in a particular social group (Luhtanen & Crocker, 1992). Positive collective self-esteem can enhance mental well-being by providing a sense of pride and support from the group.

The relationship between multigroup ethnic identity, collective self-esteem, and mental health still needs further exploration. Most previous studies have focused more on one specific ethnic group, thus paying less attention to the experiences of individuals in a multicultural environment. Therefore, this study aims to fill this gap by exploring the impact of multigroup ethnic identity on college students' mental health through the mediating role of collective self-esteem.

In addressing the question of how dimensions of collective self-esteem and multigroup ethnic identity interact and influence mental health, this study focuses on a detailed analysis of the internal mechanisms of these concepts and their role in influencing the mental health of individuals in a multicultural environment such as Indonesia. The following hypotheses have been

formulated based on the relationships between dimensions of collective self-esteem, multigroup ethnic identity, and mental health:

Hypothesis 1: The dimensions of collective self-esteem—membership esteem, private collective self-esteem, public collective self-esteem, and the significance of group identity to the individual—positively influence mental health. An increase in any of these dimensions is expected to enhance the mental health of students.

Hypothesis 2: Multigroup ethnic identity has a positive effect on the dimensions of collective self-esteem. In other words, the stronger the multigroup ethnic identity of the students, the more posi-tive its impact on their collective self-esteem dimensions.

Hypothesis 3: The dimensions of collective self-esteem serve as mediators in the relationship between multigroup ethnic identity and mental health. This means that the influence of multigroup ethnic identity on students' mental health is mediated by the level of collective self-esteem they experience, encompassing all four dimensions of collective self-esteem.

2. METHOD

This study was conducted following a quantitative research approach. Prior to data collection, ethical approval was obtained from the human research ethics committee, under the approval number KEPK/UMP/204/III/2024. Data were gathered through an online survey using Google Forms, with participants providing informed consent at the beginning of the survey before answering the provided instruments. The data collection process spanned approximately five months, and the study, including the preparation of the research report, was completed within two additional months.

2.1 Participants

The study involved a total of 305 university students. Of the total sample, 263 participants (86%) were female, and 42 participants (14%) were male. The participants' ages ranged from 17 to 29 years, with a mean age of 20.09 years (SD = 1.31). Most participants were 20 years old (35%), followed by 19 years old (26%) and 21 years old (19%). In terms of ethnic background, the largest group was Javanese, comprising 168 participants (55%), followed by Acehnese with 83 participants (27%), and other smaller ethnic groups such as Makassarese (13 participants, 4%) and Sundanese (8 participants, 3%). In terms of religion, 302 participants (99%) identified as Muslim, while 2 participants identified as Catholic, and 1 participant as Protestant. Additionally, 96 participants (31%) reported having Chinese Indonesian friends, while 209 participants (69%) reported not having Chinese-Indonesian friends.

2.2 Measurement

Multigroup Ethnic Identity. Multigroup Ethnic Identity was measured using the 12-item Multigroup Ethnic Identity Measure-Revised (MEIM-R) by Phinney & Ong (2007), which captures two dimensions: exploration and commitment. The scale was translated into Indonesian using a

translation–back translation procedure, reviewed by bilingual experts to ensure linguistic clarity and cultural appropriateness. The assessment in this scale uses a 5-point Likert model (1 = Strongly Disagree to 5 = Strongly Agree). Examples of items are Exploration: “I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs” and Commitment: “I have a strong sense of belonging to my own ethnic group.” In the measurement model evaluation, two items with very low loadings were removed, resulting in a final 10-item version. Among these, one indicator had a relatively low loading of 0.563. However, it was retained because it remained above the minimum acceptable threshold for exploratory research (.50) and contributed important theoretical coverage of the exploration dimension (Hair et al., 2017). Overall, the final 10-item MEIM-R demonstrated strong reliability, with Cronbach’s alpha and composite reliability values exceeding .80.

Collective self-esteem. Collective self-esteem is measured using the Collective Self-Esteem Scale (CSES) developed by Luhtanen & Crocker (1992) adapted in Indonesia by Suwartono & Moningka (2017). There are 16 items in this scale with 4 items per dimension. The reliability scores each dimension of this scale ranged from 0.861 to 0.929. The assessment in this scale uses a 5-point Likert model (1 = Strongly Disagree to 5 = Strongly Agree). This scale measures an individual's evaluation of their membership in a particular social group, which includes the main dimensions: private collective self-esteem (the individual's view of their own group), membership esteem (the individual's feelings related to being part of a group), public collective self-esteem (the perception of how others view the group), and identity importance (the importance of group identity to the individual). The examples of items in this measurement are: “I am a worthy member of the social groups I belong to.” and “Overall, my social groups are considered good by others”.

Mental Health. The last measurement was conducted using the Mental Health Continuum-Short Form (MHC-SF), which is a psychometric instrument designed to measure individual mental well-being comprehensively. There are three main dimensions in this measurement, with a total of 14 items consisting of emotional well-being, psychological well-being, and social well-being. On a 6-point scale, the MHC-SF measures the frequency of Respondents’ experiences of each mental health dimension. The Likert scale was used, with total scores of 0-70 with higher scores indicating greater levels of mental health. This study used the MHC-SF Indonesian version scale by Sulistiowati (2020) with a good internal consistency of 0.89. The reliability in this study was >0.80. The examples of items are “During the past month, how often did you feel happy?” and “During the past month, how often did you feel that you liked most parts of your personality?” “During the past month, how often did you feel that you belonged to a community (like a social group or your neighborhood)?”

