

Empowering Youth: A Qualitative Review on the Impact of Leadership and Participation on Biopsychosocial Development

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ABSTRACT

This study explores the impact of youth involvement in social activities, leadership, and sports on their biopsychosocial development. Various studies show that active participation in these activities can enhance self-esteem, emotional resilience, and mental well-being, as well as develop social and decision-making skills. However, while many studies have discussed the positive impact of leadership on psychosocial development, the understanding of the interaction between biological, psychological, and social factors remains limited. Using a qualitative approach through a literature review, this study aims to identify how youth participation in social and leadership activities can comprehensively affect their development. The findings of the study show that leadership and social participation significantly contribute to building social skills, increasing responsibility, and strengthening youth's psychosocial resilience. The study also highlights the need for a more holistic biopsychosocial approach in supporting the well-being of youth, particularly those in vulnerable groups. Suggestions for future research include exploring cultural diversity in youth empowerment and developing broader biopsychosocial intervention models to support their mental and social health. The implications of these findings are important for designing more effective leadership programs that not only support leadership skill development but also consider the physical, mental, and social well-being of youth.

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BACKGROUND

Youth involvement in social activities, leadership, and sport plays an important role in the formation of individual biopsychosocial character, identity, and well-being. Various studies show that active participation in such activities can affect physical, mental, and social development, as well as improve self-esteem, emotional resilience, and social skills (Wahid & O'Neill, 2020). However, there is still a lack of comprehensive understanding of how youth involvement in various social activities, leadership, and sport contributes to individual biopsychosocial development (Bean & Dorsch, 2021).

Adolescent leadership and participation play a very important role in the biopsychosocial development of the individual, which includes biological, psychological, and social aspects. In this context, leadership is not only seen as the ability to lead, but also as a means to build social skills, decision-making skills, and increased self-esteem (Shapiro & Kuperminc, 2022). Participation in social and leadership

activities among adolescents has the potential to strengthen individual social skills, increase a sense of responsibility, as well as develop an understanding of the individual's role in the community and society at large. Through leadership roles, adolescents can learn about empathy, cooperation, and how to deal with challenges, which are integral parts of individual development (Revolta & Spector, 2016).

This phenomenon is increasingly important considering the role of adolescents as agents of change in society. Individuals have great potential to make a positive impact in various sectors of life through the development of effective leadership skills (White dkk., 2023). This makes understanding how leadership and participation affect individual development essential for further research. However, despite the fact that many studies have discussed the influence of leadership on social and psychological development, there is still a lack of a deeper understanding regarding biopsychosocial aspects (Khiatani dkk., 2023).

Various studies show that adolescent participation in leadership activities can improve the psychosocial well-being



of individuals. According to reports of UNICEF (2020) about 60% of the world's adolescents are involved in extracurricular activities that support character development and leadership. In addition, the National Youth Leadership Council reports that more than 80% of teens involved in leadership programs experience improved communication skills, empathy, and a sense of responsibility. In a more specific study American Psychological Association (2019) that it was noted that adolescents who were active in organizations or social leadership activities tended to have lower levels of stress and were better able to cope with emotional challenges. This opens up opportunities for further research in exploring the long-term impact of youth active participation on individual health and well-being.

According to data, Central Bodies Statistics (2023) about 60% of youth in Indonesia are involved in social and sports activities, which include participation in community organizations, school sports, and leadership activities. Despite this increasing participation rate, many youth still face challenges in terms of mental health, stress, and anxiety. BPS also noted that more than 40% of adolescents in certain areas experience mental or emotional disorders due to social and economic pressures that are difficult to deal with. This indicates the need for a more holistic approach in supporting individual well-being.

Although many studies have examined the positive impact of leadership and social participation on youth, research incorporating biopsychosocial perspectives is still very limited. In Indonesia, data shows Kementerian Pemuda dan Olahraga (2022) that adolescent participation in leadership activities has increased rapidly. However, although many adolescents are involved in various youth organizations, there are still gaps in the application of a comprehensive leadership concept that includes biological, psychological, and social aspects. This suggests that despite the existence of leadership activities, a deep understanding of its influence on biopsychosocial development is still limited.

Most studies tend to focus on a single dimension, such as psychological or social impacts, without considering the interaction between biological, psychological (Khiatani dkk., 2023). Therefore, there is an urgent need for more comprehensive research into how these factors interact with each other and affect youth development. This research is expected to fill this gap by examining the impact of leadership and social participation in a biopsychosocial framework (Wong dkk., 2021).

Although there has been a lot of research that addresses the impact of adolescent leadership on the development of social and psychological skills, few have addressed it in the context of more comprehensive biopsychosocial development (Elliott-Groves, 2019). Many studies focus only on one dimension, for example only psychological or social aspects, without considering how biological factors such as hormonal changes or the influence of physical development can affect an individual's leadership experience (Otanga, 2021).

According to Walton (2024) to there is a lack of research that incorporates multidimensional perspectives in the study of adolescent leadership, especially those that include biological, psychological, and social aspects simultaneously. Previous studies have often focused on leadership outcomes in specific social and cultural contexts, while few have explored how these factors interact to affect overall adolescent development. Therefore, there are still research gaps that need to be bridged in understanding the impact of adolescent leadership and participation on the biopsychosocial aspects of individuals holistically (Walton, 2024).

This study introduces a new conceptual framework that integrates biological, psychological, and social aspects of adolescent leadership and participation. Unlike previous models that typically address these dimensions separately, this study explores how these factors interact to shape youth development in a holistic manner. The model emphasizes the interplay between physical changes, emotional resilience, and social skills, providing a more comprehensive view of how leadership roles impact adolescents. This approach fills a gap in existing literature by offering a biopsychosocial perspective that considers the full range of influences on youth development, rather than focusing solely on one dimension, such as psychological well-being or social behaviors.

