A scientific journal published by
Faculty of Human Ecology

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

The Malaysian Journal of Human Ecology (MJHE) is published by Faculty of Human Ecology, Universiti Putra Malaysia. MJHE is an open-access journal and published once a year, in December. The aim of MJHE is to provide the platform for research paper publication and also for public references, especially in human ecology.

MJHE accepts contribution from all discipline of social sciences such as childhood & adolescent development, adulthood & ageing, family well-being, community development, social psychology, politics & government, philosophy and civilization, consumer well-being, family economics & finance, music & well-being.

MALAYSIAN JOURNAL OF HUMAN ECOLOGY (MJHE)
VOLUME 5 (2), 2024

CONTENTS   Pages

Original Articles

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

BEYOND BEAUTY STANDARDS: EXPLORING BODY IMAGE DISSATISFACTION LITERATURE IN THE CULTURAL CONTEXT IN IRAN

Sahar Heidary [1], Hanina Hamsan [2], Zainal Madon [3], Mariani Mansor [4], Farah Lotfi Kashani[5]

[1,3,4] *Department of Human Development and Family Studies, Faculty of Human Ecology, Universiti Putra Malaysia, Malaysia*

[2] *Department of Social and Development Sciences, Faculty of Human Ecology, Universiti Putra Malaysia, Malaysia*

[5] *Department of Clinical Psychology, Islamic Azad University, Roudehen, Iran*

ABSTRACT

Previous research primarily focused on body dissatisfaction among Iranian women. This paper will review and evaluate studies on body dissatisfaction among both males and females in Iran. Body dissatisfaction in both genders has been linked to poor psychological adjustment, eating disorders, substance abuse, exercise dependence, and other health-related behaviors. Therefore, comprehending the extent of body dissatisfaction and its associated factors is critical.

Method: The review is divided into three sections: body dissatisfaction in children, adolescents, and adults, with a focus on dissatisfaction levels and sociocultural factors. Methodological issues preventing valid conclusions are highlighted.

Results: Current data suggest that Iranian male and female children have similar levels of body dissatisfaction, with the majority demonstrating high body satisfaction. During adolescence, both boys and girls have a mixed desire to lose or gain weight, with little research on the desire for more muscle mass. Adults, regardless of gender, tend to want to lose weight as they age.

Conclusion: Previous studies focused primarily on female issues, emphasizing the need for further research into areas of body dissatisfaction that are relevant to both Iranian males and females. This approach would help us better understand the relationship between body image dissatisfaction and psychological and behavioral issues that people in Iran face at all stages of their lives.

Corresponding author:
Sahar Heidary
Email: saharhyderi@gmail.com

INTRODUCTION

Body image dissatisfaction is a multidimensional issue with sociocultural, psychological, and biological dimensions that intersect across disciplines such as sociology, psychology, and health sciences. Sociological research has demonstrated how societal beauty standards shape individuals' perceptions of their bodies, particularly in a collectivist culture like Iran, where communal norms often influence personal behavior and self-esteem (Grogan, 2021). This paper will primarily focus on the emotional and cognitive aspects of body image dissatisfaction among individuals of all ages in Iran. Studies indicate that a substantial portion of Iranian individuals, irrespective of gender, grapple with discontentment regarding their physical appearance. Nonetheless, prior research has largely concentrated on body dissatisfaction in females, raising questions about the thorough examination and consideration of similar concerns among males (Walker et al., 2018; Shoraka et al., 2019; Bassett-Grunter et al., 2017). By integrating these perspectives, the current review not only explores body image dissatisfaction within the cultural context of Iran but also lays the groundwork for future interdisciplinary studies that address its underlying complexities and consequences.

One of the innovative aspects of this study is its gender-inclusive approach, moving beyond the traditionally female-focused lens of body image research in Iran. By investigating the body image concerns of males alongside females, this study contributes to the growing body of literature that highlights how societal expectations about masculinity and femininity affect individuals differently. For example, boys and men are increasingly subject to pressures for muscularity, as evidenced by Western research linking media exposure to the drive for muscularity (Ahmadi et al. 2018; Garousi et al. 2017), further investigation is needed to understand its association with health risk behaviors such as steroid use, dietary supplements, and exercise dependency. On the other hand, some research has explored the relationship between body dissatisfaction and the desire to lose weight and achieve a thin ideal body for women (Garrusi & Baneshi 2017; Jill Thompson et al. 2020). While these findings remain underexplored in Iran, emerging evidence suggests similar trends, emphasizing the importance of studying these dynamics within the Iranian cultural framework. This inclusive approach ensures a more comprehensive understanding of body image issues across genders.

This article evaluates body image dissatisfaction and sociocultural influences on Iranian males and females. Previous studies have shown conflicting results on body dissatisfaction levels and gender differences. Mixed findings exist on the impact of parents, peers, and media on body image. Inconsistencies are due to variations in surveys, age group samples, failure to differentiate between size and muscularity, and research methodology differences. Societal pressures to meet ideal body standards contribute significantly to body dissatisfaction among Iranian males and females. (Shoraka et al. 2019).

Understanding sociocultural influences on body dissatisfaction in Iran is essential for creating successful prevention and intervention programs. Proactively addressing these pressures can prevent the need for clinical intervention.

Body Dissatisfaction Among Preadolescent and adolescents

Research on body image disturbance in childhood in Iran has primarily focused on girls and their desire for a thinner physique. (Jalali-Farahani et al. 2021), a review of the literature on body dissatisfaction among preadolescents, with a focus on studies that included both boys and girls or only boys. A study in Iran looked at the body image of 10- and 11-year-old boys and girls, and found that twice as many girls preferred a thinner body as boys, particularly among children with a higher BMI. (Garoui, 2014). Several studies have found a strong association between BMI and body dissatisfaction in Iranian children. (Heshmat et al, 2015). The text discusses how boys aged 2 to 18 are more likely to be obese than girls. It emphasizes the importance of boys and girls developing healthier dietary habits and lifestyles during childhood (Taghizadeh et al. 2022). Hatami et al. (2015) examined body image dissatisfaction in 1109 adolescents aged 10 to 18. The study discovered that overweight or obese people frequently perceive themselves as thinner than they are. Higher weights were
.

associated with greater dissatisfaction with body image.

Adolescence brings rapid physical and psychological changes, impacting body dissatisfaction and early body awareness. Such dissatisfaction can lead to health issues like isolation, depression, and unhealthy behaviors. Rostampour et al. (2022) link higher BMI in adolescents with anxiety, depression, and poor body image, emphasizing the need to address mental health in overweight youths. Shoraka et al. (2019) note a shift in Eastern societal views towards smaller female body sizes due to Western media influence, contrasting previous preferences for larger bodies associated with health and fertility. This clash in Iran, influenced by Islamic traditions and Western beauty ideals, has heightened body dissatisfaction, leading to extreme measures like disordered eating and cosmetic procedures (Kalantar-Hormozi et al., 2016; Sahlan et al., 2021).

Prevalence of Body Image Dissatisfaction in Iran

Body image dissatisfaction is a pervasive issue among women in Iran, cutting across various demographic categories and weight classifications. Studies such as Baharvand, Malekshahi, and Mahdiyan (2020) reveal alarmingly high levels of dissatisfaction among Iranian women, with percentages as high as 94.9% for overweight individuals and 91.1% for those classified as obese. Even within the normal BMI range, over half of the

women express dissatisfaction (Alipour et al., 2015). This trend extends to younger demographics, as evidenced by the findings of Baharvand et al. (2020), who observed significant concerns among Iranian schoolgirls, with 84% reporting moderate and 16% reporting severe body image concerns.

Moreover, the prevalence of body image dissatisfaction in Iran is coupled with risks of eating disorders and low self-esteem, as highlighted in studies like Naeimi et al.

(2016). Despite variations in demographic factors such as gender, the overall prevalence of eating disorder risk is substantial, affecting 9.5% of university students surveyed. Poor body image is also widespread, with 34.2% of participants affected, while low self-esteem affects 16% of the population. These findings underscore the urgent need for public health initiatives and therapeutic interventions to promote healthy body perceptions and mitigate the psychological consequences associated with body image dissatisfaction in Iranian society.

Influencing Factors of Body Image Dissatisfaction

Parental influence significantly shapes adolescents' body image dissatisfaction, with cultural nuances affecting the nature of this impact. Kakar et al. (2023) revealed diverse experiences across cultures, where Australians emphasized media pressures, Iranians faced familial pressures, Indians dealt with combined familial and peer pressures, and Chinese adolescents reported balanced pressures. Palmeroni et al. (2021) highlighted identity formation as a crucial mediator between socialization agents' pressures and the internalization of body ideals, with correlations between appearance satisfaction, disordered eating, and sociocultural factors. Sahlan, Akoury, and Taravatrooy (2020) underscored parents' role in internalizing appearance ideals among Iranian college students, with women exhibiting higher thin-ideal internalization and men showing higher athletic internalization. Additionally, familial dynamics influenced higher weight participants, contributing to elevated thin-ideal internalization scores among Iranian college men and women. These findings

underscore the complexity of parental influence and its role in shaping adolescents' body image perceptions across different cultural contexts.

Peers play a significant role in shaping adolescents' body image perceptions and behaviors, a phenomenon evident globally and particularly emphasized in Iran. Hatami et al. (2015) emphasized the impact of peer influence and societal norms on Iranian adolescents' body image perception and dissatisfaction, stressing the need for interventions to consider these influences. Similarly, Garrusi, Garousi, and Baneshi (2013) highlighted the substantial role of peer relationships in shaping adolescents' beliefs and behaviors related to body image, potentially leading to body dissatisfaction. This influence is amplified by the prevalence of body shaming and criticism from peers, as evidenced by Novitasari & Hamid (2021), linking such experiences to emotional distress and unhealthy fixation on body size and appearance. Thus, peer influence, driven by the desire for conformity and social

comparison, emerges as a critical factor in shaping adolescents' body image perceptions and often contributes to dissatisfaction with body image

The influence of traditional and social media on adolescents' perceptions of beauty and body image is profound, with implications both globally and specifically in Iran. Traditional media outlets like magazines and music videos often promote slender body types as the ideal standard, actively shaping individuals' perceptions (Mills, Shannon, & Hogue, 2017). Similarly, the widespread use of social media, particularly among Iranian adolescents, highlights its significant impact on body image and mental health, with concerns such as social media addiction reaching alarming levels (Chegini et al., 2022). This influence extends across genders, affecting women's mental health and men's perceptions of their bodies (Behal & Soni, 2018). Furthermore, the hijab, mandated in Iranian society, plays a pivotal role in defining beauty standards and influencing adolescents' perceptions of beauty and self-image, reflecting religious and societal norms (Sohail et al., 2023; Al-Mutawa et al., 2019).

Gender and Body Image Dissatisfaction

Puberty manifests differently for boys and girls, influencing their perceptions of body image. Girls undergo significant physical changes, including weight gain and alterations in body fat distribution, which may lead to body dissatisfaction exacerbated by media portrayals of the thin ideal (Agam et al., 2015; Aparicio-Martinez et al., 2019). Conversely, boys experience an increase in muscle mass and body size during puberty, aligning with the muscular ideal perpetuated

The portrayal of beauty ideals in mass media further contributes to the internalization of these standards among Iranian adolescents, emphasizing the need for comprehensive interventions to address the negative effects of media on body image perceptions and mental well-being.

Meanwhile, Shahyad et al. (2015) explored the relationship between body image dissatisfaction and self-esteem, thin-ideal internalization, and appearance-related social comparison among 477 Tehran high-school students. The study revealed a direct correlation between body image dissatisfaction and thin-ideal internalization and appearance-related social comparisons. Furthermore, a negative correlation was observed between self-esteem and body image dissatisfaction, with self-esteem explaining 19% of the variance in body image dissatisfaction. These findings underscore the central role of self-esteem in predicting body image dissatisfaction and highlight its significance in preventive measures and interventions aimed at promoting positive body image among adolescents.

in media and cultural notions of masculinity, yet they too may experience body dissatisfaction striving to meet these standards (Agam et al., 2015; Rodgers et al., 2020). Gender disparities in societal norms and biological changes contribute to variations in body dissatisfaction among adolescents. Girls, influenced by societal emphasis on appearance, often internalize unattainable beauty standards, leading to higher levels of dissatisfaction and

disordered eating compared to boys (Vuong et al., 2021). Additionally, biological changes during adolescence may move girls further from the thin ideal while pushing boys closer to the muscular ideal, further contributing to gender differences in body image concerns (Agam et al., 2015; Muhlheim, 2018; Ganson et al., 2022).

Demographic Factors and Body Image Dissatisfaction

The relationship between Body Mass Index (BMI) and body image dissatisfaction is multifaceted, as demonstrated by various studies. Radwan et al. (2019) and Latiff et al. (2018) revealed a significant correlation between perceived BMI, actual BMI, and body image dissatisfaction, indicating the importance of addressing both BMI concerns and body image perceptions for adolescent well-being. Moreover, Sabeti & Gorjian (2013) found that adolescents' satisfaction with their body image positively correlated with perceived body image size and weight status, particularly among overweight and obese adolescents, suggesting an early awareness of body image and weight status among young individuals and highlighting the need for early intervention and support.

Gender and BMI are pivotal factors influencing the prevalence of body image dissatisfaction, especially among primary- school students, as highlighted by Latiff et al. (2018). Females and overweight or obese students are more prone to experiencing body image dissatisfaction, as supported by Garrusi & Baneshi (2017) and Alvani et al. (2016), which affirm a direct association between body image and BMI. However, Yazdani et al. (2018) reported no significant relationship between BMI and adolescent body image, indicating potential variability in findings. Nonetheless, considering both gender and BMI is crucial when addressing body image concerns among adolescents. Studies conducted in Iran and Saudi Arabia further emphasize significant concerns regarding body dissatisfaction and its associations with various demographic factors, underscoring the need for targeted interventions to promote positive body image perceptions and self-esteem among individuals in these cultural contexts.

METHODOLOGY

This study utilized a systematic review approach to synthesize findings from existing literature on body image dissatisfaction in Iran. The PRISMA framework was used to guide the selection and reporting of studies (Moher et al., 2009). Data were gathered from electronic databases such as PubMed, PsycINFO, Scopus, and Google Scholar. Keywords included "body image dissatisfaction," "body dissatisfaction," "Iran," "sociocultural factors," "adolescents," "children," and "adults." Searches were conducted in both English and Persian to capture a comprehensive pool of studies. Articles published between 2000 and 2024 were included, ensuring relevance to contemporary sociocultural dynamics. Studies included were peer-reviewed, conducted on Iranian populations, and focused on body image dissatisfaction or

related psychological and behavioral impacts. Studies excluded were those with non-representative samples, insufficient data on dissatisfaction trends, or focusing on populations outside of Iran. Data extraction was performed independently by two reviewers to ensure accuracy and consistency. Information on study design, sample characteristics, methods, and findings were recorded. Thematic analysis was conducted to identify recurring patterns and themes, particularly concerning age, gender, and sociocultural influences (Braun & Clarke, 2006).

RESULTS AND DISCUSSION

Antifat sentiments and body weight concerns are prevalent among Iranian elementary school students, with antifat sentiments being substantially correlated with BMI in females (Garousi, 2014). Studies suggest that sociocultural influences, such as family attitudes and peer dynamics, begin to shape perceptions of body image in late childhood. For instance, parental emphasis on weight control was identified as a contributing factor in early body dissatisfaction, particularly among girls (Grogan, 2021). Iranian culture, which traditionally places less emphasis on individual appearance during childhood, may explain the relatively high satisfaction levels in this demographic (Shoraka, et al., 2019).

Adolescence is marked by a noticeable increase in body dissatisfaction, driven by societal pressures and exposure to media. Boys increasingly express a desire for muscularity, while girls predominantly wish to lose weight, reflecting traditional gender norms in beauty ideals (Murnen & Karazsia, 2017). For Iranian adolescents, these trends are further complicated by a cultural clash between traditional values and the influence of Western media (Hosseini et al., 2020). Social media platforms, in particular, play a significant role in reinforcing unattainable body standards, exacerbating dissatisfaction (Elmi, 2023).

Adult Iranians report a stronger desire to lose weight, a trend more pronounced in urban areas where modern beauty standards are pervasive (Kakar et al., 2023). Among women, dissatisfaction often stems from societal expectations tied to thinness, while men experience growing pressure to achieve muscular physiques (Grogan, 2016). Additionally, the emphasis on physical appearance in Iranian culture, particularly during significant social events like weddings, contributes to this trend (Hosseini et al., 2020). Across all age groups, sociocultural factors significantly influence body dissatisfaction. Media representations, family attitudes, and peer comparisons emerge as critical drivers (Nikniaz et al., 2016). For example, Iranian media often idealizes thin, fair-skinned women and muscular men, perpetuating unrealistic beauty standards (Das & Raman 2019). Furthermore, collectivist cultural values, which emphasize conformity, may intensify dissatisfaction when individuals perceive themselves as deviating from societal norms.

Body dissatisfaction in Iran is strongly associated with poor psychological

adjustment, including low self-esteem and increased anxiety (Ahadzadeh et al., 2018, Ranjbar et al., 2024). Behavioral consequences, such as disordered eating, substance use, and exercise dependence, are also prevalent (Hosseini et al., 2020). However, these outcomes vary by gender, with women more likely to engage in dieting behaviors and men pursuing excessive physical training to build muscle mass (Ricciardelli & McCabe, 2004). This study highlights the need for interdisciplinary research to address body dissatisfaction comprehensively. Psychological studies can explore individual factors like self-esteem and coping mechanisms, while sociological research investigates cultural norms and media effects.

Public health initiatives should focus on preventing the adverse health behaviors associated with dissatisfaction, such as eating disorders and exercise dependence (Rahme et al., 2023). The review identified significant gaps in the methodological rigor of existing studies. Many lacked representative samples, focusing predominantly on urban populations and excluding rural or marginalized groups. Moreover, most studies relied on cross-sectional designs, limiting insights into the long-term impacts of body dissatisfaction (Moher et al., 2009). Future research should employ longitudinal methods to explore these dynamics over time. Addressing body dissatisfaction requires targeted interventions tailored to specific age groups and genders. For children, educational programs emphasizing body diversity and self-acceptance can be effective. Adolescents may benefit from media literacy campaigns that challenge unrealistic beauty standards, while

adults could be supported through workplace wellness programs promoting healthy lifestyles (Engel et al., 2024).

