Older Sibling or Younger Sibling? The Dynamics of Self-Confidence and Emotional Stability Among University Students in Wetland Communities

Muhammad Andri Setiawan[1], Nina Permata Sari[2], Hendro Yulius Suryo Putro[3], Andry Ananda Putra Tanggu Mara[4]

Guidance and Counseling Department, Faculty of Teacher Training and Education, Universitas Lambung Mangkurat, Indonesia[1]
Guidance and Counseling Department, Faculty of Teacher Training and Education, Universitas Lambung Mangkurat, Indonesia[2]
Guidance and Counseling Department, Faculty of Teacher Training and Education, Universitas Lambung Mangkurat, Indonesia[3]
Guidance and Counseling Department, Faculty of Teacher Training and Education, Universitas Lambung Mangkurat, Indonesia [4]
E-mail: andri.bk@ulm.ac.id[1], nina.bk@ulm.ac.id[2], hendro.putro@ulm.ac.id[3,] Andry.tanggumara23@gmail.com[4]
Correspondent Author: Muhammad Andri Setiawan, andri.bk@ulm.ac.id
Doi: 10.31316/g-couns.v10i01.8381

Abstrack

This study investigates the impact of birth order on self-confidence and emotional stability among university students residing in wetland communities. Using a quantitative survey design, 200 students, comprising 100 firstborns and 100 lastborns, from Lambung Mangkurat University were assessed using the Edwards Personal Preference Schedule (EPPS). Descriptive statistics, Mann-Whitney tests, and Structural Equation Modelling (SEM) were used to analyze the data. Results indicated that firstborn students exhibited significantly higher self-confidence (M = 3.57, SD = 1.26) and emotional stability (M = 3.43, SD = 1.26) than lastborns (p < .05). Family expectations and academic experiences emerged as key influences. SEM revealed that self-confidence strongly predicts emotional stability (β = 0.52, p < .001), with family background and educational experience having moderate effects. The findings underscore the psychological challenges faced by students in geographically isolated, resource-limited wetland environments. Tailored counseling interventions are recommended, particularly for lastborn students. Future research should investigate the intersection of cross-cultural and environmental factors.

Keywords: self-confidence, emotional stability, birth order, wetland communities, Edwards Personal Preference Schedule (EPPS)

Abstrak

Penelitian ini mengkaji pengaruh urutan kelahiran terhadap kepercayaan diri dan stabilitas emosi pada mahasiswa di komunitas lahan basah. Dengan desain survei kuantitatif, 200 mahasiswa—100 anak sulung dan 100 anak bungsu—dari Universitas Lambung Mangkurat dinilai menggunakan Edwards Personal Preference Schedule (EPPS). Statistik deskriptif, uji Mann-Whitney, dan Structural Equation Modeling (SEM) digunakan untuk menganalisis data. Hasil menunjukkan mahasiswa anak sulung memiliki kepercayaan diri (M = 3,57, SD = 1,26) dan stabilitas emosi (M = 3,43, SD = 1,26) yang lebih tinggi secara signifikan dibandingkan anak bungsu (p < 0,05). Harapan keluarga dan pengalaman akademik menjadi pengaruh utama. SEM mengungkapkan kepercayaan diri memprediksi stabilitas emosi secara kuat (β = 0,52, p < 0,001), dengan latar belakang keluarga dan pengalaman akademik berpengaruh sedang. Temuan ini menyoroti tantangan psikologis mahasiswa di lingkungan lahan basah yang terisolasi dan terbatas sumber daya. Disarankan intervensi konseling khusus bagi anak bungsu.

Kata kunci: kepercayaan diri, stabilitas emosional, urutan kelahiran, komunitas lahan basah, Edwards Personal Preference Schedule (EPPS)

INTRODUCTION

Wetland communities present complex social dynamics for university students, influenced by various psychological factors, including self-confidence and emotional stability (Yang et al., 2022). In this context, the terms 'older sibling' and 'younger sibling' refer to birth order within the family, which can affect social interactions, personal development, and academic performance (Pantshwa & Buschke, 2019). University students who are firstborns or 'older siblings' are expected to exhibit leadership and assertiveness. In comparison, those who are lastborns or 'younger siblings' tend to follow and learn from the experiences of others around them (Najeri & Syahrin, 2024).