In comparison to prior reviews, such as Wong et al. (2021) and Theron (2025), which primarily focus on psychological and social outcomes of youth leadership, this article offers a more integrated approach. Wong et al. (2021) discuss the psychological benefits of leadership roles, while Theron (2025) examines social development, but neither addresses the biological factors influencing leadership experiences. This study bridges that gap, offering insights into how physical development and hormonal changes intersect with psychological and social growth during adolescence. By focusing on leadership's impact through a biopsychosocial framework, this research contributes new insights that previous reviews have not explored.

RESEARCH METHODS

This study employs a qualitative approach and utilizes a literature review methodology to explore complex phenomena in the existing research. A qualitative approach is particularly useful in examining themes, patterns, and narratives within the literature, rather than focusing on quantitative data. The goal of the review is to gain a deeper understanding of the "how" and "why" behind the findings in the studies reviewed, rather than merely summarizing what has been done. In this context, the study analyzes the themes, concepts, and findings that emerge from the reviewed literature to develop a rich, narrative synthesis.

It is important to clarify that this study employs a Narrative Review methodology, which is a type of qualitative review that synthesizes findings from various studies in a descriptive and narrative format. Unlike a Systematic Review or Scoping Review, which follow structured protocols for

selecting and synthesizing studies based on predefined criteria and questions, a Narrative Review focuses on synthesizing qualitative themes and providing an overarching story that connects findings across different studies. This approach is particularly useful for exploring complex topics where the aim is to understand broader patterns and theoretical insights rather than to assess statistical evidence.

The literature review process follows a systematic selection protocol, beginning with 116 articles from an initial

database search. After removing irrelevant, non-English, and duplicated articles, 21 articles remained. Following quality assessment, 13 articles were excluded for not meeting the inclusion criteria, resulting in a final selection of 15 high-quality studies. This rigorous selection process ensures that only relevant and credible articles are included for thematic analysis and narrative synthesis, adhering to quality standards for qualitative review research.

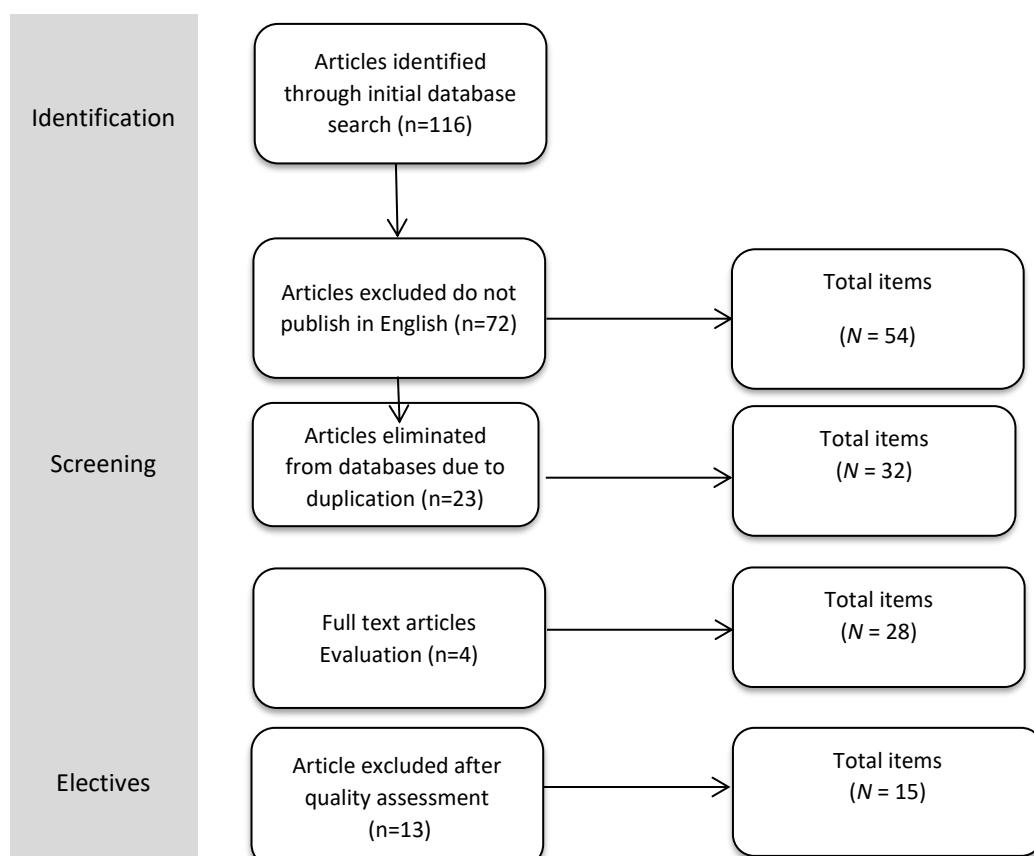


Figure 1. PRISMA Method

RESEARCH RESULTS

Research on youth leadership and social participation has shown a significant impact on the biopsychosocial development of individuals, with involvement in social and

leadership activities increasing self-esteem, emotional resilience, and mental well-being.

Table 1. Literature Identification Results

Article	Purpose	Method	Findings	Comparison and contradiction
(Anyon, 2018). A systematic review of youth participatory action research (YPAR) in the United States: Methodologies, youth outcomes, and future directions. <i>Health Education & Behavior</i> , 45(6), 869–880.	To explore the methodology and results of youth participatory action research (YPAR) in the US and provide future research direction.	A systematic review of the YPAR study.	Identify the various methodologies and outcomes of YPAR, as well as their positive impact on youth development and empowerment.	It has the same theme of youth empowerment as other studies, but its focus on participatory methods sets it apart from studies that only analyze youth outcomes.