Policymakers should implement community-wide initiatives to reduce body dissatisfaction, such as regulating advertisements promoting unattainable beauty ideals. Schools and healthcare institutions should incorporate body positivity education into their curricula and services, fostering a healthier and more inclusive societal perspective on body image. To bridge existing gaps, future studies should explore underrepresented populations, such as rural communities, older adults, and individuals with disabilities. Additionally, examining the role of intersectional factors like socioeconomic status, ethnicity, and religion could provide a more nuanced understanding of body dissatisfaction in Iran.

One of the key strengths of this study lies in its ability to bridge the gap in the existing literature by adopting an integrative framework that considers body dissatisfaction across all age groups and both genders within the Iranian cultural context. While previous studies have primarily focused on Iranian women, this research highlights the importance of examining both male and female experiences, thereby expanding the discourse on body dissatisfaction (Makian, 2023). By exploring body image dissatisfaction across the lifespan—from childhood to adulthood—this review provides a more comprehensive understanding of how sociocultural and psychological factors interact to shape body image concerns at different life stages. This

integrative approach is particularly novel in the context of Iran, where such interdisciplinary perspectives remain underexplored (Hosseini et al., 2020).

Furthermore, this study introduces new empirical evidence by synthesizing findings from both Persian and English sources, ensuring a broader representation of the Iranian population. For instance, the analysis of urban versus rural disparities and the influence of Western media versus traditional values adds depth to the understanding of sociocultural determinants (Pursey et al., 2021). Additionally, the review identifies methodological gaps in previous research, such as the lack of studies on muscle mass dissatisfaction in Iranian adolescents, calling for future investigations to explore these overlooked aspects (Ricciardelli & McCabe, 2004). This contribution not only advances theoretical knowledge but also provides a practical foundation for interventions aimed at addressing body dissatisfaction holistically within the Iranian cultural framework.

REFERENCES

Agam, R., Tamir, S., & Golan, M. (2015). Gender differences in respect to self-esteem and body image as well as response to adolescents' school-based prevention programs. Journal of Psychology and Clinical Psychiatry, 2(5), 00092.

Ahadzadeh, A. S., Rafik-Galea, S., Alavi, M., & Amini, M. (2018). Relationship between body mass index, body image, and fear of negative evaluation: Moderating role of self-esteem. *Health psychology open*, *5*(1), 2055102918774251.

Ahmadi, S., Heyrani, A., & Yoosefy, B. (2018). Prevalence of body shape dissatisfaction and body weight dissatisfaction between female and male students. Journal of Physical Education and Sport, 18(4), 2264-2271.

Al Mutawa, N., Bryce, J., Franqueira, V. N., Marrington, A., & Read, J. C. (2019). Behavioural digital forensics model: Embedding behavioural evidence analysis into the investigation of digital crimes. Digital Investigation, 28, 70-82.

ALAhmari, T., Alomar, A. Z., ALBeeybe, J., Asiri, N., ALAjaji, R., ALMasoud, R., & Al-Hazzaa, H. M. (2019). Associations of self-esteem with body mass index and body image among Saudi college-age females. Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity, 24, 1199-1207.

Alipour, B., Abbasalizad Farhangi, M., Dehghan, P., & Alipour, M. (2015). Body image perception and its association with body mass index and nutrient intakes among female college students aged 18–35 years from Tabriz, Iran. Eating and Weight Disorders, 20(4), 465–471. https://doi.org/10.1007/s40519-015-0184-1

Alvani, S. R., Hosseini, S. M. P., & Kimura, L. W. (2016). Relationship between Body Weight and Self-Esteem: A Study of Young Men and Women in Iran. J Obes Overweig 2 (2): 202. doi: 10.15744/2455-7633.2. 202

Aparicio-Martinez, P., Perea-Moreno, A. J., Martinez-Jimenez, M. P., Redel-Macías, M. D., Pagliari, C., & Vaquero-Abellan, M. (2019). Social media, thin-ideal, body dissatisfaction and disordered eating

attitudes: An exploratory analysis. International journal of environmental research and public health, 16(21), 4177.

Baharvand, P., Malekshahi, F., & Mahdiyan, P. (2020). Prevalence of body image concern among schoolgirls aged 12–17 years in Iran. Journal of Education and Health Promotion, 9.

Barnhart, W. R., Sun, H., Lin, Z., Lu, C., Han, X., & He, J. (2022). Integrating the tripartite influence, minority stress, and social comparison theories to explain body image and disordered eating in Chinese sexual minority men and women. Body Image, 43, 95-106.

Bassett-Gunter, R., McEwan, D., & Kamarhie, A. (2017). Physical activity and body image among men and boys: A meta-analysis. Body image, 22, 114-128.

Behal, M., & Soni, P. (2018). Media Use and Materialism: A Comparative Study of Impact of Television Exposure and Internet Indulgence on Young Adults. Management and Labour Studies, 43(4), 247–262. https://doi.org/10.1177/0258042x18791613

Berk, L. (2015). Child development. Pearson Higher Education AU.

Bornioli, A., Lewis-Smith, H., Smith, A., Slater, A., & Bray, I. (2019). Adolescent body dissatisfaction and disordered eating: Predictors of later risky health behaviours. Social Science & Medicine, 238, 112458.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3, 101 - 77. https://doi.org/10.1191/1478088706qp063oa
.

Burke, N. L., Schaefer, L. M., Karvay, Y. G., Bardone-Cone, A. M., Frederick, D. A.,

Schaumberg, K., ... & Thompson, J. K. (2021). Does the tripartite influence model of body image and eating pathology function similarly across racial/ethnic groups of White, Black, Latina, and Asian women?. Eating Behaviors, 42, 101519.

Burnette, C. B., Kwitowski, M. A., & Mazzeo, S. E. (2017). "I don't need people to tell me I'm pretty on social media:" A qualitative study of social media and body image in early adolescent girls. Body Image, 23, 114-125.

Chegeni, M., Nakhaee, N., Shahrbabaki, M. E., Mangolian Shahrbabaki, P., Javadi, S., & Haghdoost, A. A. (2022). Prevalence and Motives of Social Media Use among the Iranian Population. Journal of Environmental and Public Health, 2022. https://doi.org/10.1155/2022/1490227

Chung, S. J., Ersig, A. L., & McCarthy, A. M. (2017). The Influence of Peers on Diet and Exercise Among Adolescents: A Systematic Review. Journal of Pediatric Nursing, 36, 44–56. https://doi.org/10.1016/j.pedn.2017.04.010

Convertino, A. D., Elbe, C. I., Mendoza, R. R., Calzo, J. P., Brown, T. A., Siegel, J. A., ... & Blashill, A. J. (2022). Internalization of muscularity and thinness ideals: Associations with body dissatisfaction, eating disorder symptoms, and muscle dysmorphic symptoms in at risk sexual minority men. International Journal of Eating Disorders, 55(12), 1765-1776.

Cruz-Sáez, S., Pascual, A., Wlodarczyk, A., & Echeburúa, E. (2020). The effect of body dissatisfaction on disordered eating: The mediating role of self-esteem and negative affect in male and female adolescents.

Journal of health psychology, 25(8), 1098-1108.

Das, K., & Raman, R. (2019). "Mirror, Mirror, on the Wall… Who is the Fairest of Them All?"—Body Image and Its Role in Sexual Health. *Journal of psychosexual health*, *1*(3-4), 227-235.

Edwards, C., Tod, D., Molnar, G., & Markland, D. (2016). Perceived social pressures and the internalization of the mesomorphic ideal: The role of drive for muscularity and autonomy in physically active men. Body image, 16, 63-69.

Elmi, Y. (2023). The Influence of Gender Equality Movements on Marketing Campaigns and Advertisements in the Beauty Industry: An Empirical Study of Iranian and Italian Brands.

Engel, E., Gell, S., Heiss, R., & Karsay, K. (2024). Social media influencers and adolescents' health: A scoping review of the research field. Social Science & Medicine, 340, 116387.

Esmaeili, F. (2017). Refashioning the hijab: Negotiating public and private space in the material and virtual worlds of Iranian woman (Doctoral dissertation, Central European University).

Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). The mediating role of appearance comparisons in the relationship between media usage and self-objectification in young women. Psychology of Women Quarterly, 39(4), 447-457.

Ganson, K. T., Testa, A., Rodgers, R. F., Jackson, D. B., & Nagata, J. M. (2022). Associations between muscle-building exercise and alcohol use behaviors among adolescent boys: Results from the 2019 Youth

Risk Behavior Survey. American journal on addictions, (3).

Garousi, S. (2014). Body weight concerns and antifat attitude in iranian children. International Journal of Preventive Medicine, 5(12), 1587.

Garousi, S., Khajeh Dolatabad, R., & Garrusi, B. (2017). Concerns about body change behaviors, and construction of flexible masculinity among Iranian students. Quality & Quantity, 51, 2831-2846.

Garrusi, B., & Baneshi, M. R. (2017). Body dissatisfaction among Iranian youth and adults. Cadernos de saude publica, 33, e00024516. https://doi.org/10.1590/0102-311X00024516

Garrusi, B., Garousi, S., & Baneshi, M. R. (2013). Body image and body change: predictive factors in an Iranian population. International journal of preventive medicine, 4(8), 940

Gimlin, D. (2002). Body work: Beauty and self-image in American culture. Univ of California Press.

Ginsberg, R. L., Tinker, L., Liu, J., Gray, J., Sangi-Haghpeykar, H., Manson, J. A. E., & Margolis, K. L. (2016). Prevalence and correlates of body image dissatisfaction in postmenopausal women. Women and Health, 56(1), 23–47. https://doi.org/10.1080/03630242.2015.1074636

Grogan, S. (2021). Body image: Understanding body dissatisfaction in men, women and children. Routledge.

Hatami, M., Taib, M. N. M., Djazayery, A., Mojani, S., & Mejlej, H. (2015). Relationship between body image, body dissatisfaction

and weight status in Iranian adolescents. Archives of obesity, 1(1), 1-7.

Heshmat, R., Kelishadi, R., Motamed-Gorji, N., Motlagh, M. E., Ardalan, G., Arifirad, T., ... & Qorbani, M. (2015). Association between body mass index and perceived weight status with self-rated health and life satisfaction in Iranian children and adolescents: the CASPIAN-III study. Quality of Life Research, 24, 263-272.

Hosseini, E. (2014). Test tripartite influence model in Iranian girls. Global Journal on Advances Pure and Applied Sciences, 4, 209-213.

Jalali-Farahani, S., Amiri, P., Zarani, F., & Azizi, F. (2021). The main physical components of body image from the perspectives of Iranian adolescents: a qualitative study. BMC Public Health, 21, 1-11.

Jill Thompson, A., Poyrazli, S., & Miller, E. (2020). Western Media and Body Image Dissatisfaction in Young Women in Developing Nations. Eurasian Journal of Educational Research, 90, 45-66.

Kakar, V. (2022). Beauty ideals and body image among adolescent girls: a cross-cultural study (Doctoral dissertation, Macquarie University).

Kakar, V., Fardouly, J., Rapee, R. M., Guo, M., Arman, S., & Niazi, E. (2023). Exploring the tripartite influence model of body image and disordered eating among adolescent girls living in Australia, China, India, and Iran. Body Image, 47, 101633.

Kalantar-Hormozi, A., Jamali, R., & Atari, M. (2016). Interest in cosmetic surgery among Iranian women: the role of self-esteem, narcissism, and self-perceived

attractiveness. European Journal of Plastic Surgery, 39, 359-364.

Kenny, U., O'Malley-Keighran, M. P., Molcho, M., & Kelly, C. (2017). Peer influences on adolescent body image: friends or foes?. Journal of Adolescent Research, 32(6), 768-799.

Latiff, A. A., Muhamad, J., & Rahman, R. A. (2018). Body image dissatisfaction and its determinants among young primary-school adolescents. Journal of Taibah University Medical Sciences, 13(1), 34-41.

Makian, S. S. (2023). Life as a Fat Female Body: A Feminist Narrative Inquiry with Iranian Women.

Mills, J. S., Shannon, A., & Hogue, J. (2017). Beauty, body image, and the media. Perception of beauty, 145-157.

Muhlheim, L. (2018). When your teen has an eating disorder: Practical strategies to help your teen recover from anorexia, bulimia, and binge eating. New Harbinger Publications.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group*, T. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of internal medicine*, *151*(4), 264-269.

Momeni, M., Ghorbani, A., & Arjeini, Z. (2020). Disordered eating attitudes among Iranian university students of medical sciences: The role of body image perception. Nutrition and health, 26(2), 127-133.

Murnen, S. K., & Karazsia, B. T. (2017). A review of research on men's body image and drive for muscularity.

Naeimi, A. F., Haghighian, H. K., Gargari, B. P., Alizadeh, M., & Rouzitalab, T. (2016). Eating disorders risk and its relation to self-esteem and body image in Iranian university students of medical sciences. Eating and Weight Disorders, 21(4), 597–605. https://doi.org/10.1007/s40519-016-0283-7

Nikniaz, Z., Mahdavi, R., Amiri, S., Ostadrahimi, A., & Nikniaz, L. (2016). Eating Behaviors Factors associated with body image dissatisfaction and distortion among Iranian women. Eating Behaviors, 22, 5–9.
https://doi.org/10.1016/j.eatbeh.2016.03.018

Novitasari, E., & Hamid, A. Y. S. (2021). The relationships between body image, self-efficacy, and coping strategy among Indonesian adolescents who experienced body shaming. Enfermeria Clinica, 31, S185–S189.
https://doi.org/10.1016/j.enfcli.2020.12.019

Palmeroni, N., Claes, L., Verschueren, M., Raemen, L., & Luyckx, K. (2021). Internalization of Appearance Ideals and Appearance Comparison among Adolescent Boys and Girls: The Role of Identity Formation. Identity, 21(3), 219–237. https://doi.org/10.1080/15283488.2021.1930542

Paterna, A., Alcaraz-Ibáñez, M., Fuller-Tyszkiewicz, M., & Sicilia, Á. (2021). Internalization of body shape ideals and body dissatisfaction: A systematic review and meta-analysis. International Journal of Eating Disorders, 54(9), 1575-1600.

Pursey, K. M., Burrows, T. L., Barker, D., Hart, M., & Paxton, S. J. (2021). Disordered eating, body image concerns, and weight control behaviors in primary school aged children: A systematic review and meta-

analysis of universal–selective prevention interventions. International Journal of Eating Disorders, 54(10), 1730-1765.

Radwan, H., Hasan, H. A., Ismat, H., Hakim, H., Khalid, H., Al-Fityani, L., ... & Ayman, A. (2019). Body mass index perception, body image dissatisfaction and their relations with weight-related behaviors among university students. International journal of environmental research and public health, 16(9), 1541.

Ragelienė, T., & Grønhøj, A. (2020). The influence of peers′ and siblings′ on children's and adolescents′ healthy eating behavior. A systematic literature review. Appetite, 148(November 2019).
https://doi.org/10.1016/j.appet.2020.104592

Rahme, D., Dabbous, M., Malaeb, D., Hallit, S., & Obeid, S. (2023). The mediating effect of body appreciation between muscle dysmorphia and bulimia nervosa among Lebanese adolescents. BMC psychiatry, 23(1), 275.

Ranjbar, M., Hasanpour, S., Mirghafourvand, M., Rahmani, V., & Bani, S. (2024). A Comparison of Self-esteem, Body Image, and Depression in Hysterectomized and Non-hysterectomized Iranian Women: A Comparative Cross-sectional Study. Current Women's Health Reviews, 20(5), 65-72.

Robbins, L. B., Ling, J., & Resnicow, K. (2017). Demographic differences in and correlates of perceived body image discrepancy among urban adolescent girls: a cross-sectional study. BMC pediatrics, 17, 1-10.

Roberts, S. R., Maheux, A. J., Hunt, R. A., Ladd, B. A., & Choukas-Bradley, S. (2022). Incorporating social media and muscular ideal internalization into the tripartite

influence model of body image: Towards a modern understanding of adolescent girls' body dissatisfaction. Body image, 41, 239-247.

Rodgers, R. F., Slater, A., Gordon, C. S., McLean, S. A., Jarman, H. K., & Paxton, S. J. (2020). A biopsychosocial model of social media use and body image concerns, disordered eating, and muscle-building behaviors among adolescent girls and boys. Journal of youth and adolescence, 49, 399-409.

Rostampour, N., Naderi, M., Kheiri, S., & Safavi, P. (2022). The relationship between body mass index and depression, anxiety, body image, and eating attitudes in adolescents in Iran. Advanced Biomedical Research, 11.

Sabeti, F., & Gorjian, Z. (2013). The relationship between the satisfaction of body image and self-esteem among obese adolescents in Abadan, Iran. Iranian Journal of Diabetes and Obesity, 5(3), 126-131.

Sahlan, R. N., Akoury, L. M., & Taravatrooy, F. (2020). Validation of a Farsi version of the Sociocultural Attitudes Towards Appearance Questionnaire-4 (F-SATAQ-4) in Iranian men and women. Eating behaviors, 39, 101438.

Sahlan, R. N., Saunders, J. F., Mond, J. M., & Fitzsimmons-Craft, E. E. (2021). Eating disorder symptoms among adolescent boys and girls in Iran. International Journal of Eating Disorders, 54(1), 19-23.

Sahlan, R. N., Williams, B. M., Forrest, L. N., Saunders, J. F., Fitzsimmons-Craft, E. E., & Levinson, C. A. (2021). Disordered eating, self-esteem, and depression symptoms in Iranian adolescents and young adults: A

network analysis. International Journal of Eating Disorders, 54(2), 132-147.

Schaefer, L. M., Rodgers, R. F., Thompson, J. K., & Griffiths, S. (2021). A test of the tripartite influence model of disordered eating among men. Body Image, 36, 172-179.

Shahyad, S., Pakdaman, S., & Shokri, O. (2015). Prediction of body image dissatisfaction from self-esteem, thin-ideal internalization and appearance-related social comparison. International Journal of Travel Medicine and Global Health, 3(2), 65-69.

