

Promoting and Risk Factors of Mental Health Among Indonesian Undergraduate Psychology Students

Kathleen Rachel^{1*} Viona Christin Chandra²

^{1,2}Fakultas Psikologi, Universitas Kristen Krida Wacana, Jakarta, Indonesia

*kathleen.502020043@civitas.ukrida.ac.id

ABSTRACT

Various paradigms are used to identify the risk factors of mental illness, one of them is the medical paradigm that views the correlation between disorders to biological and cognitive components. However, mental disorders are insufficient to be explained with a single view by biomedical paradigm and pharmacological treatment may not be enough to treat them. To understand mental health, acknowledgment of personal experiences and environmental challenges is necessary, which is known as the biopsychosocial paradigm. This study aims to identify the promoting and risk factors of mental health through the biopsychosocial lens. This study uses a descriptive approach through open-ended questions. The collected data from undergraduate psychology students in a private university in Indonesia (n=88) is analyzed through a thematic analysis. The results showed that lifestyle, good physical health, positive characters, family support and bond, financial stability, meaningful social roles, and access to basic rights promote mental health. In contrast, the risk factors of mental health are illness, negative coping, poor parenting, lack of social skills, environmental disasters, and poor neighborhoods. The findings in this research imply that mental health is a multidimensional component influenced by the interrelationships of biological, psychological, social, and environmental dimensions.

Keywords: biopsychosocial, mental health, promoting factors, risk factors.

Introduction

In today's fast-paced world, mental health has received increasingly widespread attention among the public. Aside from being recognized as a relevant aspect of individuals' well-being and social development, mental health also affects the abilities of every individual to contribute to their society. Therefore it is no wonder that issues about mental health became the public's top priority to confront. The concern rises alongside the number of mental health problems that occur, especially in developing countries like Indonesia. A report from Indonesia National Adolescent Mental Health Survey (I-NAMHS, 2022), there is at least 1 out of 3 adolescents in Indonesia have mental health problems. This prevalence is equal to 34.9% or about 15.5 million adolescents who show problems in their mental health. Unfortunately, only 2% of these adolescents have accessed services of support or counseling as an intervention. The numbers raise a growing urgency to intervene and ensure better mental health for Indonesians. One way to achieve this goal is to have a comprehensive perspective of promoting and risk factors of mental health in Indonesia. Therefore, developing promotive and preventive measures for mental health becomes contextualized and sustainable.

The biomedical paradigm views illness as the result of physical malfunctions, if not, as an effect of lower-level causes (Rocca & Anjum, 2020). The paradigm is primarily focused on the

physical body and defines 'health' as the absence of physical symptoms or disease. In the last decades, many have expressed their criticism of the paradigm's framework. Researchers have found that the biomedical paradigm fails to capture other important factors that might predict health and illness (Rocca & Anjum, 2020; Handerer et al., 2020). The paradigm's limitations challenge the development of mental health knowledge in Indonesia, as the approach serves limited information regarding mental health.

There are many efforts being made in facing mental health problems in Indonesia. Back in the 1960s, the Indonesian government first recognized mental health as a serious problem for national development, especially in health. The government then released the first Mental Health Act in 1966 to support ways of preventing mental health problems in Indonesia. The Act focused on defining mental health with the biomedical term, leading to the inherent biomedical paradigm towards mental health in Indonesia (Hidayat et al., 2023). In 2014, the Indonesian government introduced mental health with a more comprehensive perspective. The Mental Health Act No. 18 of 2014, Article 1, Paragraph 1 states, "Mental Health is a condition where an individual person is able to develop physically, mentally, spiritually and socially to allow such person to be aware of one's own abilities, able to overcome stress, able to work productively and able to contribute to the community". The definition of mental health in the paragraph aligns with the biopsychosocial definition of mental health proposed by Engel (1977).