<p>(Coelho, 2023). Biopsychosocial factors that influence the purpose in life among working adults and retirees. <i>International Journal of Environmental Research and Public Health</i>, 20(8), 5456–5462.</p>	<p>To examine the biopsychosocial factors that affect life purpose in workers and retirees.</p>	<p>The cross-sectional study uses surveys to assess biopsychosocial factors.</p>	<p>Factors such as social support, physical health, and psychological well-being affect life goals.</p>	<p>It is similar to the study of aging, but unique in that it integrates social and psychological dimensions in life goals.</p>
<p>(Faulkner, 2024). Evaluation of a biopsychosocial education resource for mild traumatic brain injury: The CLARITY study. <i>Frontiers in Neurology</i>, 15(1), 143–153.</p>	<p>To evaluate the effectiveness of biopsychosocial educational resources for mild traumatic brain injury (TBI).</p>	<p>Randomized controlled trials.</p>	<p>Educational resources improve participants' understanding of TBI and the individual's ability to manage symptoms.</p>	<p>It is similar to other TBI educational studies, but unique with its biopsychosocial approach.</p>
<p>(Garrido-Bolton, 2024). Neuropsychological and biopsychosocial evolution in pediatric transplant recipients: A mixed-methods study protocol. <i>Frontiers in Psychology</i>, 15(1), 130–145.</p>	<p>To investigate neuropsychological and biopsychosocial evolution in pediatric transplant recipients.</p>	<p>A mixed method approach, combining quantitative and qualitative data.</p>	<p>The study protocol outlines the expected outcomes regarding cognitive, emotional, and social development after transplantation.</p>	<p>It has a similar theme to the study of pediatric health outcomes but focuses on transplant recipients and biopsychosocial factors.</p>
<p>(Lee, 2025). Olympic combat sports and mental health in children and adolescents: A systematic review. <i>Frontiers in Psychology</i>, 1(1), 1–17.</p>	<p>To review the impact of Olympic combat sports on the mental health of children and adolescents.</p>	<p>A systematic review of the literature on combat sports and mental health outcomes.</p>	<p>It found both positive and negative impacts on mental health, including increased resilience and anxiety risk.</p>	<p>It has similarities with the study of adolescent sports participation, but a special focus on combat sports.</p>
<p>(Nash, 2024). Examining the intersection of sociopolitical development and transformative social and emotional learning outcomes: An integrated approach in youth participatory action research. <i>Youth</i>, 10(1), 1–23.</p>	<p>To explore how sociopolitical developments affect social and emotional learning in youth participatory action research.</p>	<p>Qualitative analysis of youth participatory projects.</p>	<p>It was found that sociopolitical developments greatly improve social and emotional learning outcomes in youth.</p>	<p>It combines social development and emotional learning, in contrast to research that focuses on only one aspect.</p>
<p>(Ozer, 2024). Youth-led participatory action research and developmental science: Intersections and innovations. <i>Annual Review of Developmental Psychology</i>, 1(1), 1–13.</p>	<p>To discuss the intersection between youth-led participatory action research and developmental science.</p>	<p>A literature review on participatory action research and developmental science.</p>	<p>Highlights innovative approaches in which youth-led research influences developmental psychology.</p>	<p>Provide a unique perspective on the integration of youth-led research with developmental science.</p>
<p>(Pokowitz, 2024). Mood Lifters for graduate students and young adults: A biopsychosocial, transdiagnostic treatment model. <i>Behavioral Sciences</i>, 14(3), 252–262.</p>	<p>To explore a model of biopsychosocial treatment for mood disorders in graduate students and young adults.</p>	<p>Development and evaluation of treatment models.</p>	<p>This model shows potential in improving mood and psychological well-being in the target population.</p>	<p>It is similar to other mental health treatments but uses a transdiagnostic approach.</p>
<p>(Poly et al., 2024). Fostering quality of life in young adults living with multiple sclerosis: A biopsychosocial co-created intervention. <i>Frontiers in Psychology</i>, 15(1), 1–13.</p>	<p>To evaluate interventions designed to improve quality of life in young adults with multiple sclerosis.</p>	<p>A co-created biopsychosocial intervention.</p>	<p>These interventions improve quality of life and better psychosocial outcomes.</p>	<p>Focusing on young adults with MS, similar to other interventions but unique in a co-created approach.</p>
<p>(Radovan, 2025). Female athletes' knowledge of biopsychosocial puberty-related topics and their implications for sports participation. <i>Frontiers in</i></p>	<p>To examine female athletes' knowledge of biopsychosocial topics related to puberty and its impact on individual sports participation.</p>	<p>Survey-based studies.</p>	<p>Female athletes' knowledge of puberty issues is essential for optimal participation and sports performance.</p>	<p>Similar to other sports and gender studies, but focuses on puberty and its implications.</p>