However, reality shows that not all students who hold the position of an older sibling in the birth order possess high self-confidence or strong emotional stability (Al-Masri & Ma'abreh, 2020). Conversely, some students who are younger siblings in their families exhibit better self-confidence and emotional stability(Onipko, 2021). This phenomenon highlights the gap between societal expectations regarding family roles and the psychological realities of individuals (Chiang et al., 2019). To understand the factors influencing self-confidence and emotional stability in wetland communities, the Edwards Personal Preference Schedule (EPPS) instrument is utilized (Maund et al., 2019). This tool helps explore aspects such as dominance, independence, and affiliation, which contribute to the development of self-confidence and emotional stability among university students within the context of family roles (Halian et al., 2022).

Theories of social psychology and personal development suggest that interactions within close-knit communities can significantly influence an individual's self-confidence and emotional stability (Chiang et al., 2019). Recent studies emphasize that social environmental factors, peer support, and experiences of interacting in various roles within a community can significantly influence an individual's psychological dynamics (Al-Masri & Ma'abreh, 2020). Therefore, the EPPS is employed in this study to understand the personality patterns of university students and how specific psychological factors contribute to their social dynamics and emotional balance (Maund et al., 2019).

This study is designed to address three main research questions: 1) How do the levels of self-confidence and emotional stability of firstborn university students compare to those of lastborn university students in wetland communities? 2) Are there significant differences in self-confidence and emotional stability between firstborn and lastborn university students in wetland communities? 3) What are the causal relationships between self-confidence, emotional stability, family background, and academic experiences among university students in wetland communities?

This study aims to analyze differences in confidence levels and emotional stability between first-born and youngest students living in wetland communities. This study aims to investigate how factors such as birth order, family background, and academic experience influence the psychological dynamics of students in environments with limited resources and unique social characteristics. In addition, this study also seeks to map the causal relationship between self-confidence, emotional stability, family background, and academic experience through the Structural Equation Modeling (SEM) approach to comprehensively understand the contribution of each variable to the psychological balance of students.

The novelty of this research lies in the socio-ecological context raised, namely wetland communities that are rarely the focus of educational psychology and counseling. Previous research has discussed chiefly the influence of birth order in the context of urban or general families, while this study combines factors of geographical environment,

resource limitations, and social dynamics typical of wetland communities in analyzing students' confidence and emotional stability. In addition, the use of the Edwards Personal Preference Schedule (EPPS) integrated with Structural Equation Modelling (SEM) analysis provides a stronger and more in-depth methodological approach to understanding the causal relationships between psychological variables in this unique population.

METHOD

This study employs a quantitative approach with a survey design to explore the relationship between students' birth order in wetland communities and their levels of self-confidence and emotional stability. The research subjects consist of 200 students from Lambung Mangkurat University in Banjarmasin, divided into two groups based on birth order: 100 firstborn respondents and 100 lastborn respondents. The sampling technique used is purposive sampling, with the criterion being students actively engaged in wetland communities.

The instrument used in this study is the Edwards Personal Preference Schedule (EPPS), designed to measure 15 personality variables related to individual psychological needs. The EPPS was chosen for its high validity and reliability in identifying personality tendencies relevant to this research (Fahmi et al., 2021). This instrument consists of structured items designed to measure various personality dimensions, including achievement, affiliation, dominance, and others (Sesari et al., 2019). The table below summarizes the personality variables measured in the EPPS along with the number of items for each:

Table 1.
Personality variables according to EPPS

No.	Personality Variable	Number of Items
1.	Achievement	15
2.	Deference	15
3.	Order	15
4.	Exhibition	15
5.	Autonomy	15
6.	Affiliation	15
7.	Intraception	15
8.	Succorance	15
9.	Dominance	15
10.	Abasement	15
11.	Nurturance	15
12.	Change	15
13.	Endurance	15
14.	Heterosexuality	15
15.	Aggression	15

The data collection procedure was conducted through the distribution of questionnaires in a supervised offline session, similar to the administration of typical psychological testing instruments. Participants were instructed to complete the EPPS instrument following the provided guidelines. The collected data were then analyzed to obtain an overall description and identify significant differences between the groups.