The founder of the biopsychosocial paradigm (Engel, 1977) explains that the paradigm recognizes an individual's mental health to be influenced by biological, psychological, and social factors. All of these factors are important to consider when developing interventions (Damsgaard & Angel, 2021). The Mental Health Act of 2014 has generated hope to address mental health in Indonesia from a more comprehensive perspective using the biopsychosocial paradigm. However, the psychology curriculum in the country still mainly gravitates toward the biomedical paradigm. Relying solely on the biomedical paradigm to understand mental health might hamper intervention development due to limited knowledge of the diverse factors that impact mental health problems in Indonesia. Hence, the biopsychosocial paradigm is necessary in addition to the biomedical paradigm to address the mental health needs of Indonesian students and create interventions that address all aspects of an individual's well-being. Through the biopsychosocial paradigm, this research aims to assess Indonesian students' perception of both promoting and risk factors of their mental health.

Method

Online surveys were distributed to undergraduate psychology students. The psychology students that participated in this research are actively enrolled in a private university in Jakarta, Indonesia. Through a convenience-sampling method, the researchers obtained 88 students, with 78.4% (n=69) female students and 21.5% (n=19) male students.

The participants were given an upfront material regarding the social context of mental health and mental disorders. In responding to the material, the participants were asked to answer an online survey. The survey consists of two open-ended questions, "*Coba kamu refleksikan keseimbangan biopsikososial dalam hidupmu. Apa yang mempromosikan kesehatan mentalmu dan apa yang mengancamnya*", translated to English "Try to reflect on the balance of biopsychosocial factors in your life. What do you think promotes your mental health and what threatens it?". The answers were retrieved through an online study portal.

The retrieved data were analyzed using a thematic coding analysis with a deductive approach. The data on each theme are visualized in the form of descriptive statistics which are frequencies and percentages. The researchers applied the stages of data analysis by Sokang, Westmaas, and Kok (2019) which consist of, a) Data coding; b) Themes identification; and c) Themes

evaluation between researchers. Finally, the coded data will be visualized through a diagram visualization.

Results

The retrieved data were categorized into five main themes. All themes were based on the biopsychosocial paradigm which is a) Biological; b) Psychological; c) Family; d) Social; and e) Environment dimensions. The results show the main themes for each dimension and sub-themes for each main theme if it's applicable.

Table.1
Promoting factors of mental health

Dimension	Main Themes	n	%	Examples
Biological	Lifestyle	49	51.57	Eat nutritious foods, workout, rest
	Physical health	46	48.42	Good health, completeness of body parts, absence of illness
Psychological	Positive character	65	56.03	Confident, self-esteem, positive thinking
	Positive coping	23	19.82	The ability to solve a problem, good coping stress, self-control
	Self-help	13	11.20	Journaling, meditation, traveling
	Resilience	5	4.31	Resilience within a conflict, revive, reparation
	Absence of negative emotions	4	3.44	Doesn't feel stressed, have not many thoughts, doesn't feel afraid or disappointed
	Life values	3	2.58	Stoicism, understanding one's value
	Professional help	3	2.58	Psychotherapy, go to a psychiatrist
Family	Family support	39	48.14	Freedom of choice from parents, supportive parents, social support from family
	Family bond	30	37.03	Harmonious family, positive relationships
	Family members	10	12.34	Completeness of family members
	Financial stability	2	2.46	Financial stability, economically sufficient
Social	Support systems	81	82.65	Supportive friends, tight relationships with friends, social relations
	Meaningful social role	14	14.28	Have important roles in a community, involved in a church community
	Social skills	3	3.06	The ability to adapt, build boundaries in friendships, always be friendly
Environmental	Good neighborhood	57	81.42	Security, comfortable environment, hospitality
	Access of basic rights	13	18.57	Access to help, Easy access to positive entertainment, adequate facilities
New Emerging Themes	Productivity	5	100	Able to do various activities, mobility, productive
	Spirituality	1	100	Religious

Biological factors. The participants perceived lifestyle (51.57%) as a promotive factor in the biological dimension. This theme consists of behaviors that promote health.

Healthy eating habits (*Pola makan yang sehat*).

Workout (*Olahraga*).

Adequate rest (*Istirahat yang cukup*).

Physical health (48.42%) is also a promotive factor in the biological dimension. Physical health can be seen with the absence of illness, completeness of body features, and good health.

Born with good physical health (*Terlahir dengan kesehatan fisik yang baik*).

Complete body features (*Anggota tubuh yang lengkap*)

Don't get diagnosed with any illness (*Tidak terdiagnosis penyakit*).

Psychological factors. One of the promotive factors for mental health is having positive character (56.03%) is a part of the psychological dimension that is commonly mentioned by the participants.