<p>Sports and Active Living, 7(1), 112–123.</p>	<p>(Tam et al., 2024). The influence of social dynamics on biological aging and the health of historically marginalized populations: A biopsychosocial model for health disparities. International Journal of Environmental Research and Public Health, 21(5), 554–562.</p>	<p>To explore how social dynamics affect biological aging and health in marginalized populations using biopsychosocial models.</p>	<p>Literature review and model development.</p>	<p>Social dynamics</p>	<p>affect</p>	<p>health</p>	<p>inequality and ageing, especially in marginalized groups.</p>	<p>Using a biopsychosocial model, it is similar to other health inequality research but with a special focus on social dynamics.</p>
<p>(Theron, 2025). Multisystemic resilience and its impact on youth mental health: A biopsychosocial perspective. Frontiers in Child and Adolescent Psychiatry, 9(1), 29–41.</p>	<p>To examine how multisystems resilience affects youth mental health from a biopsychosocial perspective.</p>	<p>Conceptual framework and literature review.</p>	<p>Multisystem resilience has a positive impact on youth mental health by improving adaptability and coping strategies.</p>	<p>It is similar to other resilience research but differentiates itself by using a biopsychosocial approach.</p>				
<p>(Viola, 2024). The effects of cultural engagement on health and well-being: A biopsychosocial perspective. Frontiers in Public Health, 12(1), 136–145.</p>	<p>To explore how cultural engagement affects health and well-being from a biopsychosocial perspective.</p>	<p>Literature review and conceptual framework.</p>	<p>Cultural engagement has a positive impact on physical and mental health outcomes.</p>	<p>Unique in biopsychosocial approaches to cultural and health engagement.</p>				
<p>(Whitty et al., 2024). Exploring mental functions utilised by male youth team-based ball-sport athletes within academy programs: A systematic review and meta-aggregation. Frontiers in Sports and Active Living, 1(1), 1–13.</p>	<p>To review the mental functions used by male athletes in ball-based team sports in the academy program.</p>	<p>Systematic review and meta-aggregation of existing studies.</p>	<p>Mental functions such as focus and emotional regulation are important for success in sports.</p>	<p>Focus on male athletes, similar to other sports psychology research but focus on team sports.</p>				
<p>(Zhu et al., 2025). Subjective outcome evaluation of a positive youth development program in Mainland China during the COVID-19 pandemic. Applied Research in Quality of Life, 20(8), 5456–5462.</p>	<p>To evaluate the subjective outcomes of positive youth development programs in China during the COVID-19 pandemic.</p>	<p>Survey-based evaluation of program participants.</p>	<p>This program has a positive impact on the psychological well-being and resilience of participants.</p>	<p>Similar to other youth development studies, but focused on the context of the COVID-19 pandemic.</p>				

1. Youth Empowerment and Social Development

Some studies have focused on Youth Participatory Action Research (YPAR), which highlights how youth active involvement in research can strengthen individual empowerment, social development, and community engagement. These studies show that youth who engage in individual-led research projects themselves tend to experience increased self-esteem, a greater sense of social responsibility, and deeper involvement in community activities. Therefore, the main research model that emerges from these findings is the importance of youth participation in social research, which can have a long-term impact on individual outcomes. Future research may explore the effects of youth empowerment from social, emotional, and professional perspectives.

Research can focus on cultural diversity in youth empowerment, as youth experiences can be very different

depending on the individual's cultural and social background. More in-depth research in this context can look at how cultural and economic factors influence the effectiveness of empowerment programs and identify the models that work best in different cultural and community contexts. This can be seen in a study conducted by Smith (2023), in which participants reflected on individual experiences in the Youth Participatory Action Research (YPAR) program. One of the subjects, J.A. (17 years old), shared the following in the interview:

Before joining the program, I felt that my opinion was not being considered. But now, I feel like I'm part of something bigger. I am directly involved in local issues and have helped organize several community events. (JA, 17 years old).

Table 2. Social Empowerment and Development

Aspects	How to Upgrade	Implementation Examples
Youth Empowerment and Social Development	Focus research on how youth involved in individual-led research can thrive in social, emotional, and professional aspects.	The YPAR program makes youth feel more valued and more involved in community activities, as expressed by 17-year-old participants (Smith, 2023).
Cultural Diversity in Youth Empowerment	Research should take into account different cultural backgrounds in youth empowerment. This is important to know which programs are most effective in each culture.	YPAR programs can be adapted to local cultures, for example involving youth from different ethnic backgrounds to address common social problems.
Youth Research and Development Model	Develop a research model that also teaches professional skills, in addition to social and emotional skills.	Programs that combine leadership training and project management can prepare youth for future professional challenges.

2. Biopsychosocial Influences on Mental Health

Biopsychosocial models have become a major theme in understanding mental health in a variety of populations, including workers, retirees, as well as individuals with certain conditions such as multiple sclerosis or mild traumatic brain injury. These studies show how biological, psychological, and social factors interact with each other in influencing a person's mental health condition. These findings open up opportunities for further research into the impact of biopsychosocial approaches on the mental health of children and adolescents, especially in the context of education, sport, or other psychosocial issues.

Further research could explore biopsychosocial interventions that can be applied to support adolescent mental health, especially among vulnerable groups, such as adolescents who have experienced trauma or adolescents with socioeconomic problems. This research can identify different forms of effective social support, such as

community-based therapy, family support, or programs involving peers, as well as how a combination of these factors contributes to the recovery or improvement of an individual's mental health.

There is a great opportunity to research prevention models that can be applied on a broader scale in society. For example, stress and anxiety prevention programs that utilize biopsychosocial approaches to prevent mental disorders among adolescents living in conflict-prone areas or who face chronic stress due to difficult socioeconomic conditions. A worker who participated in a study on biopsychosocial factors that affect life goals, K.L. shared:

"My physical health declined after the car accident, but my family's support really helped me find a new goal. Being actively involved in my community makes a huge difference in my life. I now regularly volunteer and feel more fulfilled." (KL, 23 years old).