The data was analyzed using descriptive statistics to provide an overview of the students' levels of self-confidence and emotional stability. Subsequently, the Mann-Whitney test was used to identify significant differences between the firstborn and lastborn groups in terms of self-confidence and emotional stability. Further analysis was conducted using Structural Equation Modelling (SEM) to evaluate the complex relationships between the psychological factors measured by the EPPS and their impact on students' self-confidence and emotional stability. SEM was chosen for its ability to simultaneously analyze causal relationships among variables and provide a more accurate modelling of the research data.

RESULT AND DISCUSSION
Descriptive Statistics of Self-Confidence and Emotional Stability

The findings of this study reveal the dynamics of self-confidence and emotional stability among students in wetland communities based on birth order. Firstborn students tend to demonstrate higher levels of self-confidence and emotional stability compared to their lastborn counterparts. Statistical analysis indicates that family background and academic experiences have a significant influence on both variables, as measured by the Edwards Personal Preference Schedule (EPPS). The EPPS identifies key psychological needs, such as the need for achievement and self-control, which play a crucial role in shaping students' self-confidence and emotional stability (Sesari et al., 2019). For further explanation, Table 1 below provides a detailed statistical description of self-confidence and emotional stability among students, categorised by birth order. This data illustrates how firstborn and lastborn students differ in these two variables, offering strong evidence of the critical role of social environment and life experiences in shaping their psychological development.
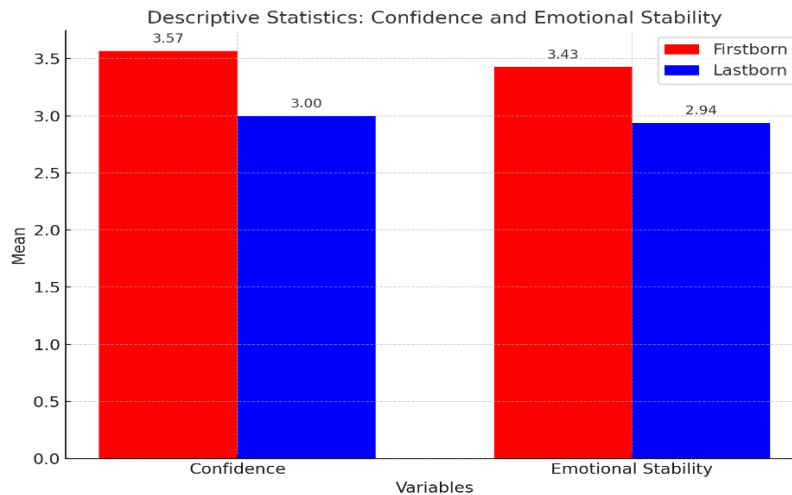
Table 2.
Descriptive Statistics of Self-Confidence and Emotional Stability

Variable	Group	N	Mean	Std. Deviasi	Min	Max
Self-Confidence	Firstborn	100	3.57	1.26	1.00	5.00
	Lastborn	100	3.00	1.37	1.00	5.00
Emotional Stability	Firstborn	100	3.43	1.26	1.00	5.00
	Lastborn	100	2.94	1.50	1.00	5.00

Table 2 shows that the average self-confidence of firstborn students (M = 3.57, SD = 1.26) is higher than that of lastborn students (M = 3.00, SD = 1.37). The same applies to emotional stability, where firstborn students record a higher average (M = 3.43, SD = 1.26) compared to lastborn students (M = 2.94, SD = 1.50). These differences provide empirical evidence that family dynamics, including higher expectations for firstborns, play a significant role in shaping their self-confidence and emotional stability. Fig. 1 provides a bar chart visualization to reinforce these findings.

G-COUNS: Jurnal Bimbingan dan Konseling
Vol. 10 No. 01, Month January Year 2026
p-ISSN : 2541-6782, e-ISSN : 2580-6467

520

Graph 1.
Comparison of Mean Self-Confidence and Emotional Stability

Graph 1 reinforces that firstborn students have a higher average distribution of self-confidence and emotional stability compared to lastborn students. This aligns with the measurements using the Edwards Personal Preference Schedule (EPPS), which identifies key psychological needs, such as the need for achievement and self-control. Firstborn students tend to meet these needs more consistently due to higher family expectations and the responsibilities they often bear. In contrast, lastborn students exhibit a wider range of scores, which may be influenced by more flexible social roles and lower family expectations.