Feeling confident (*Merasa percaya diri*).

Believe in yourself (*Percaya kepada diri sendiri*).

Optimistic (*Optimis*).

Self-esteem (*Harga diri*).

Many of the participants perceived positive coping (19.82%) may promote mental health. This theme covers the ability to solve a problem.

Able to finish a problem (*Mampu menyelesaikan masalah*).

In conquering a problem, did not use egocentric view (*Tidak menggunakan ego dalam mengatasi masalah*).

Patience in facing a problem (*Sabar dalam menghadapi masalah*).

Positive coping mechanism (*Coping-mechanism yang positif*).

Family-related factors. The researchers saw an interesting finding of the theme "Family Members" consisting of completeness of family members (12.34%). This means if a family consists of a father, a mother, and other family members, it would promote individuals' mental health. Complete parents (*Orang tua yang lengkap*).

Have complete family members (*Anggota keluarga yang lengkap*).

Have a complete family of father, mother, and sibling (*Memiliki keluarga yang lengkap dari ayah, ibu, dan adik*).

This is a unique factor as it differs from the definition of health promotions from Europeans which consists of behaviors and lifestyles, income, social status, education, employment, access to appropriate health services, and the physical environment (Lehtinen, Riikonen, Lahtinen, 1997). Other than that, family support (48.14%) consists of various forms of support the participants may perceive as promoting mental health.

Freedom of choice in future plans (*Kebebasan rencana masa depan*).

Social support from family that made me go through the day with a spirit (*Dukungan sosial dari keluarga yang membuat saya menjalani hari dengan semangat*).

Supportive (*Supportif*).

Lastly, family bond (37.03%) was perceived to be promoting mental health. This theme covers the positive dynamic of the family's relationship.

Intimate (*Akrab*).

A good attachment with parents (*Kelekatan dengan orang tua yang baik*).

Have quality time together (*Memiliki quality time bersama*).

Social factors. Support systems (82.65%) emerge as a major promoting factor according to the participants. Supportive friends, having social relations, and tight relationships with friends are identified as the components of support systems.

Supportive friend (*Teman yang supportif*).

Good working environment (*Lingkungan pekerjaan yang baik*).

Have a religious community (*Memiliki komunitas rohani*).

Support systems in the social factors work as a spectrum. The system that works as a support system started from the inner circle of friends and significant others, continues to the people in their neighborhood, leads to the existence of various communities (workplace, school, and hobbies), and finishes in cyberspace. The factors can be seen through the availability of the people and the quality of relationships which are the emotions developed within those relationships.

Environmental factors. Good neighborhood (81.42%) was commonly identified as the promotor of mental health among the participants. The theme covers the quality of the neighborhood, hygiene, and psychological affection in the neighborhood.

Don't feel threatened (*Tidak merasa terancam*).

Have a comfortable environment (*Memiliki lingkungan yang nyaman*).

Helping each other (*Tolong menolong*).

Access of basic rights (18.57%) is another promotive factor in the environmental dimension. The theme consists of access to primary, secondary, and tertiary human rights.

Access to help-care (*Akses terhadap pertolongan*).

Access to education (*Akses terhadap pendidikan*).

Adequate facilities (*Fasilitas memadai*).

Tabel 2.
Risk factors of mental health

Dimens ion	Main Themes	n	%	Sub-themes	n	%	Examples
Biologi cal	Illness	37	48.68				Feeling sick, injured, lack of nutrition
	Genetics	22	31.88				Hereditary diseases
	Lifestyle	16	21.05				Smoking, unhealthy sleeping schedule, restless, unhealthy eating habits
	Periodical disturbance	1	1.31				Menstrual disturbance due to stress
Psycho logical	Distress	36	52.17				Distress
	Negative character	15	21.73				Pessimistic, low self-esteem, anxious
	Negative coping	8	11.59				Unable to solve a problem
	Mental health problem	5	7.24				Unmeaningful life
	Lack of emotion regulation	3	4.34				Repressing emotions
Family	Family conflicts	47	71.21	Domestic violence	30	63.8	Unsupportive parent
				Conflict of relationship	11	23.4	Violence
				Communication conflict	5	10.6	Bad communication pattern
				Trauma	1	2.1	Trauma
	Poor parenting	17	25.75	Pressure and demands	9	52.9	Picking favorites, different values