Table 3. Biopsychosocial and Mental Health

Aspects	How to Upgrade	Implementation Examples
Biopsychosocial Influences on Mental Health	Research can focus more on how biological, psychological, and social factors affect each other's mental health, especially in the context of education and sports.	Research on biopsychosocial impacts among adolescents experiencing trauma or socioeconomic problems, involving community-based therapy or family support.
Biopsychosocial Interventions in Adolescent Mental Health	Develop programs that combine family, peer, and therapy support to help teens recover from mental issues.	Implement programs that involve family and peers, such as at school or in the community, to help teens cope with stress or trauma.
Stress and Anxiety Prevention Models for Adolescents	Develop biopsychosocial-based stress and anxiety prevention programs that can be widely applied in the community.	Stress prevention programs in conflict-prone areas or for adolescents with socioeconomic problems, with community and psychological support.

3. Cultural Engagement and Wellbeing

Research on cultural engagement shows that participation in cultural activities can improve a person's

physical and mental health outcomes. Cultural engagement, which includes art, music, and other cultural practices, often makes a positive contribution to mental and physical well-

being. This research suggests that involvement in cultural activities is not only beneficial in the context of mental health but also in enhancing a sense of social identity and cultural pride.

Further research could focus on how public health programs can integrate cultural activities to support well-being in specific groups, particularly among marginalized or minority groups. For example, in the context of indigenous peoples or migrant groups, cultural engagement can provide a platform to build individual social and emotional resilience. The study could also look at how cultural involvement in communities can strengthen social networks and support individuals in facing life's challenges, such as discrimination or social marginalization.

Biopsychosocial models that incorporate cultural involvement in health programs could be an interesting area of research. This research may explore how culture-based programs can be designed to improve physical and mental well-being, and reduce health inequalities in underrepresented groups. The same thing was conveyed by SM in the interview with the results of the research as follows:

I never realized how much my cultural activities could affect my mental well-being. Singing with my group during the pandemic really lifted my spirits and helped me overcome isolation. (SM, 28 years old).

Table 4. Culture and Well-Being

Aspects	How to Upgrade	Implementation Examples
Biopsychosocial Influences on Mental Health	Research can focus more on how biological, psychological, and social factors affect each other's mental health, especially in the context of education and sports.	Research on biopsychosocial impacts among adolescents experiencing trauma or socioeconomic problems, involving community-based therapy or family support.
Biopsychosocial Interventions in Adolescent Mental Health	Develop programs that combine family, peer, and therapy support to help teens recover from mental issues.	Implement programs that involve family and peers, such as at school or in the community, to help teens cope with stress or trauma.
Stress and Anxiety Prevention Models for Adolescents	Develop biopsychosocial-based stress and anxiety prevention programs that can be widely applied in the community.	Stress prevention programs in conflict-prone areas or for adolescents with socioeconomic problems, with community and psychological support.

4. Resilience and Adaptability in Youth

Research on multisystems resilience shows that building resilience in youth is critical in supporting individual mental health. This resilience is influenced by a variety of factors, including social support, problem-solving skills, and environmental influences. Further research may focus on how resilience development programs in schools or communities can help youth cope with social and emotional stress, especially in the context of societies with high levels of poverty or communities exposed to violence.

Research can also look at the relationship between personal resilience and social resilience in creating more resilient youth.

The workshops taught me how to cope with stress and control my emotions better. Now I know how to deal with conflicts with friends

The research could explore how family, peer, and community involvement supports the development of emotional and social resilience among youth. In addition, research can also identify environmental factors that affect youth resilience, such as family stability, access to education, and the quality of the environment in which individuals live. This research could lead to more effective models of resilience interventions that can be applied in a variety of contexts, such as schools, youth institutions, and local communities. These programs can be designed to facilitate the development of stress management skills, strengthening self-identity, and healthier emotional management.

*and family without feeling overwhelmed.
(RT, 16 years old).*

Table 5. Durability and Adaptability

Aspects	How to Upgrade	Implementation Examples
Biopsychosocial Influences on Mental Health	Research can focus more on the interactions between biological, psychological, and social factors that affect adolescent mental health, especially in education and sports.	Research on biopsychosocial impacts on adolescents experiencing trauma or socioeconomic problems, involving community-based therapy or family support.

Biopsychosocial Interventions in Adolescent Mental Health	Develop programs that combine family, peer, and therapy support to help teens recover from mental issues.	Implement programs that involve family and peers in schools or communities to help teens cope with stress or trauma.
Stress and Anxiety Prevention Models for Adolescents	Develop biopsychosocial-based stress and anxiety prevention programs that can be implemented in the community.	Stress prevention programs in conflict-prone areas or for adolescents with socioeconomic problems, with community and psychological support.

5. Health and Participation by Gender

Research focusing on gender in sport shows significant differences in the way women and men manage health issues, especially as it relates to puberty and participation in sport. This research shows that an understanding of health issues related to puberty can affect exercise performance and individual participation in various physical activities.

Further research can explore how gender differences in the experience of puberty, as well as the social and cultural factors that influence it, impact sports participation in adolescent girls and boys. In addition, the study can identify ways to support the physical and mental well-being of female athletes through education about puberty and reproductive health. An intervention model that

can be applied in this context is a gender-based education program that aims to reduce the barriers women face in participating in sports, as well as support the overall health of individuals.

The research could also look at how social and cultural changes affect the way these two genders engage in sport and physical activity, as well as identify ways to create a more inclusive environment for all genders in sport and recreation.

"I used to feel embarrassed to talk about puberty changes, but after taking workshops on women's health and puberty, I feel much more confident and can now focus on my performance without distractions." (LP, 19 years old).