Shahyad, S., Pakdaman, S., Shokri, O., & Saadat, S. H. (2018). The role of individual and social variables in predicting body dissatisfaction and eating disorder symptoms among iranian adolescent girls: an expanding of the tripartite influence mode. European Journal of Translational Myology, 28(1).

Shoraka, H., Amirkafi, A., & Garrusi, B. (2019). Review of body image and some of contributing factors in Iranian population. International journal of preventive medicine, 10(1), 19.

Sohail, S., Anjum, G., & Aziz, M. (2023). Hijab and enclothed cognition: The effect of hijab on interpersonal attitudes in a homogenous Muslim-majority context. Cogent Psychology, 10(1), 2219084.

Taghizadeh, S., Suksatan, W., Shalaby, M. N., Abbasalizad-Farhangi, M., & Hojati, A. (2022). Life style, dietary patterns and physical activity in different obesity phenotypes of 2–18 year old children in Tabriz, Iran. Mediterranean Journal of Nutrition and Metabolism, 15(1), 131-142.

Thompson, J. K., Coovert, M. D., & Stormer, S. M. (1999). Body image, social

comparison, and eating disturbance: A covariance structure modeling investigation. International Journal of Eating Disorders, 26(1), 43-51.

Van Vonderen, K. E., & Kinnally, W. (2012). Media effects on body image: Examining media exposure in the broader context of internal and other social factors. American Communication Journal, 14(2), 41-57.

Voges, M. M., Giabbiconi, C. M., Schöne, B., Waldorf, M., Hartmann, A. S., & Vocks, S. (2019). Double standards in body evaluation? The influence of identification with body stimuli on ratings of attractiveness, body fat, and muscle mass. Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity, 24, 1173-1180.

Walker, D. C., White, E. K., & Srinivasan, V. J. (2018). A meta-analysis of the relationships between body checking, body image avoidance, body image dissatisfaction, mood, and disordered eating. International Journal of Eating Disorders, 51(8), 745-770.

Yazdani, N., Hosseini, S. V., Amini, M., Sobhani, Z., Sharif, F., & Khazraei, H. (2018). Relationship between body image and psychological well-being in patients with morbid obesity. International journal of community-based nursing and midwifery, 6(2), 175.

Zamani Sani, S. H., Fathirezaie, Z., Gerber, M., Pühse, U., Bahmani, D. S., Bashiri, M., ... & Brand, S. (2021). Self-esteem and symptoms of eating-disordered behavior among female adolescents. Psychological reports, 124(4), 1515-1538.

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

ARTIFICIAL INTELLIGENCE MUSIC GENERATION FOR CLINIC APPLICATIONS OF MUSIC THERAPY

Zixue Zhang[1], Weijia Yang[2], Chih-Fang Huang[3], Lin Shen[4], Xian Zhao[5], Hsun-Yi Huang[6], Fu-Su Wang[7]

[1] Department Music, Faculty of Human Ecology, Universiti Putra Malaysia, Selangor, Malaysia

[2] Music Department of Shandong Xiehe University, Jinan, China

[3,6] Music Department of Kainan University, Taoyuan,Taiwan

[4] Department of Music Technology, Shanghai Normal University, Shanghai,China

[5] Department of Film-Television and Communication College, Shanghai Normal University, Shanghai, China

[7] Department of Martin E. E. C. P. Health Management Clink, Taiwan, China

ABSTRACT

This study aims to investigate the impact of combining Binaural Beats Music Therapy (BBMT) with AI music (AI-M) generation on attention enhancement in children. The study employed a two-factor mixed experimental design of 2×2, specifically examining the effects of music generation mode and BB technology. Multiple controls and experiments were conducted to ensure accuracy. The music generation method served as the inter-subject variable, while the BB was the intra-subject variable. A total of 64 children, aged approximately 9 years, diagnosed with Attention Deficit Disorder (ADD) using the SNAP-IV rating scale, were recruited for this study. The participants were randomly assigned to four groups: original music (O-M) group, AI music (AI-M) group, binaural beats original music (BB-O-M) group, and binaural beats AI music (BB-AI-M) group, with 16 individuals in each group. Heart Rate Variability (HRV) data were collected before and after the measurements for each group. The analysis results were obtained using SPSS, and the experimental findings were further validated through semi-structured interviews. After the intervention, the HRV data of the four groups demonstrated an increasing trend of attention. Specifically, the data after the intervention of BB technology showed a significant increase. Moreover, the improvement effect of the O-M and AI-M groups was found to be similar, indicating that AI has reached a basic level of maturity in music generation and is suitable for normal use.

Keywords: AI Music, Attention Deficit Disorder, Binaural Beats Music Therapy, Heart Rate Variability, Original Music

Corresponding author:
Weijia Yang
Email: vjkisa520@gmail.com

INTRODUCTION

Attention Deficit Disorder (ADD), a neurodevelopmental disorder, typically manifests before the age of seven (Lovett & Nelson, 2021). Medication is commonly prescribed to manage the symptoms, while non-drug therapies like behavior therapy and music therapy are also widely used (Maloy & Peterson, 2014). Recent research has shown the positive impact of music on enhancing attention, with studies highlighting the effectiveness of Binaural Beats Music (BB-M) in particular (Chockboondee et al., 2023). However, most existing studies focus on traditional music and fail to explore different music content (Martin-Moratinos et al., 2023). In the current era of artificial intelligence, there is a strong focus on AI music (AI-M), which refers to the generation of music content using artificial intelligence. AI-M has been widely applied in various industries such as education, law, and medicine (Pandey & Janghel, 2019). This study aims to explore the potential improvement of children's attention through the combination of Binaural Beats Music Therapy (BBMT) and AI-M generation. The findings of this study can provide valuable insights for music education, music therapy, and other related fields. The study primarily addresses the following research questions:

1. How does the BBMT enhance children's attention?
2. Can AI-generated music be combined with BBMT like the traditional music to improve children's attention?

LITERATURE REVIEW

ADD and HRV

ADD is a neurodevelopmental disorder primarily observed in children under the age of seven. It is primarily caused by delayed development of the frontal lobe of the brain, leading to abnormalities in both structural and functional connectivity. Additionally, there are neurotransmitter disorders involving lower secretion of dopamine and norepinephrine in the brain. These abnormalities and disorders contribute to symptoms such as easy distraction and forgetfulness (Lovett & Nelson, 2021). ADD can significantly affect the academic performance and social behavior of school children, with potential long-lasting consequences extending into adulthood. Furthermore, it can have adverse effects on an individual's career and relationships. Therefore, early diagnosis and treatment of ADD are crucial. It is important to note that ADD is a subtype of attention deficit hyperactivity disorder (ADHD), characterized by a deficit in attention without hyperactivity or impulsivity. Diagnostic tests, such as the Swanson, Nolan and Pelham-IV (SNAP-IV) rating scales, are commonly used to assess ADD (Luo et al., 2022).

Heart Rate Variability (HRV) is a measure of the activity of the Autonomic Nervous System (ANS), it refers to the temporal variability between successive heartbeats and reflects the cardiac activity of physiological and environmental events (such as breathing, physical exercise, mental stress, and hemodynamic and metabolic changes) and disease-induced disorders (Mccraty & Shaffer, 2015). The

function of the autonomic nervous system can be influenced by various factors, such as sleep, stress, exercise, mood, and diet. HRV is generally regarded as an indicator of good health, while low HRV may be linked to physical health issues like heart disease, autonomic disorders, and psychological stress. By measuring HRV, it is possible to identify abnormal physical conditions beforehand and make necessary adjustments to lifestyle, diet, and exercise in order to enhance both physical and mental well-being.

Numerous studies have identified a correlation between HRV and ADD. In a systematic review and meta-analysis conducted by Andreea Robe (2019), it was discovered that there is a specific association between ADD and ANS dysregulation, particularly in relation to heart rate variability. Schulz et al. (2022) study delved into the correlation between

ADD and event-related potentials in electroencephalography (EEG), suggesting that ANS dysregulation could potentially serve as a mechanism for ADD. The link between attention deficit disorder ADD and HRV is primarily observed through the parameters of SDNN (standard deviation of all normal sinus cardiac intervals), rmSSD (root-mean-square value of the differences between adjacent sinus cardiac intervals), pNN50 (the percentage of adjacent sinus intervals that exceed 50 ms, calculated by dividing the number of such intervals by the total number of sinus intervals and multiplying by 100%), and LF/HF (the ratio of low frequency power in the range of 0.04-0.15 Hz to high frequency power in the range of 0.15-0.4 Hz). This demonstrates that HRV data can effectively illustrate the nuances of attention improvement in individuals with ADD through specific parameters.

BBMT

Binaural Beats Music Therapy (BBMT) is a non-invasive treatment that utilizes auditory stimulation. The underlying principle is that when exposed to two distinct frequencies of sound, the brain generates a third frequency of sound. One notable distinction between BB-processed music and conventional music is that the left and right brain have different standard frequencies of sound. Through the medium of music, the brain's activity state is modulated, subsequently regulating the transmission of information between neurons (Draganova et al., 2008). BB-M typically involves the presentation of two sinusoidal waves with different frequencies to the left and right ears. These waves are transmitted to the auditory cortex through brain stem neurons. The brain then

combines the two sine waves to generate a new type of stimulus known as Binaural Beats (Licklider et al., 2005). The frequency of the BB-M is usually between 1 - 30 Hertz (Hz), while the input frequency must be between 20 - 1500 Hz. Additionally, the two frequencies must be relatively close (with a difference of less than 30 Hz) in order to perceive the beat of this pulse.

Auditory stimuli, such as binaural beats (BB), have been shown to impact the brain wave frequency of listeners, leading to potential improvements in attention and cognitive ability. A study focusing on attention found that participants who were exposed to BB-M performed better on tests, exhibiting significantly higher attention scores compared to a control group that did

not listen to BB-M (Cepeda-Zapata et al., 2023). In recent years, numerous studies have reached similar conclusions, demonstrating that listening to BB-M with a specific frequency difference can enhance attention in children, college students, and individuals with specific psychiatric disorders (Chockboondee et al., 2023). Several research studies have explored the effects of BBMT. For instance, a study conducted by B.K. Isik (2017) discovered

that listening to BB sounds with a particular beat frequency can reduce stress and anxiety, as well as promote relaxation and happiness. Furthermore, research conducted by Chaieb et al. (2015) demonstrated that listening to BB sounds can enhance attention, memory, and sleep quality. These findings highlight the effectiveness of BBMT in improving attention.

AI-M Generation

In recent years, there has been significant progress in AI technology due to advancements in science and technology. One of the notable achievements is the automation of productivity and creativity. This has been evident in various areas, such as the emergence of 'Industry 4.0' and the global impact of the Chat GPT model developed by Open AI. The collaboration between AI and different disciplines has gained increasing attention from the public. Among these collaborations, the integration of AI and music has become a prominent area of research, particularly in the context of AI music therapy projects (Pandey & Janghel, 2019). The core technology behind these projects is AI-M generation, which effectively extends music generation technology to medical applications (Hamman, 2004).

The fundamental principle of AI-M generation involves utilizing computer language to establish the theoretical framework of music. This is achieved by constructing a diverse sentence material

library and training music style models through machine learning techniques (Roads, 1985). The ultimate objective is to generate novel digital music content. Extensive research on this subject has been conducted for over three decades, with a particular emphasis on the AI-M generation aspects of computer music following the development of the MIDI Broadcast Control Protocol by the MIDI Equipment Manufacturers Association in 1991. In the realm of Music Therapy research, Machado Sotomayor introduced a novel concept called 'Medicine', where musical elements in MIDI information are referred to as 'medicinal materials' (Machado Sotomayor et al., 2021). The field of Music Therapy is increasingly integrating AI automated composition systems like Magenta, AIVA, and Amper Music. This indicates that music therapy is a prominent area of investigation amidst the rise of AI-generated music. Building upon this context, the present study delves into the exploration of binaural differential frequency music therapy.

METHOD

Research Objectives

This study aims to investigate whether AI-generated music can replace or potentially

exceed the current music used in music therapy. Additionally, it aims to conduct a

two-factor mixed experimental design by combining BB technology with AI-M to explore the impact of AI-M and BB on children's attention.

Experimental Materials
    1.   SNAP-IV Assessment Scale and Music Perception Questionnaire

The SNAP-IV scale is based on the diagnostic principles of ADHD outlined in the Diagnostic Statistical Manual of Mental Disorders (DSM). It is widely used for screening, diagnosing, and assessing the effectiveness of treatment for ADHD. This study utilized the SNAP-IV-26 questionnaire, which comprised three sections: attention symptoms, hyperactivity symptoms, and oppositional defiance symptoms. Each question was rated on a scale of 0-3, with response options including 'Not at all', 'Just a little', 'Quite a Bit', and 'Very much' (Each question is based on a 0 to 3 rating scale: Not at all = 0, Just a little = 1, Quite a Bit = 2, and Very much = 3). Participants were instructed to select their answers based on their experiences in the preceding two weeks. The average completion time for the questionnaire was typically under 10 minutes.

2.   Music Perception Questionnaire

Music Perception Questionnaire (MPQ) is a questionnaire that comprises 8 multiple choice questions aimed at evaluating children's perception of O-M, AI-M, and BB-M following their respective processing. The quantitative questionnaire includes 8 items: Stimulation, acceptance, continuous use, help, convenience, love, completion, and interference. Each item is assessed on a baseline scale ranging from 1 to 5, representing the following options: totally disagree, disagree, neutral, agree, and completely agree.

The SNAP-IV rating scale was developed to assess children with ADD for testing purposes. In addition, a questionnaire was designed to evaluate the children's acceptance of the music chosen for this study. Once the MPQ was finalized, 12 children with ADD were selected using the SNAP-IV rating scale and underwent testing. The results of the test indicated that the music perception was found to be moderate and appropriate for use. We also conducted semi-structured interviews with parents of the students who were tested, with pre-fabricated questions:

1.   What are your thoughts on your child's exceptional performance or challenges in maintaining attention in daily life?

2.   Throughout the process of AI music generation treatment, what notable changes or concerns have you observed?

3.   How would you assess your child's level of interest and cooperation during the treatment sessions?

4.   In your opinion, does music therapy yield the anticipated benefits for enhancing children's attention? What specific indicators support your perspective?

2.1 Choice of O-M and AI-M

5.   In order to determine the children's favorite songs, we conducted a selection process based on their popularity on the internet. Subsequently, after selecting 10 songs from the QQmusic, Kugou, and NetEast Music APP playlists, we narrowed our choices down to two songs based on 5 expert recommendations and votes from 20 music teachers. These are 'Dream It Possible' (^{b}E, 4/4, 120BPM, 6 minutes and 50 seconds, popular genre) and 'Getting

Dark, Close Eyes' (C, 4/4, 84BPM, 10 minutes and 3 seconds, BGMs genre). Notably, these two pieces of music emerged as favorites among the subjects involved in this study. To create the O-M material for testing, we repeatedly spliced these two songs, resulting in a composition that lasts for 16 minutes and 53 seconds. In this study, we utilized Suno, an open-source AI music generation tool developed by Google, to replicate the tone, rhythm, tempo, and duration of the two aforementioned songs within the production window. Out of the five pieces of music generated automatically, two were selected for further evaluation. These two pieces received approval from five music experts. The generated music was then segmented into 16 minutes and 53 seconds clips, which were used as the AI-M material for testing. The experiment involved comparing O-M and AI-M as two different types of music materials. In the experiment, we selected the portable music player. Various methods were attempted, including mobile phone playback, computer playback, and MP3 playback. Eventually, a Bluetooth headset with USB data reading function was used, allowing children to directly play stored music through a USB hard drive.

2.2 BB Technology to Participate in the Production

The above two types of music materials are processed using BB technology to obtain the music materials used by the experimental group. The BB frequency is typically measured in Hertz (Hz) and involves playing two sound waves with different frequencies separately on each side of the ear. This creates a differential frequency in the listener's brain. In a study conducted by Zi-Bo Liu (2022), the beta wave (14-30Hz) was chosen as the

frequency for BB-M [20], and the average frequency beat was calculated using a general formula for the average value algorithm as follow:

$$Aug_{14-30} = \frac{1}{n}\sum_{i=1}^{n} x_i, \quad 14 \le x_i \le 30 \#1$$

After calculating, the average beta wave (14-30Hz) was found to be approximately 22Hz. The two pieces of music, each lasting 7 minutes and 34 seconds were then categorized as BB-M based on the 22Hz frequency difference. The monophonic channels of the music, both left and right, were combined with the generated 2 Sin Wave frequencies (left channel 100 Hz, right channel 78 Hz), resulting in the production of a β-wave 22 Hz Binaural Beats sound. The volume of each channel was adjusted, and the stereo mixing was performed to create BB-M. As shown in Figure 1.

Figure 1. How binaural beats work

2.3 Pre and Post Test of HRV

The HRV pre-test is conducted to collect normal heart rate data before the experiment, while the post-test aims to compare the data between the groups. The benchmark for examining attention enhancement in children with ADD includes SDNN, rmSSD, pNN50, and LF/HF in HRV data. These details were verified through a sample T test and Two-Way ANOVA.

SDNN is commonly regarded as an indicator of the overall variability of HRV. Higher SDNN values suggest increased heart rate variability, indicating that the body is more capable of managing stress and mood fluctuations, which also reflects

a positive attention status. On the other hand, rmSSD is considered an indicator of respiratory variability in HRV. A high rmSSD value signifies greater respiratory variability, indicating a stronger activity of the body's autonomic regulatory system and a favorable state of attention. pNN50 refers to the proportion of adjacent heartbeat intervals greater than 50 milliseconds. A high pNN50 value indicates a high proportion of high-frequency components in heart rate variability, which reflects a good balance between the

sympathetic and parasympathetic nerves and represents a state of good attention. The LF/HF ratio is commonly used as an indicator of the balance between sympathetic and parasympathetic nervous system activity. A high LF/HF ratio suggests higher sympathetic nervous system activity, while a low LF/HF ratio suggests higher parasympathetic nervous system activity. During concentration, the LF/HF ratio tends to be low, indicating a stable balance between the sympathetic and parasympathetic nervous systems.