			Values differentiation	8	47	culture oriented
Social	Financial strain	2	3.03			Financially unstable
	Lack of conflict management	20	32.25			Rejected, betrayed, ignorant of each other
	Covert destructive behavior	18	29.03			Trauma, isolation, fear of socializing
	Overt destructive behavior	13	20.96			Bullying, sexual harassment, power abuse
	Lack of social skills	11	17.74			Difficult to adapt, separation
Environmental	Environmental disaster	15	34.88			Global warming, natural disasters, pollution
	Lack of safe space	12	27.90			Crime, war, racism
	Poor neighborhood	8	18.60			Nosy neighbors, loud neighborhood, toxic environment
	Lack of hygiene	5	11.62			Dirty environment
	Macroeconomy challenges	2	4.65			Unemployment
	Disruptive challenges	1	2.32			Technology development that affects personal space

Biological factors. Illness (48.68%) is perceived as a risk factor for mental health among the participants. The theme illness consists of the diagnosis of physical disorders, feeling sick, or any physical impairment.

Low blood pressure (*Darah rendah*).

Injured (*Cedera*).

Cholesterol relapse (*Kolesterol yang kambuh*).

Genetics (31.88%) is another theme of the risk factors of mental health. The theme consists of hereditary illness or certain features.

A risk in inheriting diabetes (*Resiko terkena diabetes karena keturunan*).

An inherited fat body (*Badan yang gemuk karena keturunan*).

Lifestyle (21.05%) is a commonly perceived risk factor by the participants. The theme consists of destructive behavior.

Smoking (*Merokok*).

Lack of rest (*Kurang istirahat*).

Eat unhealthy foods (*Makan makanan tidak sehat*).

Psychological factors. Distress (52.17) is perceived as a risk factor for mental health among the participants. The theme consists of stress or stressors.

Stress (*Stres*).

Feeling fatigued (*Merasa kelelahan*).

Feeling worried about the future (*Khawatir akan masa depan*).

Negative character (21.73%) is also perceived as a risk factor in the psychological dimension. The theme consists of negative characters an individual may possess.

Pessimistic (*Pesimis*).

Low self-esteem (*Rendah diri*).

Anxious (*Cemas*).

Finally, negative coping (11.59%) is perceived as a risk factor as it consists of negative approaches to problem-solving.

Unable to face a problem (*Ketidakmampuan untuk mengatasi masalah*).

The habit to run from a problem (*Kebiasaan lari dari masalah*).

Family-related factors. The collected data shows that family conflicts (71.21%) are commonly written down by the participants. The theme of family conflict was very complex and so it consists of four sub-themes, a) conflict of relationship, b) domestic violence, c) communication conflict, and d) trauma.

Domestic violence (63.8%) consists of violence among family members.

Verbal abuse (*Kekerasan verbal*).

Parents experiencing abuse (*Orang tua mengalami kekerasan*).

Conflict of relationships (23.4%) consists of disruption in the family relationship.

Unsupportive parents (*Orang tua tidak mendukung*).

Parents that don't get along (*Orang tua tidak akur*).

Communication conflicts (10.6%) consist of bad communication patterns.

Communicating with high tone (*Berbicara dengan nada tinggi*).

Bad communication (*Komunikasi yang buruk*).

Trauma (2.1%) is an independent theme the participant did not elaborate on the cause of trauma. However, the researchers are persistent in including the data as trauma is a cause of conflict.

The theme of poor parenting also consists of two sub-themes which are, a) pressure and demands (52.9%), and b) Values differentiation (47%). Most of the participants wrote down being pressurized and child comparisons commonly happen in their families.

Different affection expression (*Pembagian kasih sayang yang berbeda*).

One way interaction (*Interaksi yang satu arah*).

Pressure from family that made me afraid of failures (*Tekanan dari keluarga yang membuat takut mengalami kegagalan*).

The different values between parent and child may be the source of various problems within a family, nonetheless affecting the mental health state.

Different values in facing something (*Perbedaan value terhadap suatu hal*).

Different opinions and parenting style (*Perbedaan pendapat dan pola asuh*).