Table 6. Health and Participation

Aspects	How to Upgrade	Implementation Examples
Biopsychosocial Influences on Mental Health	Research can focus more on the interaction between biological, psychological, and social factors that affect adolescent mental health, especially in the context of education and sport.	Research on biopsychosocial impacts on adolescents experiencing trauma or socioeconomic problems, involving community-based therapy or family support.
Biopsychosocial Interventions in Adolescent Mental Health	Develop programs that combine family, peer, and therapy support to help teens recover from mental issues.	Implement programs that involve family and peers in schools or communities to help teens cope with stress or trauma.
Stress and Anxiety Prevention Models for Adolescents	Develop biopsychosocial-based stress and anxiety prevention programs that can be implemented in the community.	Stress prevention programs in conflict-prone areas or for adolescents with socioeconomic problems, with community and psychological support.

The relationship between students' psychological and emotional development and youth participation and leadership. This model starts from antecedents or initial factors that include various important aspects such as positive future orientation, self-compassion, self-acceptance, mental resilience, emotional regulation ability, and intelligence in facing difficulties (adversity quotient). Not only positive factors, negative experiences such as academic stress and past trauma are also taken into account as elements that shape students' initial psychological conditions. All these aspects form the basis of the youth empowerment process and psychosocial resilience which are

the main keywords in this framework. Internal process as a mediator that bridges the initial factor and the final result, namely youth participation and leadership.

These internal processes include psychological flexibility, mindfulness, acceptance, commitment to values, and future motivation. The role of moderators such as social support, access to psychological services, mental health literacy, involvement in meaningful activities, and spirituality is also crucial in strengthening the positive effects of psychological and emotional development. The end result of this whole process is increased youth social engagement, the growth of transformative leadership, the strengthening of

youth agency and voice in decision-making, and increased social initiative and collaboration. Overall, this model shows that the psychological empowerment of students is not only important for individual well-being, but also contributes

significantly to social progress through youth leadership and active participation. The findings are explained in the model of the research results below.

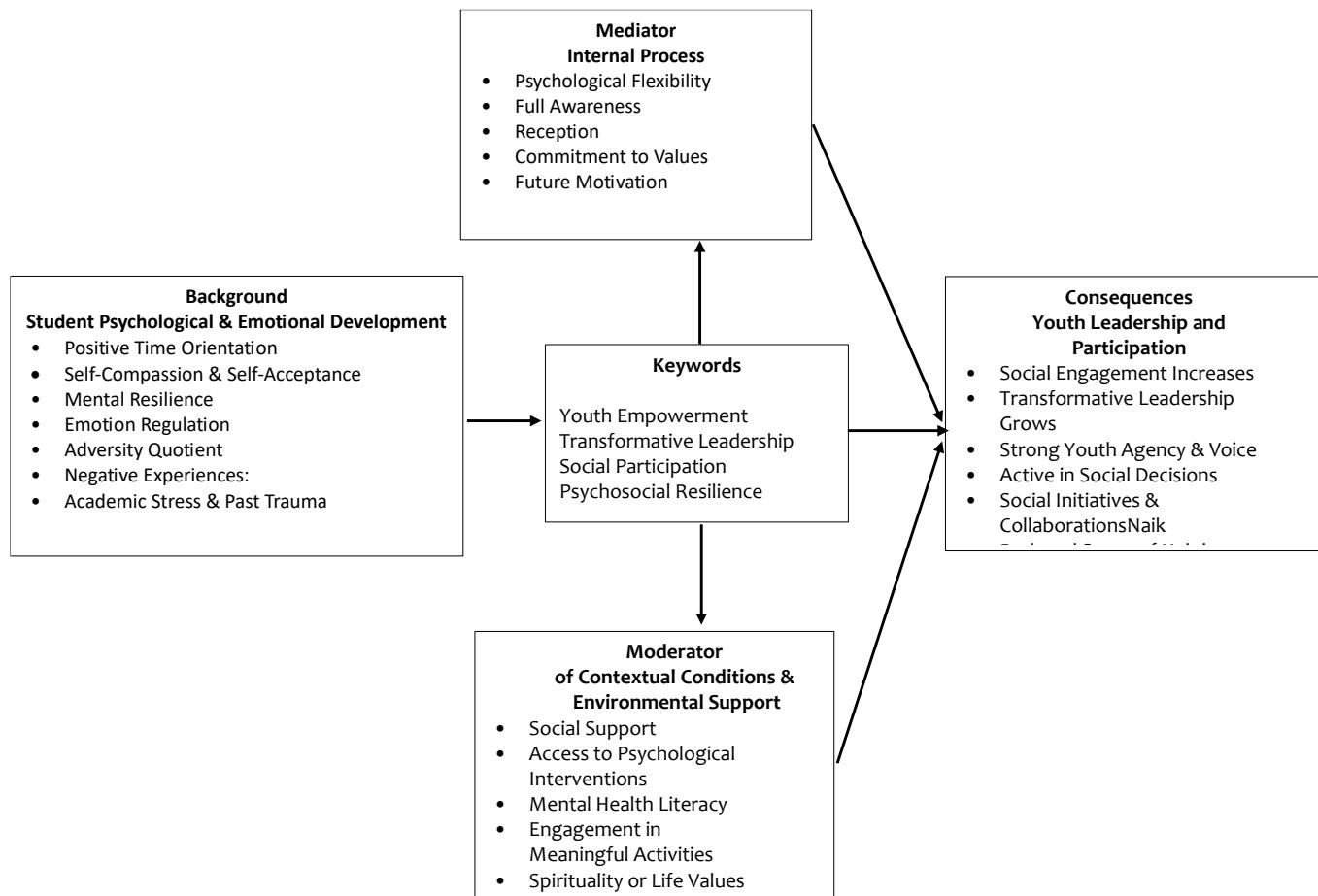


Figure 2. Synthesis of Research Findings

DISCUSSION

Youth involvement in leadership activities, social participation, and sports is one of the important factors in the overall individual development process. These activities not only serve as a means of skill development, but also as a social learning space that shapes the character and personality of youth (Wahid & O'Neill, 2020). In the context of physical development, youth involvement in active sports and social activities can improve physical health and build healthy living habits. Physical activity that is carried out in a structured manner also contributes to increasing endurance and fitness, which has a positive impact on the productivity and quality of life of youth (Bean & Dorsch, 2021).