2.3 Data Analysis

The initial stage of our data analysis was performed using JAMOVI 2.4.8 to assess the intercorrelations among variables, including their mean values and standard deviations (SD). This foundational analysis provided insights into the relationships and underlying structures between the constructs of interest. Following this preliminary evaluation, a more detailed analysis was conducted using SmartPLS 4, which examined both measurement and structural models to

ensure their reliability and validity. The internal consistency of constructs was confirmed with Composite Reliability (CR) and Cronbach's Alpha, both achieving acceptable standards (CR values between 0.70 and 0.90, and Cronbach's Alpha above 0.70). Convergent validity was supported by Average Variance Extracted (AVE) values exceeding 0.50, indicating that the constructs captured significant variance from their indicators. Discriminant validity was verified through the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio, ensuring that the constructs were distinct from each other.

The structural model assessment focused on the path coefficients' significance and evaluated mediation and indirect effects through beta values, T statistics, P values, and confidence intervals. This process highlighted important relationships, such as those between Multigroup Ethnic Identity and various dimensions of collective self-esteem (cses-identity, cses-membership, cses-private, cses-public) and mental health (mhc-sf). The roles of collective self-esteem dimensions in mediating the effects of Multigroup Ethnic Identity on mental health outcomes were also thoroughly investigated.

Multicollinearity concerns were addressed by calculating Variance Inflation Factor (VIF) values, all of which remained below the critical threshold of 10, although some higher values warranted closer inspection. The predictive strength of the model was confirmed by R-Squared (R^2) and Q-Squared (Q^2) values, indicating robustness and suitability for further analysis and practical application. Additionally, the f Square (f^2) measures were used to assess the effect sizes of each independent variable on the dependent variables, providing further insight into the practical significance of the relationships modeled. This comprehensive analysis underscores the model's potential utility in exploring the dynamics of ethnic identity and its psychological impacts.

3. RESULT AND DISCUSSION

To examine the possibility of common method bias, we conducted Harman's single-factor test. The results indicated that a single factor explained 31.83% of the total variance, which is substantially below the recommended threshold of 50%. This suggests that common method bias is not a serious concern in the present study.

Pearson correlation analysis was conducted to examine the relationships between Multigroup Ethnic Identity, Collective Self-Esteem dimensions, and Mental Health Continuum-Short Form (MHC-SF). Based on Table 1, it is evident that various components of the Collective Self-Esteem Scale (CSES) are significantly interrelated. Specifically, CSES-Membership was positively related to CSES-Private ($r = 0.705$; $P < .001$), CSES-Public ($r = 0.639$; $P < .001$), and CSES-Identity ($r = 0.705$; $P < .001$). Similarly, CSES-Private showed significant positive relationships with CSES-Public ($r = 0.694$; $P < .001$) and CSES-Identity ($r= 0.761$; $P < .001$), and CSES-Public was positively related to CSES-Identity ($r= 0.687$; $P < .001$).

Additionally, the Multigroup Ethnic Identity Measure exhibited positive correlations with all CSES components: CSES-Membership ($r= 0.369$; $P < .001$), CSES-Private ($r= 0.349$; $P < .001$), CSES-Public ($r= 0.306$; $P < .001$), and CSES-Identity ($r= 0.401$; $P < .001$). Moreover, the Mental Health Continuum Short Form (MHC-SF) showed significant but weaker positive relationships with CSES-Membership ($r = 0.249$; $P < .001$), CSES-Private ($r = 0.241$; $P < .001$), CSES-Public ($r = 0.285$; $P <$

.001), and CSES-Identity (*r* = 0.256; *P* < .001). These findings underscore the strong associations among the components of collective self-esteem and highlight the linkage between ethnic identity and self-esteem dimensions. Additionally, the results suggest an important relationship between collective self-esteem and overall mental health.

Table 1. Intercorrelations among Variables (including Means and SD)

	Mean	SD	1	2	3	4	5	6
Multigroup Ethnic Identity	43.148	6.782	—					
CSES-Membership	21.954	4.171	0.369***	—				
CSES-Private	23.308	4.478	0.349***	0.705***	—			
CSES-Public	21.258	4.451	0.306***	0.639***	0.694***	—		
CSES-Identity	22.394	4.224	0.401***	0.705***	0.761***	0.687***	—	
MHC-SF	53.729	16.872	0.24***	0.249***	0.241***	0.285***	0.256***	—
Sex	1.849	0.358						
Age	20.102	1.232						

Note. * p < .05, ** p < .01, *** p < .001

Additionally, the Multigroup Ethnic Identity Measure exhibited positive correlations with all CSES components: CSES-Membership (r= 0.369; P < .001), CSES-Private (r= 0.349; P < .001), CSES-Public (r= 0.306; *P* < .001), and CSES-Identity (*r*= 0.401; *P* < .001). Moreover, the Mental Health Continuum Short Form (MHC-SF) showed significant but weaker positive relationships with CSES-Membership (*r* = 0.249; *P* < .001), CSES-Private (*r* = 0.241; *P* < .001), CSES-Public (*r* = 0.285; *P* < .001), and CSES-Identity (*r* = 0.256; *P* < .001). These findings underscore the strong associations among the components of collective self-esteem and highlight the linkage between ethnic identity and self-esteem dimensions. Additionally, the results suggest an important relationship between collective self-esteem and overall mental.