Research Object

The subjects of this research work were primary school students from same primary school in Taiwan, China. A thorough background investigation was conducted to select healthy students with a history of ADD who had not received music therapy. A total of 64 primary school students (32 boys and 32 girls) were chosen for the study, with ages ranging from 7 to 11 years and an average age of 9.3 years.

The study has received approval from the Ethics Committee of Taiwan, China. Following the acceptance of participation by the management teams, a meeting was held with the parents of the students and the entire research process was explained to them. At the end of the meeting, they signed the authorization model in which they consented to the participation of their children in the study, and the subjects are willing to participate.

EXPERIMENTAL PROCESS

A two-factor mixed experimental design of 2×2 (music generation mode ×BB technology) was utilized in this study to compare control and experimental groups. Music generation method served as the inter-subject variable, while the BB technique was the intra-subject variable. Testers were randomly assigned to groups A (control) and B (experimental), each consisting of 32 individuals (16 men and 16 women). Within each group, participants were further divided into subgroups a & b, a' & b', with 16 students in each subgroup (8 boys and 8 girls). Each subgroup

alternated between being a control group and an experimental group for the other. The specific relationship is shown in Figure 2. The experiment required each test to last at least 30 minutes, with HRV tests conducted in a quiet and calm environment. Therefore, the experiment was conducted at the researcher's home after school. It is noted that the decision to select an equal number of men and women primarily aims to eliminate gender differences, while the choice of conducting the study at home is intended to avoid disrupting the normal lives of the students.
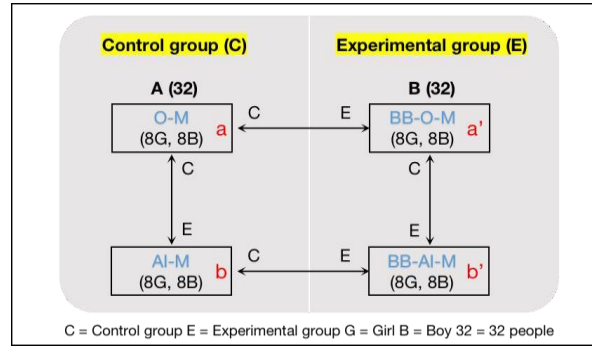
Figure 2. Introduction to experimental groups

According to the research objectives, the HVR test, as the experimental purpose, is divided into two phases: pre-test and post-test. Prior to the HVR test, it is advised to avoid strenuous exercise and maintain a relaxed state for the initial test. The first test is conducted to obtain SDNN, rmSSD, pNN50 and LF/HF of SDD children as the benchmark. Subsequently, participants in the study were instructed to listen to music that had not undergone BB technology processing with headphones during the first two weeks. Post-tests were conducted at the conclusion of this period. After two weeks, following this, both pre-tests and post-tests were conducted as per the same procedure. The pre-test was administered before the participants listened to the music, while the post-test was conducted after they listened to music processed by BB technology. The study spanned 4 weeks, with participants engaging in listening sessions 5 days a week for 30 minutes each day. The research design included three assessment visits. The first visit served as a baseline assessment, the second visit occurred after two weeks of daily 30-minute sessions, and the final visit took place four weeks after the experiment commenced. All three visits followed the same assessment procedure. Immediately after the test evaluation, the researcher obtained the corresponding HVR data from the parents and archived it. This study also combined semi-structured interviews to obtain data and conducted group meetings with 64 parents following an experimental grouping mode to examine the changes in the subjects. Each session lasted 60 minutes, with interviews conducted before, two weeks after, and four weeks after the experiment. Through in-depth analysis of the interview data, the study aimed to identify themes, patterns, and variations to more comprehensively validate the effects of the research.

As depicted in Figure 3, this study conducted a thorough process design. Prior to the experiment, the researchers provided a comprehensive explanation of the experimental procedure to the participating parents. They also assisted the parents in completing the SNAP-IV rating scale and the music perception questionnaire for their children. Additionally, the parents were interviewed regarding their children's attention. Subsequently, the students were grouped based on the statistical analysis of the SNAP-IV rating scale and music perception questionnaire. During the experiment, parents should require supervising their children to strictly carry out the experiment requirements.
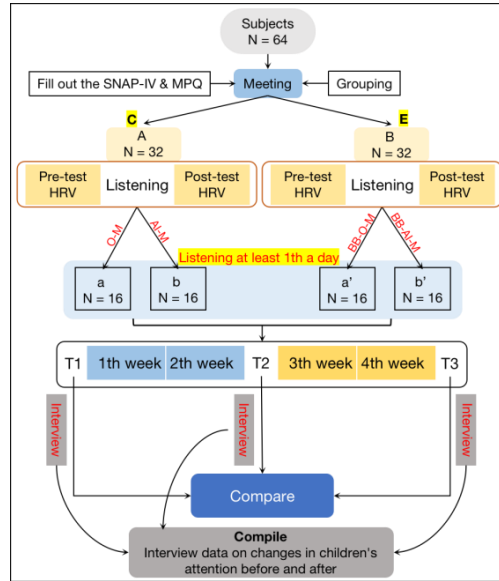
Figure 3. Research design of the study

RESULTS

SPSS (Statistical Package for Social Sciences) software 27.0 was used to analyze the experimental results in this study. Quantitative statistics were utilized to describe the subjects, while the clinical outcomes were analyzed alongside qualitative questionnaires. The data demonstrated a normal distribution and homogeneity of variance, allowing for the use of paired sample T test, independent sample T test, and two-factor ANOVA to present the experimental results. The effects examined included time and grouping effects. 'Time' effects were evaluated for differences pre- and post-experiment within each group, while 'Grouping' effects compared outcome variable differences between groups. The paired and independent sample T tests were employed to investigate the impact of various experimental factors by comparing data within and between groups, while the two-factor analysis of variance further refined the fluctuation index through comprehensive comparison. Additionally, semi-structured interviews were conducted to gain a deeper understanding of the specific clinical aspects related to attention enhancement in children.

Test Results of Each Sample in HRV Data

Table 1. HRV comprehensive measurement scale (*shows a significant difference before and after the experiment, **shows a very significant difference before and after the experiment)

Group	N	HRV Data	P	Pre-test			Post-test		
				| t |	M	SD	| t |	M	SD
A a	16	SDNN	0.041*	11.087	127.03	12.125	12.124	134.72	20.231
		rmSSD	0.032*	8.243	16.45	20.147	8.956	19.03	11.112
		pNN50	0.044*	6.626	15.14	1.007	7.114	16.01	2.187

			LF/HF	0.005*	6.635	1.72	0.89	9.181	1.58	0.53
	a'	16	SDNN	0.021*	10.807	131.13	16.525	17.183	178.03	21.425
			rmSSD	0.001**	5.324	15.32	13.567	5.836	31.24	8.723
			pNN50	0.001**	7.212	15.34	2.607	3.324	18.91	1.728
			LF/HF	0.006*	7.415	1.82	1.01	8.128	1.51	0.62
	b	16	SDNN	0.031*	10.431	120.32	16.212	13.251	138.02	16.212
			rmSSD	0.041*	8.742	15.41	18.127	8.425	20.21	9.217
			pNN50	0.021*	5.973	14.88	1.325	8.329	15.89	2.307
B			LF/HF	0.033*	7.276	1.77	0.315	5.216	1.62	0.525
	b'	16	SDNN	0.001**	14.21	131.23	28.422	13.819	169.24	18.486
			rmSSD	0.001**	10.42	16.52	17.327	5.157	31.12	7.433
			pNN50	0.001**	8.231	15.17	1.925	5.197	18.24	1.25
			LF/HF	0.027*	6.412	1.97	0.275	8.281	1.56	0.26

The impact of music on children's attention was examined in each group using paired sample T-tests. Analysis of initial and post-test data of each group revealed that over time, there were distinct differences in the indicators of each group. However, a common trend was observed: post-test values across all groups showed improvement compared to pre-test values. Specifically, SDNNpost, rmSSDpost, and pNN50post were higher than SDNNpre, rmSSDpre, and pNN50pre, while LF/HFpost was lower than LF/HFpre. The paired T-test results indicated that all $P < 0.05$, demonstrating statistically significant differences. This suggests that music interventions utilizing O-M, AI-M, or BB technology had a significant positive impact on enhancing children's attention.

The feasibility of combining AI-M with BB technology was assessed through an independent sample T test. Statistical analysis of post-test data from the BB-O-M group and BB-AI-M group revealed no significant difference in the four types of HRV indexes. The results of the independent sample T-test indicated that all $P < 0.05$, indicating statistical significance, thus confirming the validity and reliability of the data. These findings suggest that AI-M can be effectively integrated with BBMT, with no significant difference in its enhancement effect compared to traditional BB-O-M.

Two-factor ANOVA of HRV Data
The HRV data was further analyzed through a two-factor ANOVA of three time points. As outlined in the experimental design, T1 represents the average measurement before the experiment commenced, T2 represents the average measurement two weeks after the experiment, and T3 represents the average measurement two weeks after the experiment concluded. The combined data from these time points were then used to assess the specific influence of each factor on HRV using the statistical method of whether A (AI-M generation mode) and factor B (BB technology) are involved or not.

25

Table 2. HRV data overall effect test (*shows a significant difference before and after the experiment, **shows a very significant difference before and after the experiment)

SDNN	Factor A (F, P)	0.241, 0.637	rmSSD	Factor A (F, P)	0.985, 0.35
	Factor B (F, P)	162.9,0.001**		Factor B (F, P)	28.877, 0.001**
	Interactive (F, P)	1.479, 0.259		Interactive (F, P)	0.038, 0.85
pNN50	Factor A (F, P)	0.004, 0.949	LF/HF	Factor A (F, P)	0.343, 0.574
	Factor B (F, P)	28.218, 0.001**		Factor B (F, P)	6.724, 0.032*
	Interactive (F, P)	0.118, 0.74		Interactive (F, P)	1.008, 0.345

The statistical significance of the two factors in HRV data is inconsistent based on the results in Table 2. The factor B values of the 4 HRV indexes all had P < 0.05, indicating significant differences in the experimental data. This suggests that BB technology directly impacts the enhancement of children's attention and is a crucial influencing factor. On the other hand, the AI music generation method does not appear to affect the improvement of children's attention. Both unilateral analysis of factor A and interaction analysis of factors A and B revealed no significant differences in the four HRV indicators, as indicated by P > 0.05. These results suggest that AI music generation does not contribute to the enhancement of children's attention, while BB technology plays a central role in this improvement.

Figure 4 displays the graph illustrating the estimated marginal average value of the 4 types of HRV data, providing a more intuitive representation of the impact of each factor on the experimental data. While the presence of factor A does not result in significant changes in the data, factor B, representing the relative ratio of red to blue, causes fluctuations that align with the table results. The findings indicate that AI-M and O-M have similar effects on improving children's attention, regardless of the involvement of BB technology, with only minor differences observed. This suggests that AI music can be utilized as regular music for clinical purposes, underscoring the advancement and applicability of AI music generation.
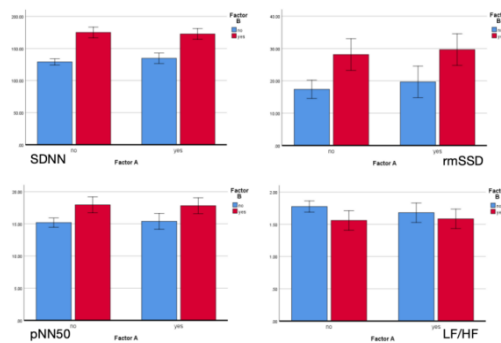
Figure 4. Estimating marginal mean for four types of HRV data

Analysis of Interview Data
To enhance the validity of the experimental data, researchers conducted three semi-structured structured interviews with the parents of 64 children. The analysis of the

data revealed several key themes. During the first interview, parents commonly voiced concerns regarding the length of their children's attention span. For instance, Parent A noted the challenge of children sticking to one task quietly for an extended period. Parent B observed that their child often got distracted while doing homework, turning a 30-minute task into a two-hour ordeal. Parent C highlighted the child's inability to focus during class lessons. Additionally, some parents noted variations in their children's attention span across different settings. Parent E mentioned that their son struggled to concentrate in a mall but could focus for no more than 10 minutes at home. Parent F reported that their child had difficulty maintaining focus regardless of the environment.

However, during the second interview two weeks after the intervention, there were notable changes observed. Parent G reported an improvement in their son's concentration on homework, noting an increase from a few minutes to over ten minutes. Parent H also observed a reduction in their daughter's attention problems, as reported by teachers at school. Parent J mentioned that despite being in a mall setting, their child was able to pause for a few minutes to engage with something of interest.

Finally, during the follow-up interview four weeks later, parent K noted an increase in his son's active participation in school classes, mentioning that he had become more attentive. Parent O observed that their child displayed enhanced focus and emotional stability in class, while parent N reported that their daughter was able to complete her homework in a single sitting. Parent Z observed that not only had their daughter's attention improved, but her accuracy in completing homework had also increased. Several parents remarked on the sustained improvement in their children's performance after two weeks. For instance, parent D mentioned that their child's attention had improved around 10 days into the intervention. Parents L also noticed a significant improvement in their children's concentration levels after listening to music processed by BB technology, while parent Q shared that their daughter's concentration had improved after two weeks.

The analysis of the interview data suggests that children with ADD show varying degrees of improvement in attention and efficiency in completing homework writing. This indicates that music therapy can enhance children's attention, with the intervention of BB technology potentially leading to quicker improvements in attention.

DISCUSSION

Discussion of Experimental Results

In this study, two pieces of music were selected based on children's preferences, with a focus on the 22HzBB music created using BB technology. Building on existing research, the intervention aimed to explore the impact of this music on children's attention. Previous studies have highlighted the potential of music therapy in enhancing attention (Machado Sotomayor et al., 2021), as well as the mood-boosting effects of BBMT. However, research on AI-M remains scarce. This study addresses this gap by investigating the role of AI-generated music in improving children's attention, both independently and in combination with BBMT. The results

suggest that daily intervention with BB technique music may be a more effective strategy, aligning with Mondnath et al.'s findings.

Through interviews with parents and MPQ data, it was discovered that there was a noticeable improvement in attention and academic performance among children from the initial assessment to four weeks later, particularly in their ability to complete homework quietly. The duration of this improvement varied for each child, with factors such as follow-up duration, musical style, parental education level, living environment, and severity of SDD potentially influencing the diverse outcomes.

Another possible explanation for the variation could be attributed to the

characteristics of BB technology. BB involve the presentation of two tones with slightly different frequencies to each ear, resulting in a single perceived sound. In this study, a frequency of 22Hz was utilized, which may be relevant and beneficial for all children with SDD.

This study examines the impact of music selection on HRV test data, comparing the effects of O-M and AI-M. The findings reveal that there is no significant difference in the data obtained from both types of music. However, it is evident that AI-generated music closely resembles real music, indicating a high level of maturity in music creation. This suggests that AI-generated music can be effectively utilized in music therapy.

Challenges During the Experiment

In addition to the research process, it is important to consider several issues. The most important thing is the selection of headphones. Ensuring the comfort of the headphones is crucial as it can help individuals relax during the experiment (Smith et al., 2009). If the headphones are uncomfortable, it may lead to feelings of anxiety and mood swings among students, ultimately affecting the reliability of the experiment. For this particular study, various types of headphones such as Bluetooth earphones, ear bone earphones, full-cover wired earphones, and full-cover

Bluetooth earphones were tested. After conducting tests and gathering participant feedback, the full-cover Bluetooth headset was chosen as the most suitable option.

In addition, the experiment was conducted during the 30-minute period before children come home from school and prepare to do homework. This time slot was chosen as testing is not allowed in the classroom or during sports. The observation of the experiment revealed that listening during this time period can effectively assist students in completing their learning tasks.

Limitation and Prospect

This study utilizes a range of control and experimental methods to gather diverse data within a single experiment, thereby saving time and costs. While acknowledging certain limitations, we hope to address these shortcomings in future research endeavors.

Firstly, the experiment's universality is limited as it only uses a specific set of music materials and involves only primary school students. However, this study still offers valuable insights for expanding music therapy methods for individuals with ADD. To enhance the universality of this study,

future research should include a wider range of participants and incorporate different types of music in separate experiments.

Secondly, the study was limited by a small number of participants and a short duration of only four weeks, which may have hindered the ability to accurately detect the effects of BBMT and AI-M on children with ADD. Future research should consider expanding the sample size and extending the duration of the study to enhance the accuracy and reliability of the findings.

Other factors besides MT may also influence the differences in final results. For instance, if the subjects were in a different home environment, the child's attention could positively impact their engagement with school or other learning materials. These factors may have influenced the outcomes. It is recommended that in future studies, both BBMT and AI-M be conducted in the same environment to better control for other potential influencing factors.

CONCLUSION

This study demonstrates the potential of combining AI-M with BB technology to enhance the concentration of primary school students. The findings not only support the advancement of AI-M therapy but also highlight the diverse applications of AI-M in the medical field. These applications include addressing limitations in music therapy libraries and enabling personalized sound therapy services. Furthermore, the research indicates that AI-M generation has reached a sufficient level of maturity for practical content creation. Moving forward, AI sound therapy services can leverage AI-M generation to cater to individual music preferences, emotional states, and auditory needs.

ACKNOWLEDGMENT

REFERENCES

Cepeda-Zapata, L. K., Corona-González, C. E., Alonso-Valerdi, L. M., & Ibarra-Zarate, D. I. (2023). Binaural Beat Effects on Attention: A Study Based on the Oddball Paradigm. *Brain Topography*, *36*(5), 671–685. https://doi.org/10.1007/s10548-023-00990-9

Chaieb, L., Wilpert, E. C., Reber, T. P., & Fell, J. (2015). Auditory Beat Stimulation and its Effects on Cognition and Mood States. *Frontiers in Psychiatry*, *6*. https://doi.org/10.3389/fpsyt.2015.00070

Chockboondee, M., Jatupornpoonsub, T., Lertsukprasert, K., & Wongsawat, Y. (2023). Long and Short Durations of Binaural Beats Differently Affect Relaxation: A Study of HRV and BRUMS. *IEEE Access*, *11*, 84842–84851. https://doi.org/10.1109/ACCESS.2023.3303183

Draganova, R., Ross, B., Wollbrink, A., & Pantev, C. (2008). Cortical steady-state responses to central and peripheral auditory beats. *Cerebral Cortex*, *18*(5), 1193–1200. https://doi.org/10.1093/cercor/bhm153

Hamman, M. (2004). On Technology and Art: Xenakis at Work. *Journal of New Music Research*, *33*(2), 115–123. https://doi.org/10.1080/0929821042000310595

Isik, B. K., Esen, A., Büyükerkmen, B., Kilinc, A., & Menziletoglu, D. (2017). Effectiveness of binaural beats in reducing preoperative dental anxiety. *British Journal of Oral and Maxillofacial Surgery*, *55*(6), 571–574.