From a psychological perspective, active participation in leadership and social activities provides an opportunity for youth to get to know their potential more deeply. Experience leading, arguing, and making decisions can increase confidence and a sense of personal competence (Shapiro & Kuperminc, 2022). Confidence that develops through leadership experience is an important capital for youth in facing academic, social, and professional challenges. When youth feel capable and valued, they tend to have a

more positive and optimistic view of the future (Revolta & Spector, 2016).

Involvement in social activities also contributes to increased self-esteem. Youth who are actively involved often feel that their existence has meaning and impact on the surrounding environment, thus reinforcing a sense of worth as individuals (White dkk., 2023). The process of forming self-identity in youth is greatly influenced by the social experiences they experience. Leadership and social participation activities provide a space for youth to explore their values, interests, and life goals. A positive self-identity is formed when youth are able to integrate personal experiences with the social roles they live (Khaitani dkk., 2023). Through active engagement, youth learn to understand who they are, what they believe, and how they stand in society. Leadership provides opportunities for youth to learn to take responsibility for the decisions and actions taken. This responsibility is an important exercise in building emotional and moral maturity (Wong dkk., 2021).

In leadership activities, youth are also trained to work together with other individuals who have diverse backgrounds, views, and characters. This process enriches

social experiences and improves adaptability. The ability to collaborate that develops through social participation is an important skill in community life (Elliott-Groves, 2019). Youth learn that achieving common goals requires effective communication, empathy, and mutual respect. In addition to collaboration, active involvement also trains youth in managing conflicts. Differences of opinion that arise in social or leadership activities teach youth how to solve problems constructively. Experience managing conflict helps youth develop emotional regulation and wise decision-making skills. This is important for building healthy and sustainable social relationships (Otanga, 2021).

Youth participation in decision-making provides a sense of ownership of the activities or programs carried out. When youth are actively involved, they tend to be more responsible and committed. This sense of belonging also increases the intrinsic motivation of youth to contribute sustainably in social activities (Walton, 2024). Youth are no longer just passive participants, but act as agents of change. Involvement as agents of change encourages youth to be sensitive to social problems in the surrounding environment. This sensitivity is the basis for the growth of social awareness and empathy. Social awareness that develops through active participation helps youth understand social realities more critically. Youth learn to see problems not only from a personal point of view, but also from a collective perspective (asfar & taufan, 2019).

In the long run, leadership experience and social participation contribute to the formation of an active civic attitude. Youth who are used to being involved tend to have a higher concern for community life. Sports activities in the social context also play a role as a medium for learning values such as discipline, hard work, and sportsmanship (Bean & Dorsch, 2021). These values are relevant not only in the context of sports, but also in everyday life. Exercise carried out in groups strengthens social interaction and a sense of community. Through this activity, youth build a social network that can be a source of emotional support. Social support formed through joint activities contributes to the mental health of youth. Feeling accepted and supported by the group can reduce feelings of loneliness and stress (Shapiro & Kuperminc, 2022).

Good mental well-being allows youth to function optimally in various life roles. Mentally healthy youth are better able to manage stress and challenges. Social participation also opens up opportunities for youth to learn from real experiences, not just from theory. This experiential learning tends to be more meaningful and lasts longer (Revolta & Spector, 2016). Through these experiences, youth develop self-reflection skills, which are the ability to evaluate actions and learn from mistakes. Self-reflection is an important aspect of the self-development process. Reflection skills help youth become more adaptive individuals and open to change. This is very relevant in the face of evolving social dynamics (White dkk., 2023).

In addition to individual benefits, youth involvement also has a positive impact on the community. The presence of

active and empowered youth can strengthen social cohesion and solidarity. Communities that involve youth in leadership tend to be more inclusive and responsive to the needs of the younger generation (Coelho, 2023). This creates a mutually reinforcing mutual relationship. Youth participation in various social activities also plays a role in preventing risky behavior. Youth who have positive activities and clear goals tend to stay away from negative behavior (Faulkner, 2024).

The biopsychosocial approach offers a holistic conceptual framework for understanding individual development by emphasizing the interconnectedness between biological, psychological, and social aspects. This approach views the individual not as an entity influenced by a single factor, but rather as the result of the dynamic interaction of various systems that influence each other throughout life (Ozer, 2024). Biological factors include physical conditions, body health, and neurobiological aspects that affect an individual's functioning in daily life. Good health conditions are an important foundation for individuals to be able to participate optimally in social and psychological activities, including educational, leadership, and self-development activities (Radovan, 2025).

Psychological aspects include mental health, emotional regulation, motivation, and self-perception. Psychological balance allows individuals to manage stress, face challenges, and maintain a positive outlook on life. In this context, psychological well-being plays an important role in forming a proactive attitude and desire to contribute in the social environment (Handayani et al., 2024). Social factors, particularly social support from family, peers, and community, have a significant influence on an individual's mental and physical health. Positive social relationships provide a sense of security, acceptance, and value, which in turn strengthens the individual's resilience in the face of life's stresses (Shapiro & Kuperminc, 2022).