3.1 Measurement Model Evaluation

The measurement model was thoroughly assessed to ensure internal consistency reliability and convergent validity, with the results presented in Table 2. This evaluation underscores the robustness of the model, providing a solid foundation for further analysis of the hypothesized relationships. Reliability was assessed using both Cronbach's alpha and composite reliability (CR), ensuring the reliability of the items within each construct is thoroughly examined. Composite reliability values between 0.70 and 0.90 are considered satisfactory, and values between 0.60 and 0.70 may also be deemed acceptable in exploratory research contexts (Bagozzi et al., 1991; Hair et al., 2017).

The results demonstrated that Cronbach's alpha values spanned from 0.861 to 0.922 across the constructs, significantly surpassing the accepted threshold of 0.70, which denotes strong internal consistency. Similarly, composite reliability scores ranged from 0.905 to 0.951, confirming the reliability of the construct indicators. For example, the Collective Self-Esteem -

Membership showed a Cronbach's alpha of 0.861 and a CR of 0.905, indicating robust reliability (McNeish, 2018).

Table. 2 Measurement Model Evaluation Results

Variable	Indicators	Outer Loading	α	Composite Reliability	AVE
Multigroup Ethnic Identity	meim1	0.563	0.892	0.912	0.511
	meim10	0.639			
	meim11	0.738			
	meim12	0.748			
	meim3	0.662			
	meim5	0.704			
	meim6	0.783			
	meim7	0.794			
	meim8	0.679			
	meim9	0.799			
CSES-Membership	cses-membership1	0.740	0.861	0.905	0.706
	cses-membership2	0.885			
	cses-membership3	0.843			
	cses-membership4	0.884			
CSES-Private	cses-private1	0.876	0.929	0.950	0.825
	cses-private2	0.933			
	cses-private3	0.907			
	cses-private4	0.916			
CSES-Public	cses-public1	0.855	0.874	0.914	0.726
	cses-public2	0.821			
	cses-public3	0.888			
	cses-public4	0.843			
CSES-Identity	cses-identity1	0.851	0.922	0.945	0.810
	cses-identity2	0.910			
	cses-identity3	0.920			
	cses-identity4	0.918			
MHC-SF	mhc-sf1	0.747	0.945	0.951	0.583
	mhc-sf10	0.800			
	mhc-sf11	0.803			
	mhc-sf12	0.746			
	mhc-sf13	0.837			
	mhc-sf14	0.836			
	mhc-sf2	0.740			
	mhc-sf3	0.749			
	mhc-sf4	0.762			
	mhc-sf5	0.644			
	mhc-sf6	0.727			
	mhc-sf7	0.718			
	mhc-sf8	0.770			
	mhc-sf9	0.788			

Convergent validity reflects the degree to which a construct correlates positively with alternative measures of the same concept (Hair et al., 2017). It is commonly assessed through the average variance extracted (AVE), which evaluates the proportion of variance captured by

the construct relative to measurement error (Avkiran, 2018). An AVE value of 0.5 or higher indicates that a construct explains at least 50% of the variance in its indicators. In this study, AVE values ranged between 0.511 and 0.825, demonstrating that most constructs were well above the threshold. The few constructs with AVE values near the threshold were retained, as they provided sufficient evidence of convergent validity. It is important to note that in exploratory research, an AVE value of 0.4 or higher may still be acceptable (Hulland, 1999). This supports the reliability of the constructs, particularly when aligned with the measurement model's rigorous evaluation criteria.

The discriminant validity of the constructs showed in table 3 was evaluated using the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio to ensure that each construct was uniquely capturing distinct psychological phenomena.

Table 3. Discriminant Validity of Construct (Fornell & Lacker and HTMT)

Variables	Multigroup Ethnic Identity	CSES-Identity	CSES-Membership	CSES-Private	CSES-Public	MHC-SF
Fornell-Larcker criterion						
Multigroup Ethnic Identity	0.715					
CSES-Identity	0.401	0.900				
CSES-Membership	0.375	0.695	0.840			
CSES-Private	0.356	0.759	0.692	0.908		
CSES-Public	0.308	0.693	0.642	0.699	0.852	
MHC-SF	0.243	0.269	0.264	0.248	0.295	0.764
Heterotrait-monotrait ratio (HTMT)						
Multigroup Ethnic Identity						
CSES-Identity	0.436					
CSES-Membership	0.417	0.791				
CSES-Private	0.378	0.822	0.789			
cses-Public	0.331	0.771	0.742	0.776		
MHC-SF	0.253	0.274	0.275	0.258	0.313	

Fornell-Larcker Criterion, in this study confirmed strong discriminant validity across all constructs. For example, the square root of the Average Variance Extracted (AVE) for the Multigroup Ethnic Identity was 0.715, which was higher than its highest correlation with any other construct. Similarly, the CSES-Identity showed a square root of AVE at 0.900, significantly surpassing its correlations with other constructs. This pattern was consistent across all constructs, confirming that each was well-differentiated and captured unique aspects of the constructs under investigation. Heterotrait-Monotrait Ratio (HTMT), All HTMT ratios were well below the 0.90 threshold recommended for establishing adequate discriminant validity. For instance, the HTMT ratio between Multigroup Ethnic Identity and CSES-Identity was 0.436, and between Multigroup Ethnic Identity and CSES-Membership was 0.417. These low HTMT values further support the distinctiveness of the constructs within our study. The results from both these tests provide robust evidence that the constructs are distinct and do not overlap significantly, thereby ensuring the integrity of the measurement model and allowing for

confident application in subsequent structural analyses. This clear discriminant validity supports the reliability of our findings and underscores the appropriateness of the constructs for in-depth psychological research.