Further Analysis with the Mann-Whitney Test

To confirm the significant differences between the two groups, the Mann-Whitney test was performed. The results are presented in the following Table 3:
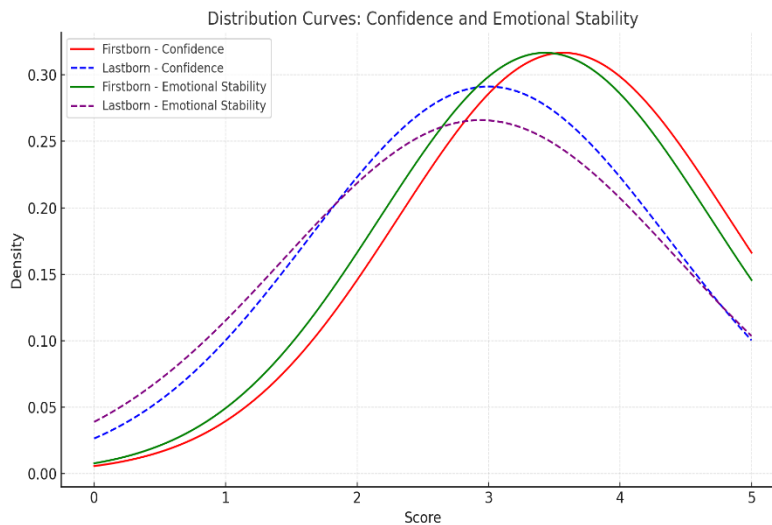
Table 3.
Results of the Mann-Whitney Test for Self-Confidence and Emotional Stability

Variable	Mann-Whitney U	Z-Score	p-value	Conclusion
Self-Confidence	3804.50	-2.991	0.003	Significant (p<0.05)
Emotional Stability	4061.50	-2.347	0.019	Significant (p<0.05)

The results in Table 3 indicate that the differences in self-confidence and emotional stability between firstborn and lastborn students are statistically significant ($p < 0.05$). Firstborn students recorded higher scores for both variables, reflecting the positive influence of family dynamics on the development of their psychological traits. Lastborn students, although showing a wider range of scores, are also influenced by their more flexible social roles within the family. Graph 2 presents a distribution curve that illustrates this pattern.

G-COUNS: Jurnal Bimbingan dan Konseling
Vol. 10 No. 01, Month January Year 2026
p-ISSN : 2541-6782, e-ISSN : 2580-6467

521

Graph 2.
Distribution Curve of Self-Confidence and Emotional Stability

The curve in Graph 2 indicates that the distribution of scores for firstborn students is more consistent compared to that of lastborn students. This more stable distribution reflects a stronger pattern of self-control and better adaptability in firstborn students, as measured through the EPPS. In contrast, lastborn students exhibit a more varied distribution, which may reflect different social experiences and more relaxed family expectations.

Evaluation with SEM Model

As a further analysis, Structural Equation Modeling (SEM) was used to evaluate the causal relationships between variables. The Goodness-of-Fit Indices (GOF) for the SEM model are presented in Table 3.

Table 4.
Goodness-of-Fit Indices for the SEM Model

GOF Indices	Value	Interpretation Criteria
Chi-Square/df	2.45	Below 3, indicating a good fit
CFI	0.95	Above 0.90, indicating a good fit
RMSEA	0.045	Below 0.06, indicating a good fit

The SEM model used demonstrates a good fit with the data. This finding indicates that the relationships between self-confidence, emotional stability, family background, and academic experiences have been accurately modelled through the use of Structural Equation Modelling (SEM). With the Goodness-of-Fit Indices showing a good model fit, SEM provides comprehensive insights into the dynamics of causal relationships between the variables.