Licklider, J. C. R., Webster, J. C., & Hedlun, J. M. (2005). On the Frequency Limits of Binaural Beats. *The Journal of the Acoustical Society of America*, *22*(4), 468–473. https://doi.org/10.1121/1.1906629

Lovett, B. J., & Nelson, J. M. (2021). Systematic review: Educational accommodations for children and adolescents with attention-deficit/hyperactivity disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *60*(4), 448–457.

Luo, J., Huang, H., Wang, S., Yin, S., Chen, S., Guan, L., Jiang, X., He, F., & Zheng, Y. (2022). A Wearable Diagnostic Assessment System vs. SNAP-IV for the auxiliary diagnosis of ADHD: A diagnostic test. *BMC Psychiatry*, *22*(1), 415. https://doi.org/10.1186/s12888-022-04038-3

Machado Sotomayor, M. J., Arufe-Giráldez, V., Ruíz-Rico, G., & Navarro-Patón, R. (2021). Music therapy and Parkinson's disease: A systematic review from 2015–2020. *International Journal of Environmental Research and Public Health*, *18*(21), 11618.

Maloy, M., & Peterson, R. (2014). A meta-analysis of the effectiveness of music interventions for children and adolescents with attention-deficit/hyperactivity disorder. *Psychomusicology: Music, Mind, and Brain*, *24*(4), 328.

Martin-Moratinos, M., Bella-Fernández, M., & Blasco-Fontecilla, H. (2023). Effects of Music on Attention-Deficit/Hyperactivity Disorder (ADHD) and Potential Application in Serious Video Games: Systematic Review. *Journal of Medical Internet Research*, *25*(1), e37742. https://doi.org/10.2196/37742

Mccraty, R., & Shaffer, F. (2015). Heart Rate Variability: New Perspectives on Physiological Mechanisms, Assessment of Self-regulatory Capacity, and Health Risk. *Global Advances in Health and Medicine*, *4*(1),46–61. https://doi.org/10.7453/gahmj.2014.073

Pandey, S. K., & Janghel, R. R. (2019). Recent Deep Learning Techniques, Challenges and Its Applications for Medical Healthcare System: A Review. *Neural Processing Letters*, *50*(2), 1907–1935. https://doi.org/10.1007/s11063-018-09976-2

Roads, C. (1985). Research in music and artificial intelligence. *ACM Computing Surveys*, *17*(2), 163–190. https://doi.org/10.1145/4468.4469

Robe, A., Dobrean, A., Cristea, I. A., Păsărelu, C. R., & Predescu, E. (2019). Attention-deficit/hyperactivity disorder and task-related heart rate variability: A systematic review and meta-analysis. *Neuroscience & Biobehavioral Reviews*, *99*, 11–22.

Schulz, A., Dierolf, A. M., Lutz, A. P., Voderholzer, U., Koch, S., Bach, M., Asenstorfer, C., Michaux, G., Mertens, V.-C., & Vögele, C. (2022). Higher cardiovascular activation, but normal heartbeat-evoked potentials and cardiac interoceptive accuracy in somatoform disorders and major depressive disorder. *Psychiatry Research Communications*, *2*(3), 100052.

Smith, J. M., Sullivan, S. J., & Baxter, G. D. (2009). The culture of massage therapy: Valued elements and the role of comfort, contact, connection and caring. *Complementary Therapies in Medicine*, *17*(4), 181–189.

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

IMPACT OF FAMILY ECONOMIC STATUS ON EMOTIONAL INTELLIGENCE AMONG ADOLESCENTS IN AHVAZ, IRAN

Azadeh Mousavi [1,] **Rumaya Juhari** [2]

[1,2,] *Department of Human Development and Family Studies, Faculty of Human Ecology, Universiti Putra Malaysia, Selangor, Malaysia*

ABSTRACT

The study describes the profile of adolescents from high- and low-income families and examines the differences in emotional intelligence between these groups. Information regarding socioeconomic status reveals that a substantial portion (74.7%) of respondents reported an income above a certain threshold, indicating a relatively high socioeconomic status within the sample.The hypothesis posited that there is a significant difference in emotional intelligence based on the level of parents' income among adolescents. The results confirmed the hypothesis, revealing a significant difference in emotional intelligence between adolescents from different income backgrounds ((t) (381) = 13.76, p < 0.001). Adolescents from higher-income families demonstrated higher emotional intelligence scores than those from lower-income families. The study highlights the importance of addressing socioeconomic disparities to foster the emotional well-being of adolescents. The finding suggests that integrating financial support with emotional intelligence development can contribute to healthier emotional development and well-being for adolescents.

 Keywords: Adolescent, Emotional Intelligence, Family Economy Status

Corresponding author:
Rumaya Juhari, PhD
Email: rumaya@upm.edu.my
Tel: 03.9769 7089

INTRODUCTION

Current complex socio-economic landscape, the intersection of financial support and emotional intelligence (EI) is increasingly recognized as vital in the development of adolescents' well-being. Emotional intelligence, defined as the ability to recognize, understand, and manage our own emotions while also understanding and influencing the emotions of others, plays a pivotal role in various life outcomes. Meanwhile, financial support from parents has profound implications for adolescents' emotional development.

Stressors associated with living in poverty can compromise children's emotional adjustment (Mayo ET AL., 2022). while stable family routines promote children's self-regulation (Xie et al., 2022). Although studies have not yet specifically examined how household chaos relates to four-year-olds' ability to manage emotions, the gap in research could have significant implications for identifying direct aspects of children's family-level socio-contextual factors. The factors may also play a critical

role in the development of emergent emotion regulation skills. Children growing up in low-income households generally exhibit fewer and poorer emotion regulation skills compared to their economically stable peers (Niu et al., 2020).

The importance of this study extends to recognizing emotional intelligence as a crucial predictor of personality variables. Higher emotional intelligence is associated with an increased ability to navigate personal challenges faced by adolescents, thereby contributing positively to the overall well-being. Additionally, emotional intelligence is linked to heightened emotional awareness, effective stress management, and a proactive approach to health improvement, as supported by existing research (Rogers et al., 2021). The research ultimately aims to provide a foundation for understanding the relationship between socio-economic status and emotional intelligence among adolescents in Ahvaz, Iran.

LITERATURE REVIEW

According to the British Broadcasting Corporation (2007) , adolescence unfolds in three distinct stages. The first stage, early adolescence, spans from 12 to 14 years old, marking the onset of body maturation, including the development of bodily hair, oily skin, sexual organs, increased perspiration, and a growing capacity for abstract thinking, reasoning, and morality, with a heightened focus on the present.The second stage, middle adolescence, transpires from 14 to 16 years old. This phase is characterized by more continuous physical development for boys than girls until the age of 20. It involves a greater

interest in the future, goal-setting, and inward psychological development. The third stage, late adolescence, unfolds from 16 to 19 years old and encompasses a heightened capacity for moral reasoning. Late adolescence sees the development of deep and romantic relationships, along with the crystallization of identity and a stronger desire for privacy, leading to increased distancing from others.

Emotional intelligence (EI) consists of four distinct components: self-awareness, self-regulation, social awareness, and social regulation, each of which plays a pivotal

role in shaping the emotional and social landscape of adolescents (Webster et al., 2021).

The Impact of Financial Status on EI Components

Self-awareness involves recognizing one's emotions and their impact. Adolescents from higher financial backgrounds are more likely to receive support and guidance in understanding their emotions, leading to better self-awareness. In contrast, financial stress can divert attention from emotional development, leading to lower self-awareness in adolescents from financially disadvantaged backgrounds (Chen et al., 2023).

The ability to manage one's emotions and behaviors nammed self-regulation (Inzlicht et al., 2021) . Financial stability provides a secure environment where adolescents can learn and practice self-regulation (Assari, 2020). Financial instability, however, often leads to chronic stress, which can impair self-regulation abilities (Waite et al., 2021). Adolescents from lower financial status families may experience heightened emotional reactivity and difficulty managing stress (Huang et al., 2020).

The ability to understand and empathize with others is social awareness . Higher financial status can expose adolescents to diverse social experiences, enhancing their social awareness. Lower financial status, on the other hand, can limit social exposure and experiences, potentially reducing empathy and social understanding (Bradley and Corwyn, 2002).

Social regulation involves managing relationships and social interactions effectively. Adolescents from higher financial backgrounds often have better access to social activities and networks,

which can improve their social regulation skills. Financial constraints can limit the opportunities, making it more challenging for adolescents to develop effective social regulation skills (Hadley et al., 2024).

The literature indicates that financial status plays a significant role in the development of emotional intelligence in adolescents. Higher financial status generally provides a more supportive environment for developing EI components such as self-awareness, self-regulation, social awareness, and social regulation. Conversely, lower financial status can hinder EI development through increased stress, limited resources, and reduced support. Understanding these dynamics is crucial for developing interventions aimed at promoting EI in adolescents, particularly those from financially disadvantaged backgrounds. Poverty has a negative impact on children's development (Loomis, 2021) . According to studies, adolescents who are raised in poor families more frequently show emotional and behavioral problems (Vora, 2020) . For instance, study by Kirkbride et al., (2024) highlights how unfavorable social conditions, such as poverty and marginalization, increase the risk of poor mental health and perpetuate intergenerational cycles of disadvantage. Moreover, the study by Golberstein et al. (2020) revealed that parents' income directly impacts children's emotional condition. According to the study by Kao et al., (2020) on 90 3-year-old children in China, the parent's income had a positive

relationship with the ability to regulate emotion among children.

In conclusion, the intersection of financial status and emotional intelligence in adolescence is complex and multifaceted. Financial stability provides a conducive

environment for the development of EI components, while financial instability poses significant challenges. Following the analysis of differences in adolescents' emotional intelligence based on economic status in Ahwaz, Iran, the implications of these findings will be discussed.

METHOD

The study was conducted in Ahvaz, a city in the southwest of Iran, among 383 adolescents aged 15 to 18 studying in public high schools. The cluster random sampling method was utilized to select the respondents for the study. The study was quantitative and used a self-report questionnaire to collect data. A correlational research design was employed. The Siberia Schering's (1995)

Emotional Intelligence Questionnaire, developed by adapting Goleman's (1995) mixed model, was used to assess respondents' emotional intelligence. The questionnaire contains 33 items. The reliability of the questionnaire was determined by Haddadi et al. (2011) as cited in Moosavi et al., (2023) using Cronbach's alpha and was reported to be 0.87 for an Iranian sample.

RESULT

T test Analysis

This section describes the profile of adolescents from both high and low-income families and the differences in emotional intelligence between adolescents from high-income and low-income families.

Objective : To determine the difference of emotional intelligence according to level of parent's income among adolescents in Ahvaz, Iran.

Ha1: There is significantly different in emotional intelligence based on level of parents income among adolesents, in Ahvaz, Iran.

Information regarding socioeconomic status, ireveals that a substantial portion (74.7%) of respondents reported an income greater than a certain threshold, indicating

a relatively high socioeconomic status within the sample. (refer to Table 1).

The results revealed a significant difference in emotional intelligence between adolescents from different income backgrounds (t) (381) = 13.76, p < 0.001) .Higher-income families demonstrated higher emotional intelligence scores than those from lower-income families. Ha 1 is supported (refer to Table 2).

The findings align with previous research indicating that poverty negatively impacts children's development (Mayo et al., 2022) . Studies have shown that adolescents raised in poor families are more likely to exhibit emotional and behavioural problems . Golberstein et al., (2020) found that parents' income directly impacts children's emotional well-being.

35

Table 1 : discriptive profile of respondents Parent Income

Parents Income			
≤ 60000000 IRL (Rm 1000.00)		97	25.3
≥ 60000001 IRL		286	74.7

Table 2 : t test for Emotional Intelligence According to Level of Parent Income

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	3.65	.057	13.76	381	.000	10.37	.753	8.893	11.85807
Equal variances not assumed			12.14	137.04	.000	10.37	.854	8.686	12.06482

DISCUSSION

The study indicates that families with higher income levels can offer a wealth of resources that contribute to children's emotional intelligence. The spectrum of support includes access to quality education, extracurricular programs, and mental health resources, all of which foster an environment conducive to emotional growth. For instance, children raised in financially stable households often have better access to counseling services, mentorship programs, and training in social skills, which are crucial for developing EI.

Conversely, low-income families may grapple with financial stressors that can hinder emotional development. Such environments often lead to heightened levels of anxiety and uncertainty, limiting children's opportunities to learn emotional regulation and social interaction (Golberstein et al., 2020) . Parents struggling with financial insecurity may also experience heightened stress, which

can inadvertently affect the ability to provide emotional support and guidance to their children. The cyclical nature of financial instability and emotional intelligence is particularly concerning, as it may limit children's ability to cope with challenges, both personal and academic.

Moreover, the presence of financial support can foster emotional well-being in

multifaceted ways (Golberstein et al., 2020) . For example, secure financial resources enable families to emphasize emotional nurturing and open communication, which are crucial for fostering emotional intelligence. Parents with stable incomes may also model positive coping strategies and emotional regulation skills, which children often adopt as they grow.

CONCLUSION OF THE STUDY

The findings from the study underscore the significant impact of parents' financial support on adolescents' emotional well-being. Adolescents from higher-income families tend to exhibit higher levels of emotional intelligence, benefiting from a more supportive environment and greater access to resources. Conversely, lower-income families may face increased stress and limited opportunities for emotional and social development, which can hinder the emotional intelligence.

The results highlight the importance of addressing socioeconomic disparities to foster the emotional well-being of adolescents. By integrating financial support with emotional intelligence development, stakeholders create more comprehensive and supportive frameworks. Such efforts negative effects

of financial stress and promote healthier emotional development, ultimately contributing to the well-being of adolescents and the broader society.

However, the study has certain limitations. The sample was restricted to adolescents from Ahvaz, Iran, which may limit the generalizability of the findings to other regions or cultural contexts. Additionally, the study relied on self-reported data, which may be subject to biases or inaccuracies. Future research could address the limitations by including diverse geographical and cultural contexts, and by employing longitudinal designs or multiple methods of data collection to gain a more comprehensive understanding of the relationship between financial support and emotional well-being.

REFERENCE

Assari, S. (2020). Parental education and youth inhibitory control in the Adolescent BrainCognitive Development (ABCD) Study: Blacks' diminished returns. *Brain sciences*, *10*(5), 312.https://doi.org/10.3390/brainsci10050312

Chen, H., Meza, J. I., Yan, Y., Wu, Q., & Lin, X. (2023). Parental attachment and depression in adolescents: Moderation mediation model of empathy and gender. *Current Psychology*, 42(7), 5898-5909. https://doi.org/10.1007/s12144-022-03462-4

Evans, G. W., & English, D. (2002). The environment of poverty: Multiple stressor exposures, psychophysiological stress, and

socio-emotional adjustment. *Child Development*, 73(4), 1238-1248.DOI: 10.1111/1467-8624.00469

Evans, R., Cunningham, E., Stabler, L., Vaughan, R., Davies, B., Cummings, A., .. & Mannay, D. (2024). Acceptability, feasibility and perceived effectiveness of online and remote mental health and wellbeing interventions during the COVID-19 pandemic: A qualitative study with care-experienced young people, carers and professionals. *Children and Youth Services Review*, 156, 107321. https://doi.org/10.1016/j.childyouth.2024.1 07321

Golberstein, E., Wen, H., & Miller, B. F. (2020). Coronavirus disease 2019 (COVID-19) and mental health for children and adolescents. *JAMA Pediatrics*, 174(9), 819-820.https://doi.org/10.1001/jamapediatrics. 2020.2337

Goleman, D; Boyatzis, R; Rhee, K. (1999): Clustering competencye in emotional Intelligence Insight from the emotional competence inventory (ECI), From the *World Wide Web*: (www.eiconsoruum.org)

Haddadi, M., Asgari, M., & Ghanbari, F. (2011). Reliability and validity of the Siberia Schering's Emotional Intelligence Questionnaire for Iranian adolescents. *Journal of Applied Psychology,* 15(2), 112-120.

Hadley, W., McWhirter, A., Franz, D., Bogner, J., Barker, D. H., Rizzo, C., & Houck, C. D. (2024). The moderating role of poverty on parenting, family climate, and early adolescent emotion regulation. *The Journal of Early Adolescence.* https://doi.org/10.1177/027243162412494 86

Huang, C. C., Chen, Y., Jin, H., Stringham, M., Liu, C., & Oliver, C. (2020). Mindfulness, life skills, resilience, and emotional and behavioral problems for gifted low-income adolescents in China. *Frontiers in psychology*, *11*, 594.https://doi.org/10.3389/fpsyg.2020.00 594

Inzlicht, M., Werner, K. M., Briskin, J. L., & Roberts, B. W. (2021). Integrating models of self-regulation. *Annual review of psychology*, *72*(1), 319-345.https://doi.org/10.1146/annurev-psych-061020-105721

Kao, K., Tuladhar, C. T., & Tarullo, A. R. (2020). Parental and family-level sociocontextual correlates of emergent emotion regulation: Implications for early social competence. *Journal of Child and Family Studies,* 29, 1630-1641.https://doi.org/10.1007/s10826-020-01712-0

Kirkbride, J. B., Anglin, D. M., Colman, I., Dykxhoorn, J., Jones, P. B., Patalay, P., & Griffiths, S. L. (2024). The social determinants of mental health and disorder: evidence, prevention and recommendations. *World psychiatry*, *23*(1), 58. doi: 10.1002/wps.21160

Loomis, A. M. (2021). The influence of early adversity on self-regulation and student-teacher relationships in preschool. *Early Childhood Research Quarterly*, *54*, 294-306.https://doi.org/10.1016/j.ecresq.2020.1 0.004

Mayo, C. O., Pham, H., Patallo, B., Joos, C. M., & Wadsworth, M. E. (2022). Coping with poverty-related stress: A narrative review. *Developmental Review*, *64*,

101024.https://doi.org/10.1016/j.dr.2022.1
01024

Moosavi, A., Johari, R., Arshat, Z. binti, & Kahar, R. binti. (2023). *Associations between COVID-19 impact, parent and peer attachment, and the moderating role of online networking and gender with emotional intelligence among adolescents in Ahvaz, Iran* (Doctoral dissertation). Universiti Putra Malaysia.