3.2 Structural Model Evaluation

The hypothesis testing thoroughly explored both direct and indirect relationships between Multigroup Ethnic Identity, dimensions of Collective Self-Esteem (CSES), and the Mental Health Continuum - Short Form (MHC-SF). The analysis employed robust statistical techniques, including path coefficients, T-statistics, p-values, confidence intervals (CIs), variance inflation factors (VIFs), effect sizes (f^2), and predictive relevance assessments (Q^2). The results, presented in Table 4 and visualized in Figure 1.

The results revealed significant statistical associations between Multigroup Ethnic Identity and various dimensions of CSES. A positive and substantial association was observed with CSES-Identity ($\beta = 0.401$, $T = 7.306$, $p < .001$, CI [0.297, 0.508], $f^2 = 0.192$, $Q^2 = 0.151$), indicating the relevance of ethnic identity to one's sense of identity within collective self-esteem. Similarly, the association with CSES-Membership ($\beta = 0.375$, $T = 6.891$, $p < .001$, CI [0.274, 0.486], $f^2 = 0.164$, $Q^2 = 0.129$) highlighted the role of ethnic identity in relation to feelings of group belonging. A significant association was also found with CSES-Private ($\beta = 0.356$, $T = 6.457$, $p < .001$, CI [0.252, 0.465], $f^2 = 0.145$, $Q^2 = 0.117$), suggesting that ethnic identity is related to higher levels of personal self-esteem. Additionally, Multigroup Ethnic Identity showed a positive association with CSES-Public ($\beta = 0.308$, $T = 5.302$, $p < .001$, CI [0.198, 0.425], $f^2 = 0.105$, $Q^2 = 0.084$), reflecting its linkage to public perceptions of self-worth. The association between Multigroup Ethnic Identity and MHC-SF was also statistically significant, though smaller in magnitude ($\beta = 0.147$, $T = 2.266$, $p = .023$, CI [0.015, 0.269], $f^2 = 0.020$, $Q^2 = 0.048$), indicating a modest positive relationship with mental health.

Using a bootstrapping procedure with 5,000 resamples, the indirect pathway from Multigroup Ethnic Identity to MHC-SF through CSES-Public was significant ($\beta = 0.057$, $T = 2.035$, $p = .042$, CI [0.008, 0.117], $f^2 = 0.003$), indicating that CSES-Public is statistically associated with the linkage between Multigroup Ethnic Identity and mental health. In contrast, the other CSES dimensions, including CSES-Private, CSES-Membership, and CSES-Identity, did not show significant indirect associations ($p > .05$), underscoring their limited roles in mediating these relationships.

The overall model fit was evaluated using common PLS-SEM diagnostics. The Standardized Root Mean Square Residual (SRMR) was 0.062 for the saturated model and 0.168 for the estimated model, indicating acceptable fit only for the saturated model. Additional measures included the squared Euclidean distance ($d\_ULS = 3.113$ for saturated; 23.052 for estimated) and the geodesic distance ($d\_G = 1.225$ for saturated; 1.775 for estimated). The Normed Fit Index (NFI) values were 0.788 (saturated) and 0.725 (estimated), slightly below the conventional threshold of 0.90, suggesting that the structural model fit is modest and should be interpreted with caution. However, NFI values in PLS-SEM are commonly lower than in covariance-based SEM because of its prediction-oriented nature. This indicates that, despite modest global fit, the model still demonstrates acceptable predictive relevance (Q^2) and explanatory power (R^2), which are more critical criteria in PLS-SEM.