Social factors. Lack of conflict management is perceived to be a risk factor for mental health. This theme consists of conflicts, negative ways to approach conflicts, and failure in managing conflicts.

Ignorant toward each other (*Tidak peduli satu sama lain*).

Bad friendship (*Pertemanan yang kurang baik*).

Judging within a friendship (*Judging dalam pertemanan*).

Destructive behavior is separated into two themes, which are overt destructive behavior and covert destructive behavior. The theme was based on the four categories of conduct problems by Frick et al. (1993). Covert destructive behavior (29.03%) consists of destructive behaviors that are not visible.

Fear of making relations (*Ketakutan untuk berelasi*).

Self-isolation (*Mengisolasi diri*).

Tendencies to fulfill a specific social status (*Tendensi memenuhi status sosial tertentu*).

Overt destructive behavior (20.96%) consists of visible destructive behaviors.

Sexual harassment (*Pelecehan seksual*).

Power abuse from various parties (*Power abuse dari berbagai pihak*).

Bullying (*Bullying*).

Environmental factors. Environmental disaster (34.88%) is a theme that covers natural disasters. The data varied from global warming, floods, and weather changes. Lack of safe space (27.90%) is a theme that consists of conflicts that implies the feeling unsafe in various spaces due to conflicts.

Stereotype (*Stereotipe*).

Racism (*Rasisme*).

Criminality and violence (*Kejahatan dan kekerasan*).

Poor neighborhood (18.60%) is perceived to affect individuals' mental health. This theme consists of negative affection within a neighborhood, conflicts, and certain neighborhood features.

Nosy neighbors that tend to interfere with other people's business (*Tetangga yang suka ikut campur dalam urusan orang lain*).

Don't feel comfortable with the neighbors (*Tidak merasa nyaman dengan tetangga*).

A noisy neighborhood that makes it so hard to focus (*Lingkungan yang berisik yang membuat susah fokus*).

Discussion

This study aims to explore the promoting and risk factors of mental health through the lens of the biopsychosocial paradigm. The biopsychosocial paradigm is a proposal to view health as surpassing the biochemical markers (Engel, 1977). The findings in this study enhanced the importance of biopsychosocial assessment in understanding mental health, as social, family, and environment play a huge role in promoting mental health. Previously, it was found that social and parental trauma were determinants of public mental health in Asia (Rachel, 2022). A negative parenting style may lead to negative attachment and a higher incapability of emotion regulation, it even reinforces destructive behavioral problems (Fazel, Reed, Panter-Brick, Stein, 2012). Helliwell and Putnam (2004) in Tost, Champagne, and Meyer (2015) confirm that human cooperation and collective prosocial behaviors may increase an individual's wellbeing. One of the explanations for that statement is social connection and support influence cognitive and emotional appraisal and decrease any negative physiological stress response (Seeman & McEwen, 1996). These findings correlate with Indonesians as the nation is community-driven (Dasgupta & Beard, 2007). This study confirms that social, family, and environmental factors contribute to achieving and maintaining mental health, especially in the country of Indonesia.

Initially, the researcher saw a graph of the interrelations of different systems in the social dimension that developed the promotive and risk factors of mental health (Graph 1.). This study eventually sees the influencing factors of mental health come from the dynamic interactions of individuals with the various layers of the environment. Based on the collected data, the dynamic comes from five layers which are, a) Self; b) Inner friends and family circle; c) Neighborhood; d) Community; e) Cyberspace (Graph 1).

Based on the findings in this study, mental health is a multidimensional component influenced by the interrelationships of biological, psychological, social, and environmental dimensions. Acknowledging the promotive and risk factors of mental health in Indonesia is necessary as it is not completely similar to other countries. Maddah et al. (2020) stated that Lebanon has life skills and management, goal setting, and practice of physical exercises as the promoting factors, despite the same factor of lifestyle in Indonesia, the concept of food and nutrition differs. Lebanon people separate between low-calorie and high-calorie food, whilst the participants in this study who are Indonesians view the consumption of food in one general understanding of the nutritional values (Maddah et al., 2020). Various countries enhance the importance of physical maintenance to promote mental health. Velten, Bieda, and Scholten (2018)