Table 5.
Results of SEM Path Analysis

Path	Path Coefficient	p-value	Interpretation
Self-Confidence → Emotional Stability	0.52	< 0.001	Significant (strong relationship)
Family Background → Self-Confidence	0.35	0.002	Significant (moderate relationship)
Academic Experience → Emotional Stability	0.40	< 0.001	Significant (moderate relationship)

Table 5 shows that self-confidence has a strong influence on emotional stability (path coefficient = 0.52). Family background contributes moderately to self-confidence (path coefficient = 0.35), while academic experience contributes moderately to emotional stability (path coefficient = 0.40). These findings underscore the crucial role of psychological variables in fostering students' development. The use of EPPS enables the identification of psychological needs, such as the need for achievement and self-control, which serve as important mediators in these relationships. To visualize these results, Fig. 3 presents the SEM path model.
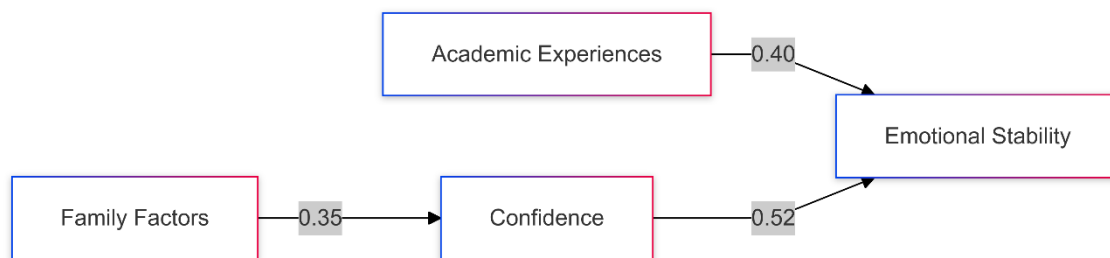

Figure 1. SEM Path Model

Figure 1 illustrates the causal relationships between variables, highlighting how family background influences self-confidence and how self-confidence, along with academic experience, contributes to emotional stability. This visualization helps to understand the students' psychological dynamics comprehensively, based on birth order and the contributions of life experiences.

This study focuses on three main questions to explore the dynamics of self-confidence and emotional stability among students in wetland communities, specifically examining the impact of birth order. These questions are revisited in this section, with answers based on the analysis presented in the previous sections.

RQ1. How do the levels of self-confidence and emotional stability of firstborn university students compare to those of lastborn university students in wetland communities?

The results of the study show that firstborn students have higher self-confidence and emotional stability compared to lastborn students(Premnath et al., 2021). This is based on the greater family expectations placed on firstborns to be role models or leaders (Largado et al., 2024). These expectations encourage them to develop a more confident and stable character when facing academic and social challenges (Fukuya et al., 2021).

In contrast, lastborn students often face more flexible family expectations. This freedom allows them to explore creativity and self-expression more freely (Largado et al., 2024). However, this dynamic can also affect their ability to maintain emotional stability, especially when faced with situations that require significant responsibility and adaptation (Iglesias & García-Martín, 2023). Therefore, lastborn students require a more targeted approach to support their emotional well-being (Fukuya et al., 2021).

Understanding these dynamics is crucial for designing interventions that support the development of self-confidence and emotional stability tailored to the unique needs of each group. Firstborn students tend to exhibit more structured self-control (Fukuya et al., 2021), whereas lastborn students require additional encouragement to achieve consistent emotional stability (Iglesias & García-Martín, 2023).

RQ2. Are there significant differences in self-confidence and emotional stability between firstborn and lastborn university students in wetland communities?

Significant differences in self-confidence and emotional stability between firstborn and lastborn students reflect the critical role of family expectations and social dynamics in shaping their psychological traits (Fukuya et al., 2021). Firstborn students are more consistent in fulfilling key psychological needs, such as the need for achievement and self-control (Iglesias & García-Martín, 2023). This is influenced by the greater responsibilities often associated with their role in the family (Monalisha, 2020).

On the other hand, lastborn students tend to show greater variation in emotional stability and self-confidence (Fukuya et al., 2021). With more relaxed family expectations, they have more space for exploration, but this can also create uncertainty when facing emotional challenges (Iglesias & García-Martín, 2023). This score variation indicates the need for a more adaptive approach to support the development of their character (Mamatha & Shivakumara, 2022).

The score distribution shows that firstborn students have a more stable pattern of emotional regulation compared to lastborn students (Fitniwilis et al., 2022). This consistency reflects their ability to handle pressure more effectively, while lastborn students are more vulnerable to emotional fluctuations due to their more flexible social roles (Mamatha & Shivakumara, 2022).