Table 4. Hypothesis and Path Coefficients Significance Testing Results

	β	T statistics	P values	97.5% CI	Report	VIF	f^2/ Upsilon V	R Square	Q^2
Direct Effect									
Multigroup Ethnic Identity -> cses-identity	0.401	7.306	0.000	[0.297, 0.508]	Supported	1.000	0.192	0.161	0.151
Multigroup Ethnic Identity -> cses-membership	0.375	6.891	0.000	[0.274, 0.486]	Supported	1.000	0.164	0.141	0.129
Multigroup Ethnic Identity -> cses-private	0.356	6.457	0.000	[0.252, 0.465]	Supported	1.000	0.145	0.127	0.117
Multigroup Ethnic Identity -> cses-public	0.308	5.302	0.000	[0.198, 0.425]	Supported	1.000	0.105	0.095	0.084
Multigroup Ethnic Identity -> mhc-sf	0.147	2.266	0.023	[0.015, 0.269]	Supported	1.220	0.020		
cses-identity -> mhc-sf	0.044	0.464	0.643	[-0.138, 0.237]	Not Supported	2.999	0.001		
cses-membership -> mhc-sf	0.070	0.904	0.366	[-0.084, 0.219]	Not Supported	2.340	0.002	0.117	0.048
cses-private -> mhc-sf	-0.016	0.162	0.871	[-0.215, 0.168]	Not Supported	2.946	0.000		
cses-public -> mhc-sf	0.186	2.320	0.020	[0.030, 0.343]	Supported	2.325	0.017		
Indirect Effect/ Mediation									
Multigroup Ethnic Identity -> cses-public -> mhc-sf	0.057	2.035	0.042	[0.008, 0.117]	Supported	-	0.003	-	-
Multigroup Ethnic Identity -> cses-private -> mhc-sf	-0.006	0.158	0.874	[-0.078, 0.064]	Not Supported	-	0.000	-	-
Multigroup Ethnic Identity -> cses-membership -> mhc-sf	0.026	0.862	0.389	[-0.031, 0.090]	Not Supported	-	0.001	-	-
Multigroup Ethnic Identity -> cses-identity -> mhc-sf	0.018	0.450	0.653	[-0.055, 0.100]	Not Supported	-	0.000	-	-

In summary, these findings underscore the role of Multigroup Ethnic Identity as statistically related to collective self-esteem dimensions and mental health. While the associations are

particularly pronounced in the identity and membership dimensions of CSES, the indirect statistical pathway was evident only through the public dimension of CSES. These results contribute to understanding the correlational patterns connecting ethnic identity, self-esteem, and mental health

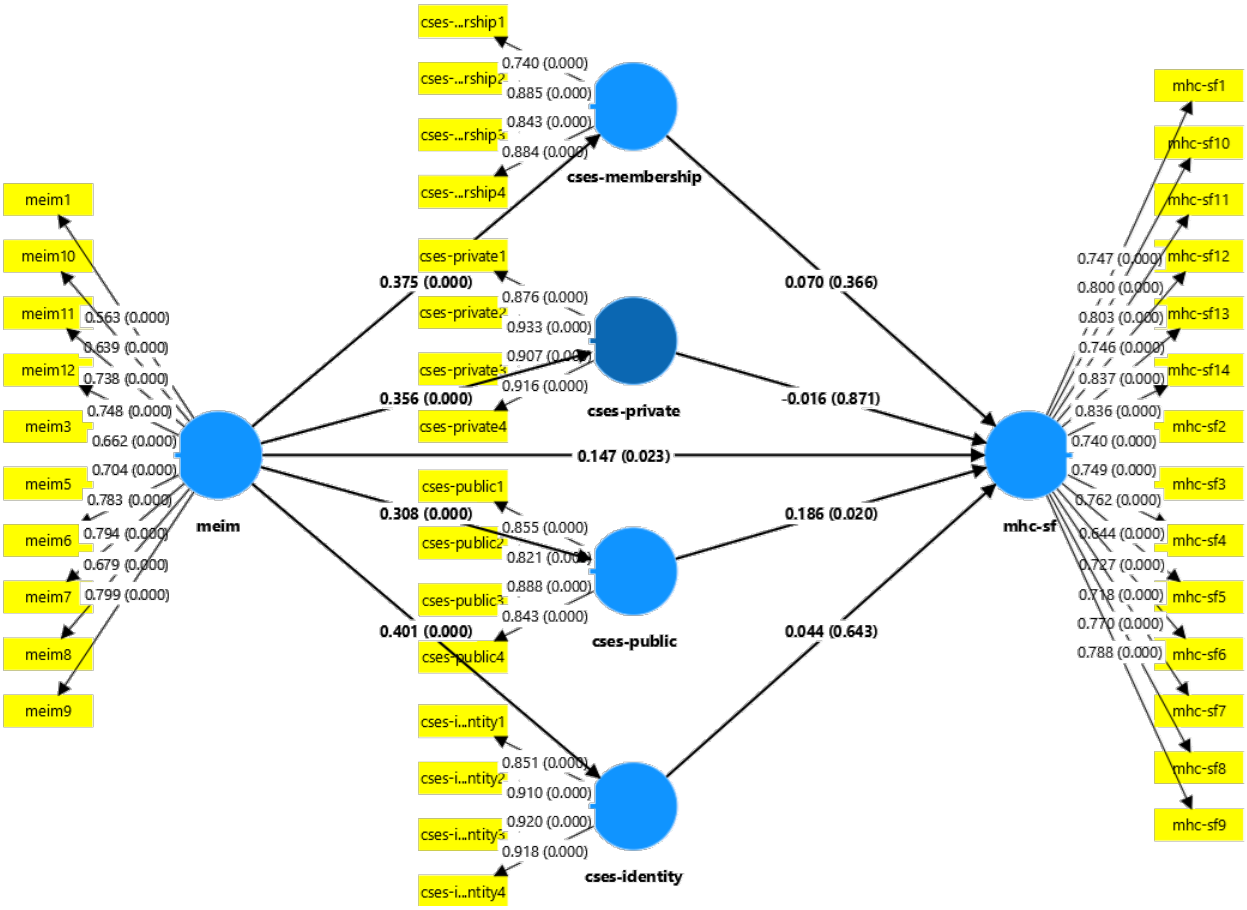

Figure 1. Structural Model Evaluation Results

The current study's findings align with Social Identity Theory (Tajfel et al., 1986) and highlight the critical role of Multigroup Ethnic Identity (MEI) in its associations with collective self-esteem (CSES) and mental health outcomes. Individuals with strong connections to multiple ethnic groups reported higher self-esteem regarding these affiliations, which was statistically related to better psychological well-being (Gilbar, 2023; Phinney, 1990). MEI was associated with personal and social validation, as individuals derived a sense of pride and belonging from their group memberships. This pattern is consistent with the theoretical proposition that group affiliations are central to an individual's self-concept and may serve as psychological resources linked to stress buffering and improved mental health (Avery et al., 2007; Luhtanen & Crocker, 1992).