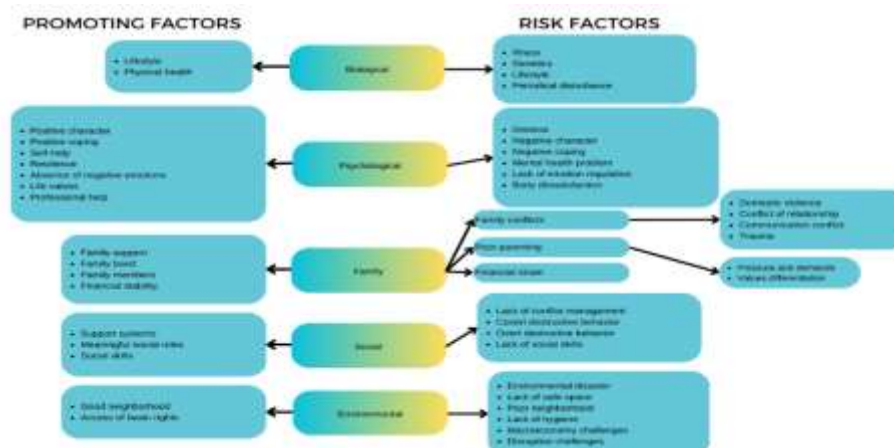
stated that higher frequencies of physical activity are baselines for positive mental health in German and Chinese students. Similarly, Australians and Indians perceived that higher personal physical activities may increase mental health (Usher & Curran, 2017; Jhunjunwala, Das, Mhatre, Thukral, Aggarwal, 2020). It became interesting that many promoting factors were based on individual projection and behavior, whilst this study finds the dynamic of social and environmental interactions can promote mental health or hinders it.

Figure 1.
The interrelationship of biopsychosocial factors



This study confirms The World Health Organization's report of South-East Asia's mental health status that being bullied may risk the mental health of Indonesians and a high level of parental engagement may promote mental health (WHO, 2017). In other words, social and familial dynamics may promote or hinders mental health. This concludes that the differentiation of geographical and cultural values may influence a nation's promoting and risk factors for mental health. Willenberg et al (2020) did an assessment of mental health determinants among adolescents in Indonesia. This study confirms the findings of individual, peers, family, school, social media, and community layers of factors in the assessment of Willenberg et al (2020). Nevertheless, this study found a newly emerging theme of productivity as a promotive factor of mental health. It is understood that the ability to conduct any activities, mobility, and productive activities are beneficial in promoting mental health.

Figure 2.
Promoting and risk factors of mental health among Indonesian undergraduate psychology students



Finally, this study provides some promoting and risk factors for mental health in Indonesia. The researcher acknowledges that the data in this study don't merely represent all promoting and risk factors of mental health in Indonesia. However, this study may capture a glimpse of some challenges the nation's currently facing and community assets that may be empowered to achieve and maintain mental health. Graph 2 depicts the whole promoting and risk factors of mental health among Indonesian undergraduate students. The researchers suggest further measurement of promoting and risk factors of mental health among other multicultural groups in Indonesia. This way may contribute to the development of contextualized mental health promotive and preventive program that is applicable to Indonesians.

Conclusion

The biopsychosocial paradigm provides a thorough assessment of mental health from the biological, psychological, social, and environmental dimensions. The collected data shows that social and environmental interactions may promote or hinder mental health. The findings in this research imply that mental health is a spectrum that is influenced by the interrelationships of the biopsychosocial dimensions. Therefore, contextualized promotive and preventive programs may be achieved by considering each biopsychosocial factor in a community's mental health.

Acknowledgment

The researchers would like to acknowledge Anita Novianty, M.A. for her assistance in preparing, conducting, and writing this research report.