Interventions specifically designed based on the unique needs of each group will help optimize their potential (Ali et al., 2024). Therefore, higher education institutions can support students in developing better self-confidence and emotional stability, in line with the unique dynamics of wetland communities (Dinter et al., 2022).

RQ3. What are the causal relationships between self-confidence, emotional stability, family background, and academic experiences among university students in wetland communities?

Self-confidence has a strong influence on students' emotional stability (Phil., 2019). Students with high self-confidence tend to be better at managing emotional pressure and challenges (Locaylocay et al., 2024). Family plays a key role in shaping this self-confidence, particularly through emotional support and balanced expectations (Nur'aini et al., 2024).

Academic experience also contributes significantly to emotional stability. A supportive educational environment and positive interactions help students develop adaptation skills and emotional regulation (Chaudhry et al., 2024). The combination of self-confidence, family support, and positive academic experiences forms a crucial

foundation for shaping students' psychological well-being in wetland communities (Pertiwi et al., 2024).

CONCLUSION

This study revealed that differences in birth order affect the confidence level and emotional stability of students in wetland communities. Firstborn students tend to have higher confidence and emotional stability than youngest children due to differences in family responsibilities and expectations. Balanced family support and positive academic experiences have been shown to enhance confidence and emotional management skills. These findings confirm the need for tailored counseling interventions, particularly for the youngest children who are more prone to emotional fluctuations, with an approach that integrates family support and the academic environment to shape students' character and psychological balance optimally.

RFERENCES
Ali, A., Collier, K., & Mayomi, T. (2024). Navigating ADHD in Higher Education: Evaluating Psychosocial Interventions for Student Self-Esteem, Well-Being, and Quality of Life. BJPsych Open. https://doi.org/10.1192/bjo.2024.106

Al-Masri, A., & Ma'abreh, M. (2020). The Relationship Between Emotional Stability and Self-Esteem Among Adolescents (Aged 13-16) in Public Schools in Irbid Qasabah. Journal of Education and Practice. https://doi.org/10.7176/jep/11-15-20

Chaudhry, S., Tandon, A., Shinde, S., & Bhattacharya, A. (2024). Student psychological well-being in higher education: The role of internal team environment, institutional, friends and family support and academic engagement. PLOS ONE, 19. https://doi.org/10.1371/journal.pone.0297508

Chiang, Y., Fang, W., Kaplan, U., & Ng, E. (2019). Locus of Control: The Mediation Effect between Emotional Stability and Pro-Environmental Behavior. Sustainability. https://doi.org/10.3390/SU11030820

Dinter, M., Grässle, S., & Mosenhauer, M. (2022). The Effect of Fragile Self-Esteem on Course Completion in Higher Education. European Journal of Management Issues. https://doi.org/10.15421/192212

Fahmi, E. F. F. El, Khoirot, U., & Astutik, F. (2021). Analisis Psikometri Aitem Need of Agression Tes EPPS pada Remaja Akhir. Psikoislamika : Jurnal Psikologi Dan Psikologi Islam. https://doi.org/10.18860/psikoislamika.v18i2.13814

Fitniwilis, F., Nofriza, F., & Nurulita, E. (2022). Emotional Intelligence of Students Based on Birth Order. Jurnal Neo Konseling. https://doi.org/10.24036/00630kons2022

Fukuya, Y., Fujiwara, T., Isumi, A., Doi, S., & Ochi, M. (2021). Association of Birth Order With Mental Health Problems, Self-Esteem, Resilience, and Happiness Among Children: Results From A-CHILD Study. Frontiers in Psychiatry, 12. https://doi.org/10.3389/fpsyt.2021.638088

Halian, I., Kurova, A., Stepanenko, L., Semenov, O., & Semenova, N. (2022). Comparison analysis of the correlation between emotional stability and mental health parameters in athletes of various skill levels. Revista Amazonia Investiga. https://doi.org/10.34069/ai/2022.54.06.7

Iglesias, M. V., & García-Martín, J. (2023). Birth Order Theory related to Emotional Intelligence development. Revista Fuentes. https://doi.org/10.12795/revistafuentes.2023.20449