The mediation analysis provides nuanced insights into the indirect statistical pathways through which MEI is associated with mental health. CSES-Public was significantly related to the indirect linkage, underscoring the importance of societal validation and recognition in connection with mental well-being. This finding suggests that positive perceptions of one's group by others are statistically associated with greater confidence and reduced psychological distress, consistent

with prior research (Luhtanen & Crocker, 1992; Verkuyten, 2018). In contrast, the non-significant roles of CSES-Private, CSES-Membership, and CSES-Identity indicate that while these dimensions are associated with MEI, they may not independently demonstrate a statistical linkage to mental health outcomes.

These findings must also be understood within the context of Indonesia, which is widely recognized as a collectivist society characterized by strong values of harmony, social cohesion, and interdependence (Sahertian & Jawas, 2021). Within such a context, individuals are expected to conform to group norms, and identity processes are shaped by the broader social framework (Pasteruk, 2020). Within such a context, the salience of public collective self-esteem as the only significant mediator may reflect the critical importance of societal validation in sustaining well-being. Moreover, Indonesia's historical experiences of interethnic tensions and conflict, such as the May 1998 riots and communal violence in Maluku and Kalimantan, have heightened the importance of public perceptions of ethnic groups (Cookson et al., 2010; Hadi Suyono & Nirwanasari, 2022). These cultural and historical conditions distinguish Indonesian settings from Western contexts, where ethnic identity has largely been studied in more individualistic societies.

At the same time, methodological considerations are important. Western-developed instruments such as the MEIM-R (Phinney & Ong (2007) and CSES (Luhtanen & Crocker (1992) were used in this study, which may not fully capture cultural nuances in the Indonesian context. Although these scales have demonstrated acceptable reliability in the present sample, their cultural adaptation and validation remain limited, representing an important methodological constraint. Future research should explicitly test cultural equivalence, including measurement invariance across ethnic groups, to ensure that instruments function similarly across diverse populations in Indonesia.

Another limitation of this study lies in the use of cross-sectional, single time-point data, which constrains the ability to examine identity development as a dynamic and longitudinal process. Given the cross-sectional design, all findings are correlational and mediation analyses should therefore be interpreted cautiously as statistical associations rather than causal mechanisms. Moreover, ethnic identity and collective self-esteem are known to evolve over time in response to changing social and cultural contexts (Umaña-Taylor et al., 2006). Accordingly, longitudinal and mixed-method designs would provide valuable insights into how these constructs unfold in the lived experiences of Indonesian students. In addition, the sample in this study was skewed, with the majority of participants being female (86%), Muslim (99%), and drawn mainly from two dominant ethnic groups. Given this imbalance, the findings cannot be generalized to the diverse populations of Indonesia, which comprises multiple religions, ethnicities, and cultural traditions. The results may therefore be more representative of majority groups, and caution is warranted when extending the conclusions to other gender, religious, or ethnic subpopulations in Indonesia. Future research should adopt more balanced sampling strategies or conduct subgroup analyses to ensure broader representativeness. Another methodological consideration relates to model fit indices. Certain indices did not meet conventional benchmarks, suggesting that overall model fit may be suboptimal. In the context of PLS-SEM, however, the appropriateness of global goodness-of-fit measures remains contested, with recent scholarship emphasizing prediction-oriented assessment over traditional cut-off criteria (Henseler et al., 2015; Sarstedt et al., 2017).

Nonetheless, the suboptimal fit should be acknowledged as a limitation, and the interpretation of results requires caution

Beyond the individual level, these findings also carry implications for institutions and communities, consistent with community psychology frameworks. Universities can play an active role by promoting intercultural dialogue, integrating ethnic diversity into curricula, and ensuring equitable representation in leadership (Kelly, 2006; Trickett, 2009). At the community level, public campaigns, inclusive policies, and positive media representation can enhance public collective self-esteem by validating minority identities (Nelson & Prilleltensky, 2005). System-level interventions are equally necessary, such as reducing structural discrimination and creating platforms for intergroup collaboration (Orford, 2008; Prilleltensky, 2008). Embedding these findings within an ecological perspective emphasizes the interconnectedness of individual, institutional, and societal factors, reinforcing the centrality of multilevel strategies in promoting both psychological well-being and social cohesion in multicultural Indonesia.