References

- Damsgaard, J. B., & Angel, S. (2021). Living a meaningful life while struggling with mental health: Challenging aspects regarding personal recovery encountered in the mental health system. *International Journal of Environmental Research and Public Health*, 18(5), 2708.
- Dasgupta, A., & Beard, V. A. (2007). Community driven development, collective action and elite capture in Indonesia. *Development and Change*, 38(2), 229–249. <https://doi.org/10.1111/j.1467-7660.2007.00410.x>
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196, 129–136.
- Fazel, M. R.-B. (2012). Mental health of displaced and refugee children resettled in high-income countries: risk and protective factors. *The Lancet*, 379(9812), 266–282.
- Frick, P. J., Lahey, B. B., Loeber, R., Tannenbaum, L., Van Horn, Y., Christ, M. A. G., Hart, E. A., & Hanson, K. (1993). Oppositional defiant disorder and conduct disorder: A meta-analytic review of factor analyses and cross-validation in a clinic sample. *Clinical Psychology Review*, 13(4), 319–340. [https://doi.org/https://doi.org/10.1016/0272-7358\(93\)90016-F](https://doi.org/https://doi.org/10.1016/0272-7358(93)90016-F)
- Handerer, F., Kinderman, P., Timmermann, C., & Tai, S. (2020). How did mental health become so biomedical? The progressive erosion of social determinants in historical psychiatric admission registers. *History of Psychiatry*, 32(1), 37–51.
- Hidayat, M. T., Oster, C., Muir-Cochrane, E., & Lawn, S. (2023). Indonesia free from pasung: a policy analysis. *International Journal of Mental Health Systems*, 17(1).

- Jhunjhunwala, S., Das, S., Mhatre, S., Thukral, T., & Aggarwal, T. (2020). Factors affecting the mental health in children and adults. *International Journal of Creative Research Thoughts* , 8(6), 2493–2504.
- Lehtinen, V., Riikonen, E., & Lahtinen, E. (1997). Promotion of mental health on the European agenda (Helsinki: STAKES). National Research and Development Centre for Welfare and Health.
- Maddah, D., Kabakian-Khasholian, T., Zeidan, R. K., Elsaady, N., Alami, N. H., & Salameh, P. (n.d.). Health behaviors, life skills, mental health, and demographic factors associated with mental health among university students in a developing country. *Research Square*. <https://doi.org/https://doi.org/10.21203/rs.3.rs-60870/v1>
- Mulya, T. W. (2021). Kontestasi diskursif di balik konsep dan praktik kesehatan mental: Kekuasaan, kolonialisme, dan kapitalisme. In *Kesehatan Jiwa dan Resolusi Pascapandemi di Indonesia* (pp. 701–723). HIMPSI.
- Rocca, E., & Anjum, R. L. (2020). Complexity, reductionism and the biomedical model. In *Springer eBooks* . https://doi.org/https://doi.org/10.1007/978-3-030-41239-5_5
- Seeman, T. E., & McEwen, B. S. (1996). Impact of social environment characteristics on neuroendocrine regulation. *Psychosomatic Medicine*, 459–471.
- Sokang, Y. A., Westmaas, A. H., & Kok, G. (2019). From physical to spiritual: A qualitative study of Jakartans health & sickness. *International Journal of Environmental Research and Public Health*, 16(19). <https://doi.org/10.3390/ijerph16193564>
- Tost, H., Champagne, F. A., & Meyer-Lindenberg, A. (2015). Environmental influence in the brain, human welfare and mental health. *Nature Neuroscience*, 18(10), 1421–1431. <https://doi.org/10.1038/nn.4108>
- Usher, W., & Curran, C. (2017). Predicting Australia’s university students’ mental health status. *Health Promotion International*. <https://doi.org/10.1093/heapro/dax091>
- Velten, J., Bieda, A., Scholten, S., Wannemüller, A., & Margraf, J. (2018). Lifestyle choices and mental health: a longitudinal survey with German and Chinese students. *BMC Public Health* , 18, 632. <https://doi.org/https://doi.org/10.1186/s12889-018-5526-2>
- Willenberg, L., Wulan, N., Medise, B. E.,
- Devaera, Y., Riyanti, A., Ansariadi, A., Wiguna, T., Kaligis, F., Fisher, J., Luchters, S., Jameel, A., Sawyer, S. M., Tran, T., Kennedy, E., Patton, G. C., Wiweko, B., & Azzopardi, P. S. (2020). Understanding mental health and its determinants from the perspective of adolescents: A qualitative study across diverse social settings in Indonesia. *Asian Journal of Psychiatry*, 52. <https://doi.org/10.1016/j.ajp.2020.102148>
- World Health Organization Regional Office for South-East Asia. (2017). Mental health status of adolescents in South-East Asia: evidence for action. <https://apps.who.int/iris/handle/10665/254982>