Largado, A. M., Gonzales, P. X., Bautista, G. J., & Gabriel, B. Dc. (2024). Implications of Birth Order on Personality and Social Behavior. Cognizance Journal of Multidisciplinary Studies. https://doi.org/10.47760/cognizance.2024.v04i03.012

Locaylocay, S., Aguilar, C., Cabatuan, B., Baccay, K. J., Darvin, M., Echavez, J., Penonia, L., Porol, R. A., Quibrar, J., Suarez, D., Clamares, K., & Pelandas, A. M. (2024). The Role of Self-Esteem and Social Support on Emotional Behavioral Problems Among Grade 12 Students. International Journal of Research and Innovation in Social Science. https://doi.org/10.47772/ijriss.2024.804234

Mamatha, J., & Shivakumara. (2022). The Effect of Birth Order on Emotional Intelligence among Indian Adolescents. https://consensus.app/papers/the-effect-of-birth-order-on-emotional-intelligence-among-mamatha-shivakumara/2f9e5622d2fc5e389fc23f716b363750/

Maund, P., Irvine, K., Reeves, J., Strong, E., Cromie, R., Dallimer, M., & Davies, Z. (2019). Wetlands for Wellbeing: Piloting a Nature-Based Health Intervention for the Management of Anxiety and Depression. International Journal of Environmental Research and Public Health, 16. https://doi.org/10.3390/ijerph16224413

Monalisha, M. (2020). A study on emotional maturity and birth order. https://consensus.app/papers/a-study-on-emotional-maturity-and-birth-order-monalisha/7c0dc8e546735eaf81948bc4e5f186b6/

Najeri, M., & Syahrin, A. (2024). Dynamics of Wetland Conversion and Its Implications for Socio-Cultural Aspects of Communities in Banjar District, Indonesia. International Journal of Social Science and Human Research. https://doi.org/10.47191/ijsshr/v7-i02-41

Nur'aini, A., Wibawa, E. A., & Rijal, F. (2024). The Effect of Self-Efficacy and Family Support toward Self-Confidence of Accounting and Financial Institution Students. Jurnal Pendidikan. https://doi.org/10.33830/jp.v25i2.7581.2024

Onipko, Z. (2021). EXPLORING THE MATURITY LEVEL OF EMOTIONAL STABILITY ON THE EXAMPLE OF THE STUDENTS OF TECHNICAL UNIVERSITY. Habitus. https://doi.org/10.32843/2663-5208.2021.24.2.13

Pantshwa, O., & Buschke, F. (2019). Ecosystem services and ecological degradation of communal wetlands in a South African biodiversity hotspot. Royal Society Open Science, 6. https://doi.org/10.1098/rsos.181770

Pertiwi, M. A., Herdian, H., Wulandari, D. A., & Wahidah, F. (2024). Supportive Families and Self-Compassion: Keys to Alleviating Academic Stress in Thesis-Engaged Undergraduate Students in Indonesia. International Journal of Innovative Research in Multidisciplinary Education. https://doi.org/10.58806/ijirme.2024.v3i3n23

Phil., M. (2019). A Study of Self-concept and Emotional Stability in Students. https://consensus.app/papers/a-study-of-selfconcept-and-emotional-stability-in-students-phil/78d4906f3072542fbda83e931874ee45/

Premnath, P., Aljesira, S., Suthesha, Nowfiya, S., & Abdullah, Z. (2021). Belief about birth order and their reflection in academic performance: a cross sectional study. International Journal Of Community Medicine And Public Health. https://doi.org/10.18203/2394-6040.ijcmph20213539

Sesari, E., Dirgantoro, B., & Setianingsih, C. (2019). Linear Congruential Method for Randomization of Test Item in Computer-Based Psychological Edwards Personal Preference Schedule (EPPS) Test. Journal of Physics: Conference Series, 1201. https://doi.org/10.1088/1742-6596/1201/1/012054

Yang, Y., Cheng, K., Li, K., Ji, Y., & He, X. (2022). Deciphering the diversity patterns and community assembly of rare and abundant bacterial communities in a wetland system. The Science of the Total Environment, 156334. https://doi.org/10.2139/ssrn.4067344