4. CONCLUSION

This study underscores the associations between Multigroup Ethnic Identity (MEI), Collective Self-Esteem (CSES), and mental health among Indonesian university students in a multicultural context. MEI was positively related to all dimensions of CSES and modestly associated with mental health, with CSES-Public emerging as the only significant mediator. This finding highlights the particular importance of societal validation and public recognition in a collectivist society shaped by historical interethnic tensions. Beyond individual-level outcomes, the study suggests that inclusive policies and community-level interventions are critical for strengthening collective self-esteem and promoting resilience. Nonetheless, several limitations should be acknowledged, including the cross-sectional design, the skewed composition of the sample (predominantly female, Muslim, and from two ethnic groups), the reliance on Western-developed instruments with limited cultural adaptation, and modest model fit indices. Future research should adopt longitudinal, mixed-method, and culturally grounded approaches, ensuring more diverse samples and testing measurement invariance across groups. Such efforts would deepen understanding of MEI as both a psychological and community resource for promoting well-being and social cohesion.

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Informed consent: Informed consent was obtained from all individual participants included in the study.

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References

Avery, D. R., Tonidandel, S., Thomas, K. M., Johnson, C. D., & Mack, D. A. (2007). Assessing the Multigroup Ethnic Identity Measure for Measurement Equivalence Across Racial and Ethnic Groups. *Educational and Psychological Measurement*, *67*(5), 877–888. https://doi.org/10.1177/0013164406299105

Avkiran, N. K. (2018). An in-depth discussion and illustration of partial least squares structural equation modeling in health care. *Health Care Management Science*, *21*(3), 401–408. https://doi.org/10.1007/s10729-017-9393-7

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing Construct Validity in Organizational Research. *Administrative Science Quarterly*, *36*(3), 421–458. https://doi.org/10.2307/2393203

Brandt, L., Liu, S., Heim, C., & Heinz, A. (2022). The effects of social isolation stress and discrimination on mental health. *Translational Psychiatry*, *12*(1), 398. https://doi.org/10.1038/s41398-022-02178-4

Cookson, M., Dunn, L., Braithwaite, J., & Braithwaite, V. (2010). Anomie and Violence: Non-truth and reconciliation in Indonesian peacebuilding. In *Anomie and Violence: Non-truth and reconciliation in Indonesian peacebuilding*. Anu Press. https://doi.org/10.26530/oapen_458801

de Zavala, A. G. (2018). Collective narcissism: Antecedents and consequences of exaggeration of the in-group image. In *Handbook of Trait Narcissism: Key Advances, Research Methods, and Controversies* (pp. 79–88). https://doi.org/10.1007/978-3-319-92171-6_8

Eker, I., Cichocka, A., & Cislak, A. (2022). Collective Narcissism. In *The Cambridge Handbook of Political Psychology* (pp. 214–227). https://doi.org/10.1017/9781108779104.015

Gilbar, G. G. (2023). Language as Ethnicity: Evaluating the Psychometric Properties of the MEIM-R in a Multi-ethnic Population in India. *Psychological Studies*, *68*(1), 45–57. https://doi.org/10.1007/s12646-022-00702-6

Hadi Suyono, & Nirwanasari, Y. (2022). Contribution of Social Identity, Stereotypes and Prejudice on Intention of Social Conflict. *Journal An-Nafs: Kajian Penelitian Psikologi*, *7*(2), 197–220. https://doi.org/10.33367/psi.v7i2.2561

Hair, J., Hult, G. T. T. M., Ringle, C., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). In *Sage* (Second). SAGE Publications Inc.

Hemat, M. G., & Heng, C. S. (2012). Interplay of Language Policy, Ethnic Identity and National Identity in Five Different Linguistic Settings. *International Journal of Applied Linguistics and English Literature*, *1*(7), 1–7. https://doi.org/10.7575/IJALEL.V.1N.7P.1

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant

validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Herdian, H., Qingrong, C., & Nuryana, Z. (2024). Unlocking the power of growth mindset: strategies for enhancing mental health and well-being among college students during COVID-19. *Current Psychology*, *43*(19), 17956–17966. https://doi.org/10.1007/s12144-023-05342-1

Herwandito, S., Utomo, A. W., & Sampoerno, S. (2024). Navigating Interethnic Harmony and Social Cohesion in Indonesia: Challenges and Opportunities in a Diverse Archipelago. *International Journal of Multicultural and Multireligious Understanding*, *11*(8). https://doi.org/oi.org/10.18415/ijmmu.v11i8.6086

Hulland, J. (1999). Use of Partial Least Squares (PLS) in Strategic Management Research: A Review of Four Recent Studies. *Strategic Management Journal*, *20*(2), 195–204. https://doi.org/https://doi.org/10.1002/(sici)1097-0266(199902)20:2<195::aid-smj13>3.0.co;2-7

Kelly, J. G. (2006). *Becoming ecological: An expedition into community psychology*. Oxford University Press.

Luhtanen, R., & Crocker, J. (1992). A Collective Self-Esteem Scale: Self-Evaluation of One's Social Identity. *Personality and Social Psychology Bulletin*, *18*(3), 302–318. https://doi.org/10.1177/0146167292183006

Mawardi, K. (2024). Dynamics of multiculturalism and religious pluralism: Strategies for building social cohesion in Indonesia. *Asian Journal of Philosophy and Religion (AJPR)*, *3*(1), 45–62.