Niu, G., Yao, L., Wu, L., Tian, Y., Xu, L., & Sun, X. (2020). Parental phubbing and adolescent problematic mobile phone use: The role of parent-child relationship and self-control. *Children and Youth Services Review*, *116*, 105247. https://doi.org/10.1016/j.childyouth.2020.105247

Rogers, A. A., Ha, T., & Ockey, S. (2021). Adolescents' perceived socio-emotional impact of COVID-19 and implications for mental health: Results from a US-based mixed-methods study. *Journal of Adolescent Health*, 68(1), 43-52. https://doi.org/10.1016/j.jadohealth.2020.08.001

Vora, S. (2020). The realities of period poverty: how homelessness shapes women's lived experiences of menstruation. *The Palgrave handbook of critical menstruation studies*, 31-47.https://doi.org/10.1007/978-981-15-0614-7

Waite, P., Pearcey, S., Shum, A., Raw, J. A., Patalay, P., & Creswell, C. (2021). How did the mental health symptoms of children and adolescents change over early lockdown during the COVID-19 pandemic in the UK?. *JCPP advances*, *1*(1), e12009. https://doi.org/10.1111/jcv2.12009

Webster, D., Dunne, L., & Hunter, R. (2021). Association between social networks and subjective well-being in adolescents: *A systematic review*. Youth & Society, 53(2), 175-210. https://doi.org/10.1177/0044118X19898151

Xie, S., & Li, H. (2022). Self-regulation mediates the relations between family factors and preschool readiness. *Early Childhood Research Quarterly*, *59*, 32-43.https://doi.org/10.1016/j.ecresq.2021.10.005

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

PSYCHOLOGICAL RESILIENCE AMONG HIGHER VOCATIONAL STUDENTS THROUGH STUDENT-CENTERED APPROACHES

Zemei Xu[1,] Hanina H. Hamsan[2], Azlina Mohd. Khir[3]

[1,2,3,] *Department of Social and Development Sciences, Faculty of Human Ecology, Universiti Putra Malaysia, Malaysia*

ABSTRACT

Improving the psychological resilience of higher vocational students in China has become a pressing theoretical and practical issue for vocational colleges. The Transconceptual Model of Empowerment and Resilience (TMER) framework illustrates the iterative and interconnected processes of resilience and empowerment, demonstrating high relevance in an expanding array of empirical studies across diverse psychosocial phenomena. It holds that individuals increase their control and power in their own lives and society by acquiring abilities, opportunities, and enhancing self-efficacy.

The "student-centered" approaches in China focus on caring for and serving students, building steps such as problem definition, intervention measures, and evaluation of effectiveness to deal with students' affairs. Under the TMER framework, this article applies the case of Mr. Wang to illustrate the practical process of empowerment improving the psychological resilience of higher vocational students through student-centered approaches. On one hand, building a good environment from six levels: individual, dormitory, class, family, department, and school, with a focus on stimulating external protective factors for psychological resilience; on the other hand, consolidating the individual's inner self from three levels: ability improvement, opportunity acquisition, and self-efficacy enhancement, with a focus on stimulating internal protective factors of psychological resilience. We then showed the effectiveness, noting that while changes in Mr. Wang's behavior were evident, the short duration of practice meant that many long-term effects remained unpredictable. Finally, this paper reflects on the experience and tries to summarize a practical model for increasing psychological resilience through a student-centered approach under TMER.

Keywords: psychological resilience, empowerment, student-centered, Transconceptual Model of Empowerment and Resilience (TMER), vocational student

INTRODUCTION

Improving the psychological resilience of vocational students in China has become a pressing theoretical and practical issue for higher vocational colleges. Resilience and empowerment are extensively utilized and profoundly pertinent concepts within the field of psychology (Brodsky & Cattaneo,2013). The concept of empowerment comes from "Black Empowerment: Social Work in Oppressed Communities" published in 1976 by the famous scholar Barbara Bryant Solomon. She described how black minorities in American society have long been subjected to negative evaluations from peer groups, advantaged groups and the macro-environment, so that they feel a deep and comprehensive lack of power. And Psychological resilience refers to an individual's ability to adapt well in the face of adversity, trauma, tragedy, threats or other major pressures, that is, the ability to rebound from difficult experiences or challenging situations (Gao, 2022). A range of models and measurements has been developed to assess both resilience and empowerment (Fletcher & Sarkar,2013; Cattaneo et al.,2014). however, only one model-the

Transconceptual model of empowerment and resilience(TMER; Brodsky & Cattaneo, 2013)-examines these two concepts concurrently. This model,which offer psychologists guidance in their work with marginalized groups, delineates the similarities and differences in the processes,action, and outcomes associated with resilience and empowerment (Brodsky et al.,2022). Some scholars integrate the Transconceptual Model of Empowerment and Resilience (TMER) into their research.

Chia-Yuan Tu (2013) found in a stud Chinedu O. Onyewuchi 1 *, Jayum Anak Jawan 2 , Zaid Ahmad 3 , Murni Wan Mohd. Nor 4y in Taiwan that elementary school teachers in Taiwan face teaching predicaments, they need to be empowered to solve teaching predicaments, improve teaching resilience and quality. And further, Zheng Yuankai (2017) applied this model to investigate practices aimed at supporting disadvantaged student groups in universities. Besides, Anne Brodsky and colleagues (2022) applied the TMER (Transconceptual Model of Empowerment and Resilience) to investigate resilience and empowerment through qualitative interviews with 99 first- and second-generation Latinx, Moroccan, and Albanian immigrants residing in the United States and Italy.

While numerous studies have examined resilience and empowerment within populations(e.g : immigrants, students, teachers), majority have concentrated on one concept at a time,rather than considering both in tandem, and there are limited literature applied the TMER,especially in higher educational setting.

Students affairs' Counselors in higher vocational and technical education institutions play the important role in guiding students to achieve comprehensive development in moral, intellectual, physical, artistic and labor. And The " Student-Centered " approaches,which focus on care about students, and serve students (Order No. 43 of the Ministry of Education of the People's Republic of China, 2017), builds a student service system that is

people-oriented, quality-oriented (Bai & Li, 2015) to deal with the students' affairs. This Approach in student affair Services includes problem definition, intervention measures, and evaluation of effectiveness. It is crucial to effectively protect the legitimate rights and interests of students (Order No. 41 of the Ministry of Education, 2017) in micro, meso, and external systems,

such as individual students, dormitories, classes, departments, families, and schools (Qian Xuesen, 2020; Sheng Zhiqiang, 2015). Thus, Our application of TMER here not only further examines the analytical potential of the theory's conceptual framework but also aims to enhance resilience by empowering through student-centred approaches.

THEORETICAL FRAMEWORK

The TMER was developed to pinpoint areas of convergence and divergence between resilience and empowerment, facilitating clearer distinctions in both theoretical understanding and practical application. This model (refer to Figure 1) is versatile,

applicable across individual, group, or community levels. However, this study focuses specifically on the individual level, drawing insights from responses provided by participants.
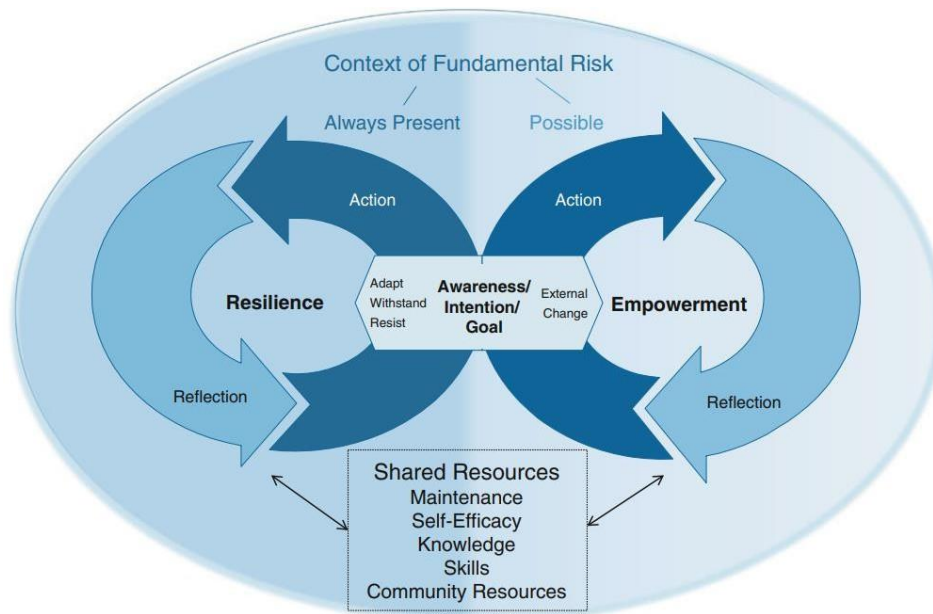
Figure 1: TMER (Brodsky & Cattaneo, 2013)

TMER operates as an iterative cycle that involves identifying and assessing risks. Resources play a crucial role throughout the resilience and empowerment process, whether they are cognitive, action-oriented, or related to maintenance. At the individual level, resources such as social capital,

education, financial means, and specific skills and abilities are significant. Additionally, there are external resources that impact individuals, including access to necessary resources and broader socio-political factors like peace, safety, rule of

law, and justice, which support fundamental individual resources.

TMER complements the existing literature on student resilience by focusing on four key aspects: internal and external resources in students' everyday lives; positive relationships across multiple levels; goals and actions chosen by students to respond to these conditions; and the divergence or convergence of those goals and actions in the processes of resilience and empowerment. Empowering processes would lead to efforts to make changes in their micro, meso, and macro communities, whereas resilient processes would lead to internal action and change within the students themselves. Xu et al. (2020) propose that empowering individuals involves three elements: enhancing abilities, securing rights and opportunities, and boosting self-efficacy.

METHOD

- The practical process of empowerment improving the psychological resilience of higher vocational students through student-centred approaches

1.1 Case Background of Student Mr. Wang

1.1.1 Family Background

Student Mr. Wang, 19 years old. He is the eldest son in the family and has a younger brother who is in university. He and his younger brother were raised by his grandparents since childhood. This year, his grandmother suddenly suffered from Alzheimer's disease. His parents are separated from each other all year round and work part-time jobs to earn money to support the family. The family's annual income is about RMB40,000 to 60,000. Student Wang's living expenses are RMB800 per month.

1.1.2 Psychological state

Wang was injured during a long-distance running practice in elementary school (the hospital diagnosed him with a concussion). Wang believed that the injury caused him to think normally when his mental state was good, but when his mental state was bad, his thinking of brain was not normal. In October last year, his father injured his arm at a construction site and was hospitalized for more than a month. However, it was not until his father was discharged from hospital Wang learned that his father was injured. He blamed himself.

1.1.3 Social Interactions

Wang communicates with his mother weekly and his father almost monthly. He has a deep bond with his younger brother from their elementary school days but knows little about his current university life. Wang had a close friend A in junior high who taught him drawing, but they've lost touch since A stopped schooling due to family reasons. In high school, he was friends with a top student B who helped him academically, but they've also lost contact since going to different universities. Since joining his new class three months ago, Wang remains unfamiliar with roommates and classmates and hasn't formed any close friendships. He lives alone and rarely participates in group activities or interacts with other students. During a class cadre

election, Wang submitted an application but withdrew on the day of the competition, confusing some students.

1.1.4 Academic challenges

one of his teachers contacted me, she said that Wang came to talk to her and said that He felt empty in her heart and that he wanted to express herself but lacked self-confidence. Wang said that maybe as a science student in high school, mathematics courses in college are relatively easy. However, professional courses such as computer science are very difficult to learn. He feels that other students can learn it easily, but he looks like stupid in these courses.

1.2 Problem Identification

1.2.1 Basic necessities of life

Mr. Wang's family supports two elderly individuals and two college students, with a per capita annual income of approximately RMB10,000. Suddenly, their grandmother fell ill and their father was injured, leading to financial difficulties that impact him. Firstly, financial stress may induce psychological anxiety and concern about the family's future, affecting his emotional stability and mental health. Secondly, limited financial resources can constrain his ability to cope with daily challenges, thereby affecting his adaptability and psychological resilience.

1.2.2 Necessary for interpersonal communication

From Mr. Wang's experience, he was accompanied by his younger brother in elementary school, good friend A in junior high, and B, a top student, in high school. However, after entering college, he suffered from loneliness, mental emptiness, and a strong desire for interpersonal communication. Despite wanting to be proactive in socializing, he often retreated at the same time and rarely communicated with his family.

Wang's lack of interpersonal communication may impact his psychological resilience in several ways:(1) Lack **of emotional support.** Without sufficient interpersonal communication, particularly within close relationships, Wang may lack the emotional support necessary during difficult times. This absence can lead to feelings of loneliness and helplessness, making it challenging for him to manage negative emotions and regain psychological balance. And then (2) **Insufficient informational support.** Limited communication with peers or classmates may restrict his access to important resources needed to solve problems and cope effectively with difficulties. (3) **Limited social skills development**. Inadequate interpersonal communication can hinder the development of strong social skills, resulting in discomfort or lack of confidence in social settings, ultimately affecting his relationships and interaction quality.

1.2.3 Improvement of self-efficacy

From Mr. Wang's learning situation, mathematics is relatively easy for him, while professional courses such as computer science are more challenging. Consequently, Mr. Wang has the need to learn more difficult content in mathematics and desires to learn quickly like other students in computer and other professional courses. Due to unreasonable self-attribution and labeling (e.g., equating not being like other students with stupidity, further linked to a concussion and injury

from primary school), Mr. Wang expressed a sense of powerlessness during the interview.

Specifically, :(1) **Negative self-evaluation**: Mr. Wang tends to attribute his learning difficulties to personal inadequacy, such as feeling different from classmates, leading to negative self-perceptions like feeling stupid or incompetent. This hinders his ability to bounce back from setbacks and affects his psychological resilience. (2) **Emotional fluctuations**: Facing learning difficulties, Mr. Wang experiences anxiety, depression, or frustration. If these emotions are not effectively managed, they can detrimentally impact his mental health and impair his psychological recovery.

1.2.4 Construction of a harmonious environment

From the communication with his roommates, Mr. Wang was accustomed to living alone and did not participate in dormitory team-building activities, leading to him no longer being invited to activities organized by the other three roommates. Additionally, Mr. Wang rarely followed the rules in handling assignments for certain courses and withdrew from participating in the class committee election, causing confusion among peers. He also almost never participated in class group activities or joined any clubs. As a college student, dormitories and classes are critical micro-meso systems in campus life, but Mr. Wang lacked involvement in these areas.

Mr. Wang's lack of participation in dormitory and class activities, as well as club activities, may have deprived him of opportunities to receive emotional support and recognition from classmates and the community. This absence of support can significantly impact his ability to cope and adapt psychologically when facing challenges in both academic and personal aspects of life. Additionally, Mr. Wang's tendency to choose self-isolation in social situations may stem from discomfort or a self-protective instinct. However, prolonged social isolation could exacerbate his difficulties in psychological adjustment, making it more challenging to navigate the diverse pressures and challenges of campus life.

1.3 Intervention Strategies

Based on the above four issues, starting from the analytical framework of improving psychological resilience, the counselor worked hard with Mr. Wang to create a six-level linkage platform of individual, dormitory, class, department, family, school to enhance his self-confidence and reduce his feeling of powerlessness, empower him, make him believe that he is capable and valuable, and work with them in the direction of solving problems to enhance their psychological resilience. The intervention strategy is described below:

1.3.1 The micro-system of psychological resilience: individual-dormitory level

This level focuses on the positive experience in which individuals feel they have the ability to influence or solve problems, they initially try to cooperate with others to solve problems, enhance their self-confidence, and stimulate internal protective factors of psychological resilience.

(1) Focus on "problem", clarify unreasonable attributions and remove labels.

45

Regarding the diagnosis of a concussion caused by a long-distance running injury suffered by Mr. Wang when he was a child, Mr. Wang believed that his brain functioned normally when in a good mental state but abnormally when in a poor mental state. The counselor discussed this issue in depth with Mr. Wang and took several steps to clarify the situation: first, parents were invited to recall any past diagnosis of a concussion; second, counselors consulted medical resources such as doctors and Baidu for information about concussions; third, professional doctors were invited to discuss concussion-related medical knowledge with Mr. Wang. Ultimately, it was agreed upon that while Mr. Wang did suffer a concussion as a child, the human body has self-healing capabilities and he had likely recovered. It was also acknowledged that mental states can vary due to external factors or lack of sleep. Ways to improve Mr. Wang's mental state were discussed, including regularizing work and rest schedules, maintaining exercise, and actively interacting with classmates and teachers.

Regarding Mr. Wang's self-labeling as "stupid," a significant factor is his failure to progress to the university pathway as his brother and friend B, resulting in him attending a higher vocational education institution instead. He also finds courses like "Computer Application Fundamentals" challenging, contributing to a deep sense of powerlessness. The counselor and Mr. Wang reviewed his daily schedule, noting that he spends more time on mathematics. Acknowledging Mr. Wang's strong performance in advanced mathematics, the counselor suggested adjusting his schedule to focus on challenging courses and recommended participating in competitions

such as mathematical modeling to engage with his current academic life more positively.

(2) Focus on "positive relationships" and cultivate a sense of belonging.