Social support also serves as a source of meaning and direction in life. Through meaningful social interaction, individuals can develop life goals that align with personal and social values. Clear life goals contribute to increased motivation, life satisfaction, and overall well-being (Whitty dkk., 2024). In the context of youth, the biopsychosocial approach becomes particularly relevant because this period is a period of development marked by the search for identity and the formation of values. Youth are in a vulnerable transition phase, so support from various systems is crucial to ensure healthy and adaptive development (Herdiani & Hidayat, 2023).

Youth involvement in social activities and leadership strengthens the social dimension of the biopsychosocial approach. Through active participation, youth learn to build relationships, work together, and understand the social dynamics in their environment. Leadership activities also contribute to strengthening the psychological aspects of youth, such as a sense of responsibility, confidence, and self-control. When youth are given space to contribute and take on important roles, they tend to develop a sense of competence and meaning in their social lives. The sense of

social responsibility formed through active involvement encourages youth to be more concerned about the welfare of the community. This triggers sustained participation in community activities and strengthens the bonds between individuals and their social environment.

Biopsychosocial-based interventions and education are approaches that place the individual as a whole subject, taking into account the interconnectedness between biological, psychological, and social aspects in each developmental process. This approach rejects a reductionist view that focuses only on one dimension, and instead emphasizes the importance of a holistic understanding of individual experience (Ozer, 2024). Through biopsychosocial interventions, individuals are encouraged to recognize their own conditions more reflectively, including how the body, mind, and social environment influence each other in responding to life's demands. This awareness is an important foundation in building self-control and responsibility for personal health. Biopsychosocial education also plays a role in improving mental health literacy, which is the ability of individuals to understand, recognize, and respond to psychological conditions experienced. This literacy allows individuals to not only identify stress or emotional distress, but also understand their sources and impacts on daily functioning (Radovan, 2025).

Based on Revolta dan Spector (2016) research that the ability to manage stress is one of the main outcomes of biopsychosocial-based interventions. Individuals who have a thorough understanding of stress mechanisms tend to be able to develop more adaptive coping strategies, such as emotion regulation, problem-solving, and seeking social support. In the youth group, this ability is very important considering the developmental phase marked by biological changes, social demands, and the search for self-identity. Without adequate support, these pressures have the potential to lead to psychological problems such as anxiety, emotional exhaustion, or decreased motivation (Coelho, 2023).

Sports activities are often positioned as a strategic medium in biopsychosocial interventions because they are able to bridge physical and psychological aspects. Biologically, exercise improves the body's fitness and physiological functions, while psychologically it can improve mood and increase a sense of self-competence. In addition, sports also have a strong social dimension, especially when they are done in a group or team context (Faulkner, 2024). Social interactions built through sport can strengthen a sense of community, emotional support, and social identity, all of which contribute to an individual's well-being. That said, exercise doesn't always have a positive impact automatically. In certain contexts, especially those that are competitive or performance-oriented, exercise can be a significant source of psychological stress for individuals. The pressure to achieve achievements, expectations from coaches or the environment, as well as intense social comparisons can increase the risk of stress, anxiety, and even mental exhaustion. This condition shows that sports also have potential risks if not managed wisely (Khiatani dkk., 2023).

Therefore, the effectiveness of sport as a means of improving welfare is highly dependent on the context of implementation and the support that accompanies it. The biopsychosocial approach helps identify these conditions so that the benefits of exercise can be maximized and the risks minimized. In leadership and social participation programs that involve sports, the integration of mental health support becomes a necessity that cannot be ignored (Handayani et al., 2024). This support can be realized through psychological assistance, emotional regulation training, and the creation of a safe and non-discriminatory environment. The presence of a mental health component in such a program helps youth understand that psychological well-being is an integral part of performance and participation, not just an additional aspect. This understanding encourages a more balanced attitude towards achievement and personal health (Shapiro & Kuperminc, 2022).

Holistically designed programs allow youth to develop healthy mental resilience, which is the ability to cope with stress without sacrificing psychological well-being. This resilience is formed through the experience of facing challenges accompanied by adequate support and reflection (Whitty dkk., 2024). Strong mental resilience not only impacts success in sports activities or leadership, but also contributes to the ability of youth to cope with broader life challenges, such as academic stress, social conflict, and future uncertainty. The development of biopsychosocial-based interventions and education in leadership and social participation programs involving sport needs to be carried out in a planned and sustainable manner. This approach ensures that physical, psychological and social benefits can be balanced to be optimised, while supporting the overall and long-term well-being of youth (Zhu et al., 2025).

CONCLUSION

Youth involvement in social activities, leadership, and sport has a significant impact on an individual's biopsychosocial development, including increased self-esteem, emotional resilience, and mental well-being. Involvement in activities such as Youth Participatory Action Research (YPAR) can strengthen youth empowerment by developing social, emotional, and professional skills, which support individual participation in social decision-making. Biopsychosocial approaches in this context have a positive impact on the mental and physical health of youth, emphasizing the important role of social support, stress management, and engagement in meaningful activities. Further research can explore more deeply the influence of cultural diversity in youth empowerment, as well as its impact on the effectiveness of social programs in various cultural contexts. Research could also expand the influence of biopsychosocial interventions on the mental health of youth in vulnerable groups, such as individuals facing social trauma or difficult socioeconomic conditions. In addition, the development of broader prevention models in the community, by integrating biopsychosocial approaches, can be the focus of further research. The implications of this

research are important for the development of youth leadership and empowerment programs, especially in the context of education, sports, and social activities. A comprehensive biopsychosocial approach can be applied in a variety of programs to improve youth well-being holistically, by involving strong social support and better mental health management. These programs can strengthen the emotional, social, and psychological resilience of youth, as well as encourage individuals to more actively participate in social life and leadership.

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