McNeish, D. (2018). Thanks coefficient alpha, we'll take it from here. *Psychological Methods*, *23*(3), 412–433. https://doi.org/10.1037/met0000144

Mehrotra, N., Mehrotra, N., & Petrova, A. (2020). Development of Ethnic Identity among American College Students of Asian Indian Descent. *Indian Journal of Youth and Adolescent Health*, *7*(1), 7–14. https://doi.org/10.24321/2349.2880.202002

Nelson, G. B., & Prilleltensky, I. (2005). Community psychology: In pursuit of liberation and well-being. In *(No Title)*. Palgrave Macmillan.

Nonterah, C. W., Hubbard, R. R., Taasoobshirazi, G., Hahn, N. C., Peifer, J. S., & Utsey, S. O. (2024). Collective Self-Esteem and Well-Being Among College Students in Ghana. *International Perspectives in Psychology*, *13*(1), 3–13. https://doi.org/10.1027/2157-3891/a000084

Orford, J. (2008). Community Psychology: Challenges, Controversies and Emerging Consensus. *Community Psychology: Challenges, Controversies and Emerging Consensus*, 1–456. https://doi.org/10.1002/9780470773154

Pasteruk, I. (2020). *Community Development in Indonesia: Contemporary Aspects of Culture*. https://doi.org/10.2991/assehr.k.201017.075

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of research. *Psychological Bulletin*, *108*(3), 499–514. https://doi.org/10.1037/0033-2909.108.3.499

Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure: A New Scale for Use with Diverse Groups. *Journal of Adolescent Research*, *7*(2), 156–176. https://doi.org/10.1177/074355489272003

Phinney, J. S., & Ong, A. D. (2007). Multigroup Ethnic Identity Measure—Revised (MEIM-R). *Journal of Counseling Psychology*. https://doi.org/10.1037/t03615-000

Prilleltensky, I. (2008). The role of power in wellness, oppression, and liberation: The promise of psychopolitical validity. *Journal of Community Psychology*, *36*(2), 116–136. https://doi.org/10.1002/jcop.20225

Rahimi, S., & Rousseau, C. (2013). A Comparative Study of Collective Self-Esteem and Perception of Racism among Cambodian Immigrants and French Quebecois. *Sociology and Anthropology*, *1*(4), 180–188. https://doi.org/10.13189/SA.2013.010403

Sadachar, A., & Khare, A. (2013). *Influence of Collective Self-Esteem on Online Shopping Behavior of American Youth* (Vol. 70). https://doi.org/10.31274/ITAA_PROCEEDINGS-180814-524

Sahertian, P., & Jawas, U. (2021). Culture and excellent leaders: case of indigenous and non-indigenous Indonesian leaders. *Heliyon*, *7*(11), e08288. https://doi.org/10.1016/j.heliyon.2021.e08288

Sánchez, F. J., & Vilain, E. (2009). Collective self-esteem as a coping resource for male-to-female transsexuals. *Journal of Counseling Psychology*, *56*(1), 202–209. https://doi.org/10.1037/A0014573

Sarkar, S., & Punnoose, V. P. (2017). Cultural diversity and mental health. In *Indian Journal of Social Psychiatry* (Vol. 33, Issue 4, pp. 285–287). Medknow. https://doi.org/10.4103/ijsp.ijsp_94_17

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial Least Squares Structural Equation Modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds.), *Handbook of Market Research* (pp. 1–40). Springer International Publishing. https://doi.org/10.1007/978-3-319-05542-8_15-1

Sharma, S., & Agarwala, S. (2014). Self-Esteem and Collective Self-Esteem as Predictors of Depression. *Journal of Behavioural Sciences*, *24*(1), 21.

Sulistiowati, N. M. D. (2020). Mental health and related factors among adolescents. *Enfermeria Clinica*, *30*, 111–116. https://doi.org/10.1016/j.enfcli.2020.07.023

Suwartono, C., & Moningka, C. (2017). Pengujian Validitas Dan Reliabilitas Skala Identitas Sosial. *Humanitas*, *14*(2), 176. https://doi.org/10.26555/humanitas.v14i2.6967

Tajfel, H., Turner, J., Wochel, S., & Austin, W. G. (1986). The social identity theory of intergroup behaviour. In *Psychology of Intergroup Relations*. Nelson.

Trickett, E. J. (2009). Multilevel community-based culturally situated interventions and community impact: An ecological perspective. *American Journal of Community Psychology*, *43*(3–4), 257–266. https://doi.org/10.1007/s10464-009-9227-y

Umaña-Taylor, A. J., Bhanot, R., & Shin, N. (2006). Ethnic identity formation during adolescence: The critical role of families. *Journal of Family Issues*, *27*(3), 390–414.

Verkuyten, M. (2018). *The social psychology of ethnic identity*. Routledge.

Wang, G., Zeng, M., Li, J., Liu, Y., Wei, D., Long, Z., Chen, H., Zang, X., & Yang, J. (2023). Neural representation of collective self-esteem in resting-state functional connectivity and its validation in task-dependent modality. *Neuroscience*. https://doi.org/10.1016/j.neuroscience.2023.08.017

Yip, T. (2014). Ethnic identity in everyday life: The influence of identity development status. *Child Development*, *85*(1), 205–219.

Zavala, A. G. de, Dyduch-Hazar, K., & Lantos, D. (2019). *Collective narcissism: Political consequences of investment of self-worth into an ingroup's image.*