The first is to leverage peer groups and encourage collective activities. Learn about dormitory life about Mr. Wang, such as daily schedule, spare time life, dormitory entertainment, everyone's getting along, life consumption, etc., and encourage Head of his dormitory to lead the dormitory students Participate in group activities such as the department's "Bedroom Culture Festival" to increase interaction with classmates. The second is to build personal initiative and set up tasks to understand classmates. Tell him that the teacher is happy for him and that he has special and sincere friends at every stage of his life. Continue to keep in touch with his close friends and share daily study, life, etc.; Then assign him a task to understand a person who are not in the same dormitory as him, and discuss with him what types of classmates he can get to know, such as his deskmate in class, members of the course study group, and classmates who are as good as you in high mathematics. It is recommended that Mr. Wang start from a familiar field and gradually a less familiar place like a library to know about other person; The third is to clarify and understand Mr. Wang's psychological expectations of the task. Discuss with him what would happen if he communicated with others. One would be a particularly great communication experience, and the other would be a just so-so or bad conversation. If you encounter poor communication, you need to realize that this is one of the normal results, because the

communication process is interactive and affected by many factors.

1.3.2 The meso-system of psychological resilience: class-faculty level

This level focuses on the reconstruction of the medium and micro system environment (classes, departments) that has a key influence on individual empowerment, so that individuals can obtain more resources and power, and through interpersonal interaction and mutual assistance, they can have more experience in cooperation and communication with others. We also hope to create a sense of consciousness and capability in each other's life community, reduce their sense of powerlessness, and stimulate external protective factors for psychological resilience.

(1) Focus on mental health, plan a series of themed class meetings, and create a "peer-style" growth alliance.

In order to enhance mutual understanding among students, a series of themed class meetings such as "Speak Well Workshop", "Heart Healthy Heart Sunshine", and "Basketball Game" were held in the class. During this process, the class committee is encouraged to mobilize the entire class to actively participate in activities such as event planning, material purchase, venue layout, event hosting, game sessions, and venue cleaning after the event. Through encouraging students who are willing but inactive to participate, and even "imposes" some relatively simple tasks to them to a certain extent to make them feel more involved in the activities.

(2) Contact the classroom teachers to establish a student learning system and create a "backup" teacher-student relationship.

To optimize the use of learning resources and enhance student-teacher interactions, two non-class time student learning systems were established after discussions between the counselor and department head. Firstly, a Q&A system was implemented during non-class hours. Secondly, a train & practice room was opened with on-duty instructors available to assist students. These changes were communicated to all students through class meetings and specifically informed Mr. Wang. Additionally, Mr. Wang was invited to serve as an assistant in the training room, responsible for tasks such as maintaining cleanliness, and he received a small work-study subsidy. Consequently, Mr. Wang consistently attended the training room during non-class hours each week.

1.3.3 The external-system of psychological resilience: family-school level

This level focuses on promoting individuals to understand the mobilization and utilization of opportunities and resources in their environmental context, while ensuring the provision of resources and the accessibility of the system needed by individuals. The focus is on changing or mediating immediate environmental stress situations, continuing to improve the individual's understanding of the environmental system, learning from teachers, friends, etc. how to communicate effectively with the system environment, improving individual self-efficacy, thereby stimulating the internal and external aspects of psychological resilience protective factor.

(1) Based on objective reality, guide them to apply for national scholarships

Introduce the national financial aid policy for students from families with financial

difficulties to the whole class, and guide students to apply. Finally, Mr. Wang submitted his application, and awarded the second-class national financial aid, which solved Mr. Wang's difficulties in life to a certain extent and effectively alleviated the financial strain at home caused by his father's arm injury. He was also encouraged to study actively and strive to be eligible to apply for scholarships in the next academic year.

(2) Consolidate the home-school alliance around students' school performance

First of all, establish a list of key students and communicate with their parents on a regular basis. Parents are expected to encourage and praise good behavior and remind of poor behavior. Secondly, in order to enhance parents' understanding of the school's learning, life, entertainment, etc., each class publishes a "Class Events" manuscript every month. Third, establish a parent WeChat group to build a platform of trust between home and school. Through regular activities, awards-winning notifications, class memorabilia and answers to parents' relevant questions, the communication channel between parents and the school is effectively opened and positive interaction is achieved.

- Intervention effectiveness

A few months later, in an interview, Mr. Wang reported significant improvements in both his mental state and computer skills. Mr. Wang had formed a close friendship in college. He joined a competition studio and focused on learning competitive content. Mr. Wang occasionally visited the counselor's office to assist with tasks and share updates on his studies and life.

Additionally, he actively participated in volunteer activities. When asked about his feelings, Mr. Wang expressed a more positive outlook. According to his professional teacher, he showed increased positive interaction in class. While changes in Mr. Wang's behavior were evident, the short duration of practice meant that many long-term effects remained unpredictable.

DISCUSSION

Build a good environment from the six levels of individual, dormitory, class, family, department, school, and focus on stimulating external protective factors for psychological resilience within a Student-Centered Approach.

The environments have an important impact on individual growth, and each subsystem interacts and influences each other. Therefore, under the TMER,practicing the student-centered approach lies in coordinating the relationship between various subsystems (i.e. individual, dormitory, class, family, department, school), and jointly promote the improvement of students' psychological resilience.

At the Individual and Dormitory level, focus on"basic necessities" and "positive relationships".these can enhance Wang's self-identity. A positive and supportive dormitory environment can improve his sense of belonging and security, thereby boosting his psychological resilience.

Conversely, conflicts or rejection in the dormitory may have a negative impact on him.

At the class level, create a "peer-style" growth alliance. Wang's gradual increase in interaction with classmates and support from classmates directly affect Wang's mental health and give him a positive relationship experience. This is supported by Ong et al.(2006), who found that experiencing positive emotions over time helps highly resilient individuals recover more effectively from daily stress.At the Department level,create a "backup" teacher-student relationship,helping individuals overcome academic difficulties.

At the Individual and Family-School level,Consolidate the home-school alliance around students' performance in school. Gradually increasing family support, understanding, and communication can help individuals build self-confidence and strong psychological resilience, enabling them to face academic and interpersonal challenges with greater calmness. As Killgore et al. (2020) conducted a study with 1,004 U.S. adults during the COVID-19 pandemic and found that those who perceived more social support from family, friends, and significant others had greater psychological resilience.

Consolidating the Individual's Inner Self from Three Levels: Ability Improvement, Opportunities Acquisition, and Self-Efficacy Enhancement, with a Focus on Stimulating the Internal Protective Factors of Psychological Resilience within a Student-Centered Approach

By effectively coordinating events at various levels, we can maximize the individual's dominance and participation in various events, overcoming the individual's addiction to inherent cognition and behavior. Once the individual's internal cognition, emotion, and behavior build a positive self-awareness, this ultimately enables the individual to move from ability improvement, opportunities acquisition to an improvement in self-efficacy, thereby stimulating internal protective factors for psychological resilience.

Ability Improvement: To enhance students' abilities, it is essential to provide them with tailored educational programs that address their unique needs and strengths. This may include providing additional resources, such as tutoring or mentorship from the backup teacher-student relationship and peer-style growth alliance, to support students in overcoming challenges and achieving their goals.

Opportunities Acquisition: Creating opportunities for students to engage in meaningful experiences is crucial for fostering their psychological resilience. This can involve offering group activities, and competition club projects that allow students to explore their interests and develop new abilities professionally. By providing diverse opportunities, counselors can help students build a sense of belonging and positive relationships, which can contribute to their resilience.

Self-Efficacy Enhancement: Enhancing students' self-efficacy is vital for promoting their psychological resilience. Counselors can achieve this by setting realistic expectations, providing positive feedback, and encouraging self-reflection about activities to help students recognize their

progress and build confidence in their abilities.

REFERENCES

Bai, S. X., & Li, M. F. (2005). Mechanism Creativity of Students 'Work in New Era. *Journal of Chengde Petroleum College*, 7(1), 4.

Brodsky, A. E., & Cattaneo, L. B. (2013). A transconceptual model of empowerment and resilience: Divergence, convergence and interactions in kindred community concepts. American journal of community psychology, 52, 333-346.

Chan, W. Y., Cattaneo, L. B., Mak, W. W. S., & Lin, W. Y. (2017). From moment to movement: Empowerment and resilience as a framework for collective action in Hong Kong. *American Journal of Community Psychology*, 59(1-2), 120-132.

Chen, Y. Y. (2023). Regional practice of cultivating psychological resilience among junior high school students under the background of "double reduction." *Mental Health Education in Primary and Secondary Schools*, 27, 71-74.

Chia-Yuan Tu. (2013). A study on the transformative learning process of empowering elementary school teachers when facing teaching difficulties. Thesis, *Department of Adult and Continuing Education, National Chung Cheng University*, 2013, 1-200.

Gao, Y. D. (2022). A review of research on adolescent psychological resilience. *Chinese Psychology*, 12(4), 110-113.

General Office of the State Council of China. (2015). *Opinions on further strengthening and improving the propaganda and ideological work of universities under the new situation*. Retrieved from https://www.gov.cn/xinwen/2015-01/19/content_2806434.htm

General Office of the State Council of China. (2016). *Strengthening and improving the ideological and political work of universities under the new situation* (Zhongfa [2016] No. 31). Retrieved from http://dangjian.people.com.cn/n1/2017/0228/c117092-29111665.html

Huang, W. J., Wu, P. P., & Sun, Y. (2023). A randomized controlled trial study on universal psychological intervention in schools based on improving children's psychological resilience. *Chinese Journal of School Health*, 44(7), 969-973.

Killgore, W. D., Taylor, E. C., Cloonan, S. A., & Dailey, N. S. (2020). Psychological resilience during the COVID-19 lockdown. *Psychiatry research*, *291*, 113216.

Ministry of Education of the People's Republic of China. (2017). *Regulations on the construction of counselor teams in higher education institutions* (Order No. 43). Retrieved from https://www.gov.cn/gongbao/content/2017/content_5244874.htm

Ministry of Education of the People's Republic of China. (2017). *Regulations on the management of students in higher education institutions* (Order No. 41). Retrieved from

http://www.volvo.com/environment/index.htm

Ong, A. D., Bergeman, C. S., Bisconti, T. L., & Wallace, K. A. (2006). Psychological resilience, positive emotions, and successful adaptation to stress in later life. *Journal of Personality and Social Psychology, 91*(4), 730–749. https://doi.org/10.1037/0022-3514.91.4.730

Qian, C. (2020). Exploration of college student affairs management based on the "three-body and dual-channel" model. *Jiangsu Gaojiao*, 1.

Sheng, Q. (2015). Practical problems and optimization of ideological and political education for college students: From the perspective of innovating social governance system. *Ideological and Theoretical Education*, (11), 94-98.

Xu, L. J., Liu, Z., & Tian, X. (2020). Empowerment and system construction: Reflections on the experience of social work intervention in education poverty alleviation: A case study of H University's summer education project in S Village, Yunnan Province. *Journal of East China University of Science and Technology: Social Science Edition*, 35(2), 62-72.

Yang, M. (2022). Relationship between physical exercises, sleep quality, and psychological well-being. *Zhongguo Xiaoyi*, 007, 036.

Zheng Y.K. (2017). The path of empowerment for special student groups in colleges and universities under the perspective of campus stratification. *Journal of Chongqing Jiaotong University (Social Science Edition)*, 17(4), 138.

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

THE INFLUENCE OF POLITICAL KNOWLEDGE AND INTEREST ON POLITICAL PARTICIPATION AMONG NIGERIAN ELECTORATES IN LAGOS STATE, NIGERIA

Chinedu O. Onyewuchi [1] *, **Jayum Anak Jawan [2]**, **Zaid Ahmad [3]**, **Murni Wan Mohd. Nor[4]**

[1, 2, 3, 4,] *Department of Government and Civilization Studies, Faculty of Human Ecology, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia*

ABSTRACT

This study investigates the influence of political knowledge and political interest on political participation among Nigerian voters in Lagos State, guided by the Civic Voluntarism Model (CVM). Utilizing a survey method, data was collected from 520 Nigerian voters and analyzed using SPSS Statistics 29.0 with correlation and multiple regression techniques to explore the relationships between political knowledge, political interest, and participation. The results indicate significant positive correlations between both political knowledge and interest with political participation. Specifically, political interest (p = 0.046) and political knowledge (< 0.001) were found to be significant predictors of participation. The findings reveal that individuals with higher levels of political knowledge are more likely to engage in activities like voting, attending political meetings, and participating in campaigns. Additionally, political interest was shown to motivate greater involvement in political processes, reinforcing the motivational aspect of political interest in fostering democratic engagement. The study highlights the importance of political education and the nurturing of political interest to enhance citizen participation in Nigeria's democracy. The findings suggest that targeted civic education and awareness programs are crucial in improving political literacy, enabling Nigerians to make informed decisions and engage meaningfully in democratic processes. This study offers valuable contributions to the field of political behavior, particularly in emerging democracies, by providing deeper insights into the factors influencing political engagement in Nigeria and stressing the need for comprehensive strategies to boost voter participation and strengthen democratic consolidation.

Corresponding author:
Chinedu Onyenachi Onyewuchi.
Email: leidychichi1@gmail.com

INTRODUCTION

Political participation is essential for democratic governance, allowing citizens to influence decision-making and hold leaders accountable (Nissen, 2021; Hue & Tung-Wen Sun, 2022; Asamoah, 2024). However, despite being the most populous Black nation in the world and the largest in African democracy, Nigeria has continued to witness steady decline in the political participation of its citizenry (Adenrele & Olugbenga, 2017), raising concerns about its democratic health (Amata, 2023; INEC, 2023).

In Nigeria, understanding the drivers of political participation is critical, especially given the country's unique socio-political context (Ojo, 2022; John-Eke & Gabriel, 2023). Enhancing participation is critical for democratic consolidation, (Ezeudu, 2023; Yakubu & Bala, 2024) and political interest and knowledge play a vital role in influencing this engagement (Bimber et al., 2015; Alelaimat, 2023; Mustapha et al., 2023; Arijeniwa & Nwaoboli, 2023; Sabo & Kente, 2024).

Nigerians often distrust their political leaders, who are seen as self-serving and unresponsive, leading to widespread discontent and disengagement (Falade, 2015; Ogidi, 2020; Orukpe, 2021; Igiebor, 2022; Ewum & Obi, 2024). Voter turnout has steadily declined from 52.26% in 1999 to a low of 26.72% in 2023, reflecting growing voter fatigue and disillusionment (Dataphyte, 2023). This distrust stems from Nigeria's vague and easily manipulated electoral laws and the ineffectiveness of its electoral body, which allows political actors to operate with impunity (Agbaje & Adejumobi, 2006). As a result, citizens often feel their votes are meaningless, merely confirming choices made by elites (Fawole, 2005; Roberts, Ijaiya, & Adewumi, 2023). While social media and traditional forms of political socialization have increased political awareness, challenges remain in fostering long-term civic engagement (Almond & Verba, 1963; Okoro & Nwafor, 2013; Arijeniwa & Nwaoboli, 2023; Okoji; & Azeez, 2023).

Despite available channels for gaining political knowledge, awareness among Nigerians remains uneven. While urban youth are increasingly engaged, many Nigerians lack sufficient political knowledge due to educational inequalities, limited access to information, and socio-economic barriers (Ojebode, 2011; Reichert, 2016). Challenges in rural education, misinformation, and propaganda further hinder effective political participation (Pate et al., 2019; Ogwezzy-Ndisika et al., 2023; Olan et al., 2024).

Political interest and knowledge are key to political participation in Nigeria, with interest driving engagement and knowledge enabling informed participation (Amechi et al., 2018; Oluwatosin et al., 2020; Tambe & Kopacheva, 2024). Addressing barriers to knowledge and fostering interest are crucial for enhancing active citizenship.

This study uses the Civic Voluntarism Model (CVM) to explore how political knowledge and interest influence participation in Nigeria. The CVM suggests that participation is driven by personal resources, psychological involvement, and recruitment networks (Verba et al., 1995). The research objective is: 1) Investigate the relationship between political knowledge and participation, and 2) Assess the impact of political interest on participation.

Political Knowledge and Political Participation

Political knowledge, defined as individuals' awareness and perception of political activities, institutions, and civic matters (Delli Carpini & Keeter, 1996), is strongly linked to political participation. Research consistently shows that individuals with greater political knowledge are inclined to participate in political events like, voting, attending political meetings, and participating in campaigns (Galston, 2001; Ojo, 2014; Le & Nguyen, 2021). Studies across various democracies confirm that political knowledge is a key predictor of political engagement (Luskin, 2002; Milner, 2002).

The relationship between political knowledge and voting behavior has been the focus of much research, with media consumption identified as a key influencing factor (Dimitrova et al., 2014; Lee, 2021; Héroux-Legault, 2023). Furthermore, studies have compared political knowledge across various sub-groups, including gender differences (Dolan & Hansen, 2020; Van der Pas & Aaldering, 2020; Kraft & Dolan, 2023). Social media, on its part has played a significant role in enhancing political knowledge by making information more accessible. Liu and Wang (2014) argue that the convenience of accessing information online contributes to greater political awareness among social media users. Oluwatosin et al. (2020) support this view, noting that mass media's socialization and educational roles increase political understanding.

Ahmad et al. (2019) observed that youths in rural Pakistan and Malaysia are highly active on social media, using it for both online and offline political activities. Halim

et al. (2021) found that social media use among young people correlates with higher political knowledge, potentially leading to greater participation in online political events.

However, the influence that social media have on political knowledge is not entirely positive. The ease with which misinformation spreads on these platforms can undermine political knowledge. Cacciatore et al. (2018) found that despite Facebook's widespread use for news consumption, it was inversely linked with high degrees of political knowledge. This highlights the need for accurate and unbiased information from traditional media, educational institutions, and face-to-face interactions.

Political knowledge is crucial for a functioning democracy, enabling an informed electorate to make decisions that align with public interests. Without it, voters may elect candidates who do not truly represent them, weakening the democratic process. Beyond voting, political knowledge entails understanding government functions, civic engagement, and citizens' rights and responsibilities (Oluwatosin et al., 2020).

Although online platforms have expanded access to political information, misinformation and echo chambers pose serious challenges (Olan et al., 2024). This underscores the importance of traditional media, education, and social interactions in providing reliable political information. Integrating media literacy into education can help individuals critically assess political content, fostering a more informed

54

electorate (Egbokhare & Idowu, 2022; Nasir & Ciroma, 2023; Yang & Li, 2024).

Political Interest and Political Participation

Political interest as defined by Shani (2009) refers to the motivation and perceived necessity to participate in politics, encompassing attention, concern, and dedication to political affairs (Prior, 2010; Holleque, 2011). As Verba et al. (1995) noted, people with political interest are more disposed to seek information, engage in discussions, and participate in political activities.

Holleque (2011) identifies three main factors influencing political interest: individual demographics (age, gender, education), early political socialization (family influence and political discussions during upbringing), and broader social context (community and political environment). These factors Bimber et al. (2015) buttressed helps to shape individual's political interest.

In Nigeria, political interest is influenced by power struggles, flawed electoral processes, and widespread public distrust. Despite democratization, many Nigerians remain cynical and lack confidence in the political system due to vague electoral laws and an ineffective electoral body (Agbaje & Adejumobi, 2006). This has led to a lack of confidence in the political process, where citizens feel their votes do not count, as outcomes are often predetermined by elites (Fawole, 2005). Voters merely participate in a pretense of confirming choices already made by powerful political figures.

Nigeria's electoral politics has faced significant challenges due to both institutional and experiential deficiencies, hindering democratic renewal and consolidation. While factors like poverty and electoral violence further diminish political interest (Angerbrandt, 2018; Laakso, 2019; Olowojolu et al., 2019; Ainoko et al., 2024), active engagement in politics can enhance both interest and efficacy (Brady et al., 1995). This suggests a cyclical relationship where increased participation can promote greater political interest and efficacy, potentially leading to a more engaged and informed electorate.

THEORETICAL FRAMEWORK

Civic Voluntarism Model (CVM)

The Civic Voluntarism Model, postulated by Verba, Schlozman, and Brady (1995), provides a comprehensive framework for understanding political participation. The CVM posits that political participation is driven by three significant issues: resources (time, money, and civic skills), engagement (political interest and efficacy among others), and recruitment networks (social connections and organizational affiliations). It highlights the need for citizens to have the interest, means, and motivation to participate.

Verba et al. (1995) sought to understand why people abstain from political

participation, identifying three main barriers: insufficient resources, lack of engagement, and limited access to recruitment networks. They argue that time, money, and civic skills are essential for participation. Psychological engagement starts early through influences such as family, church, and school, and continues in adulthood via the workplace and voluntary organizations. They assert that people may abstain from participation because they cannot, do not want to, or are not asked.

Figure 1: The Civic Voluntarism Model
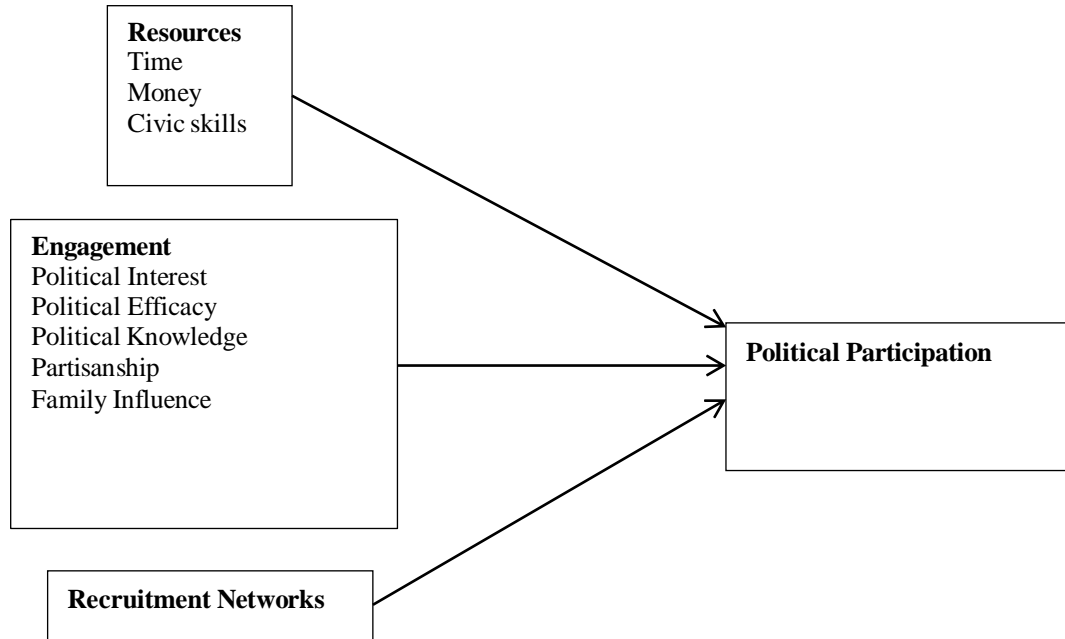
Civic Voluntarism Model by Verba, Schlozman & Brady (1995)

Theories of political participation have long focused on measuring psychological engagement, which includes factors like political interest, efficacy, and knowledge (Ramey et al., 2015; Barrett & Pachi, 2019; Kusumarani & Zo, 2019; Fakih & Sleiman, 2024). These factors are thought to drive political involvement. However, Verba et al. (1995) contend that psychological engagement may result from, rather than cause, political activity. Their Civic Voluntarism Model suggests a bidirectional relationship, where participation enhances engagement, which in turn motivates further participation.

This study examines political knowledge and interest as key aspects of psychological engagement, aiming to understand their impact on political participation among Nigerian electorates. The research will test the following hypotheses:

Ho1: There is no relationship between political interest and political participation among Nigerian electorates.

Ha1: There is a relationship between political interest and political participation among Nigerian electorates

Ho2: There is no significant relationship between political knowledge and political participation among Nigerian electorates

Ha2: There is a significant relationship between political knowledge and political participation among Nigerian electorates

Ho3: Political knowledge and political interest do not predict political participation among Nigerian electorates

Ha3: Political knowledge and political interest predict political participation among Nigerian electorates

METHODOLOGY

This study employed a quantitative approach, utilizing the survey method. Data collection involved a questionnaire as the primary source, accompanied by secondary data from archived records. It measures political knowledge through questions on political processes, interest by attention to political issues, and participation by engaging in events like voting and attending meetings. A multiple regression analysis was conducted to assess the impact of political knowledge and interest on participation.

The respondents for this study comprised Nigerian citizens, both male and female, aged 18 years and above, in line with INEC's (2019) definition of voting age. The research was situated in Lagos State, with an estimated population of 21 million (NBS, 2016), which represents all ethnic groups in the country. The sample population was selected from both the northern and southern regions of Nigeria, residing in Lagos State.

A stratified random sampling method was used, where the population was first divided into strata (Mondal & Mandal, 2020). Following this, a simple random sampling technique was used to administer the questionnaires, ensuring that each individual in the study population had an equal probability of being selected (Lohr, 2019).

Data Collection and Data Analysis

Before the main study, a pilot study was carried out to assess the reliability of the research instrument and ensure that respondents clearly understood the questions. The research questions, adopted from previous studies (Verba et al., 1995; Bimber, et al., 2015; Gil de Zúñiga, Diehl, and Ardévol-Abreu (2017), required a pilot test to validate the instrument's suitability for the research.

The reliability of the research tool was evaluated through a pilot test involving 30 respondents. As expounded by Bujang, et al., (2024), a minimum of 30 respondents is sufficient to evaluate the reliability of the questionnaire. The results indicated that the instrument was reliable, as all variables in the study recorded a Cronbach's Alpha value of 0.7 or higher for both the independent and dependent variables.

Data for this study were collected using structured questionnaires with a five-point Likert scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree. A total of 520 completed questionnaires were returned and analyzed.

Data collected were input into the Statistical Package for Social Sciences (SPSS) software for analysis. Preliminary steps included examining and screening the data by running basic frequency distributions and descriptive statistics to identify missing values and incorrectly coded items.

Pearson correlation was used for statistical analysis to examine the relationships between variables, while multiple regression analysis was carried out to assess the predictive power of the independent variables on the dependent variable. The model adhered to the principle of approximate linear relationships, as proposed by (Hair et al., 1995; Kleinbaum, et al., 2007; Tabachnick, Fidell, & Ullman, 2013; Mardia, Kent, & Taylor, 2024). Specifically, a variance inflation factor (VIF) below 10 was observed, indicating negligible collinearity. Thus, the model used in the study was free of severe collinearity issues, ensuring the reliability of the result.

FINDINGS

Political Interest

This study employs a five-item index to assess political interest of Nigerians. These five items are: 'I pay attention to political news and events', 'I am drawn to information about politics and public affairs', 'My interest in politics is influenced by good governance', 'Citizen involvement in government policies increases my interest in politics', 'Political party ideologies enhance my interest in governance'. Participants in the study were asked to indicate their level of agreement with the items, using a scale from 1 (strongly disagree) to 5 (strongly agree).

Based on the detailed analysis of the political interest variable with an average (Mean = 3.87 – SD = 0.951), the results indicate that most respondents agreed with the statement "I pay attention to political news and events" with a score of (M =3.91 – SD =.926). Equally, Similarly, many participants agreed with the statement "I am drawn to information about politics and public affairs" with (M=3.93 – SD=.963). On the question of "My interest in politics is influenced by good governance", majority of respondents overtly agreed with the statement, resulting in a mean score and standard deviation of (M =4.13 – SD =.860). Conversely, the participants agreed that "Citizen involvement in government policies increases my interest in politics" with a mean score and SD of (M =3.96 – SD =.881). Lastly, majority of the respondents agreed that "Political party ideologies enhance my interest in governance" with a mean score and SD of (M =3.41 – SD =1.124) as shown in (Table 1).

Table 1: Respondents Answers on Political Interest

Item	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree ((%)	Strongly Agree (%)	Mean	SD
PI1: I pay attention to political news and events	11 (2.1%)	31 (6.0%)	86 (16.5%)	253 (48.7%)	139 (26.7%)	3.92	.926
PI2: I am drawn to information about politics and public affairs	17 (3.3%)	36 (6.9%)	49 (9.4%)	280 (53.8%)	138 (26.5%)	3.93	.963
PI3: My interest in politics is influenced by good governance	11 (2.1%)	13 (2.5%)	57 (11.0%)	254 (48.8%)	185 (35.6%)	4.13	.860
PI4: Citizen involvement in government policies increases my interest in politics	7 (1.3%)	21 (4.0%)	108 (20.8%)	235 (45.2%)	149 (28.7%)	3.96	.881
PI5: Political party ideologies enhance my interest in governance	35 (6.7%)	69 (13.3%)	155 (29.8%)	170 (32.7%)	91 (17.5%)	3.41	1.124

N=520 - Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree, = Average Mean 19.35/5 = 3.87; Average SD 4.754/5 =0.951

Based on the above, the highest mean (PI3: 4.13) from the question, "My interest in politics is influenced by good governance," indicates a high level of agreement among respondents that good governance significantly influences their political interest. This suggests that respondents value transparent and effective governance, which motivates their engagement in political processes. Also, the relatively low standard deviation (SD = 0.860) demonstrates a high level of consistency in their responses.

On the other hand, lowest mean (PI5: 3.41) based on the question "Political party ideologies enhance my interest in governance," shows a relatively weaker agreement with this statement. It is however important to point out that a mean of 3.41, is still above the neutral threshold (3.0), indicating that political party ideologies have some influence, although less significant than other factors like governance or citizen involvement. In this case, the higher standard deviation (SD = 1.124) suggests the varied ways respondents perceive this factor. Ultimately, the overall average mean across

all items (3.87) indicates a generally high level of political interest among respondents. As most of the items score near to or above this average, reflecting positive engagement with politics.

For most of the items, the standard deviations (Average SD = 0.951) were relatively low, indicating constant responses across the sample. However, the response of PI5 shows a different view, pointing to opposing opinions about the

role of political ideologies. Overall, the results suggest that political interest among respondents is generally good, with governance and citizen involvement acting as strong drivers of engagement. While political party ideologies show lower influence, they still contribute positively. Hence, in relation to the country, reducing differences in perceptions of political ideologies and promoting strong governance practices could further enhance political interest.

Political Knowledge

This study employs a five-item index to assess political activity on the Internet. These five items are: 'Political parties and candidates often fail to follow their own party principles, 'The existing number of political parties is insufficient', 'Nigeria should use a two-party system only', 'A bicameral system (Senate and House of Representatives) is suitable for Nigeria', 'I pay close attention to the proceedings and debates of the National Assembly'. The research participants were requested to specify their level of agreement with the items on a scale from 1 (strongly disagree) to 5 (strongly agree).

Drawing from the detailed analysis of the political knowledge variable as shown in the table below, with its average mean and standard deviation, (M=3.126 – SD=1.153), the results indicate that many respondents in the study agreed with the statement that

"Political parties and candidates often fail to follow their own party principles" with mean and SD of (M =3.58 – SD =1.228). Most of the respondents however disagreed that "The existing number of political parties is insufficient" with a mean score and SD of (M=2.34 – SD=1.022). On the question of whether "Nigeria should use a two-party system only" with a mean score and SD of (M=2.97 – SD=1.261), respondents were divided and neither agreed nor disagreed. Similarly, participants in the study neither disagreed nor agreed with the statement that "A bicameral system (Senate and House of Representatives) is suitable for Nigeria" with a mean score and SD of (M=3.27 – SD=1.234). Also, on the last question "I pay close attention to the proceedings and debates of the National Assembly" with a mean score and SD of (M=3.47 – SD=1.022).

Table 2:   Respondents Answers on Political Knowledge

Item	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	SD
PK1: Political parties and candidates often fail to follow their own party principles	42 (8.1%)	62 (11.9%)	110 (21.2%)	166 (31.9%)	140 (26.9%)	3.58	1.228
PK2: The existing number of political parties is insufficient	127 (24.4%)	166 (31.9%)	163 (31.3%)	53 (10.2%)	11 (2.1%)	2.34	1.022
PK3: Nigeria should use a two-party system only	63 (12.1%)	136 (26.2%)	171 (32.9%)	54 (10.4%)	96 (18.5%)	2.97	1.261
PK4: A bicameral system (Senate and House of Representatives) is suitable for Nigeria	77 (14.8%)	32 (6.2%)	165 (31.7%)	165 (31.7%)	81 (15.6%)	3.27	1.234
PK5: I pay close attention to the proceedings and debates of the National Assembly	28 (5.4%)	51 (9.8%)	159 (30.6%)	211 (40.6%)	71 (13.7%)	3.47	1.022

N=520 - Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree, = Average Mean 15.63/5 = 3.126; Average SD 5.767/5 =1.153

From the result of this data, the highest mean (PK1: 3.58) based on the question "Political parties and candidates often fail to follow their own party principles," shows that respondents generally agree that political parties and candidates often do not abide by their stated principles. They are equally aware of these inconsistencies in political practices, reflecting a critical understanding of party behavior. The standard deviation (SD = 1.228) in this case, indicates moderate disparity in opinions, signifying some differences in how strongly respondents perceive this issue.

On the other hand, the lowest mean (PK2: 2.34) from the question, "The existing number of political parties is insufficient," shows disagreement with the statement, indicating that respondents generally believe the current number of political parties is adequate. This suggests limited support for increasing the number of parties in Nigeria. The relatively low standard deviation (SD = 1.022) suggests consistent views among respondents on this topic.

Basically, the average (Mean = 3.126) across all items suggests that respondents hold moderate levels of political knowledge. They appear to critically engage with certain political concepts but

are less inclined to agree with statements about the inadequacy of political parties or exclusive support for a two-party system. The standard deviations (Average SD = 1.153) indicate different levels of interest and understanding among respondents on different political topics.

Generally, results from respondents suggest that political knowledge is generally moderate, with the highest mean reflecting a critical understanding of political party behavior and the lowest mean indicating satisfaction with the existing number of political parties. While there are some differences in opinions based on the responses, the overall findings indicate an average level of engagement with political concepts. This suggests that strengthening civic education and making political information more accessible could further improve political knowledge.

Political participation

Political communication and Internet studies often focus on campaigns. Although voting is a fundamental act of participation, it conveys minimal information. Other forms of engagement, such as contacting officials, writing letters to editors, and making financial contributions, can communicate substantially more information (Le & Nguyen, 2021). In this study, political participation was assessed using a five-item scale. One of the items included: "I call in to express my political opinion on radio or TV programs."

Following the descriptive analysis of the variable Political Participation using the data provided in the table below, with average mean and SD (M=3.416 – SD=1.292), the result indicates that most respondents supported the statement "I am currently registered to vote" with a score ((M =4.05 – SD =1.264). On the other hand, respondents were divided in their opinion with the statement "I am an active participant in a political party" with a score of (M =3.18 – SD =1.402) as they neither disagreed nor agreed in their responses. However, most respondents strongly agreed that "I have participated in political campaign activities for a candidate before" with a mean score and SD of (M =3.68 – SD =1.266). Regrettably, regarding the question "I have contributed financially to a political party" with a score (M =2.49 – SD =1.269), the majority of respondents did not agree with the assertion, noting that they have never donated to any political party. Nonetheless, on the last question, "I have engaged in activism" with a mean and SD score (M=3.68 – SD=1.259), most respondents reported having participated in activism at some point.

Table 3:   Respondents Answers on Political Participation

Item	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree ((%)	Strongly Agree (%)	Mean	SD
PP1: I am currently registered to vote	41 (7.9%)	42 (8.1%)	31 (6.0%)	143 (27.5%)	263 (50.6%)	4.05	1.264

PP2: I am an active participant in a political party	72 (13.8%)	132 (25.4%)	71 (13.7%)	121 (23.3%)	124 (23.8%)	3.18	1.402
PP3: I have participated in political campaign activities for a candidate before	38 (7.3%)	77 (14.8%)	65 (12.5%)	171 (32.9%)	169 (32.5%)	3.68	1.266
PP4: I have contributed financially to a political party	143 (27.5%)	145 (27.9%)	108 (20.8%)	81 (15.6%)	43 (8.3%)	2.49	1.269
PP5: I have engaged in activism	46 (8.8%)	51 (9.8%)	90 (17.3%)	167 (32.1%)	166 (31.9%)	3.68	1.259

N=520 - Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree, = Average Mean 17.08/5 = 3.416; Average SD 6.46/5 =1.292

The highest mean (PP1: 4.05) with the question, "I am currently registered to vote" indicates strong agreement among respondents that they are registered to vote, reflecting a high level of participation in this fundamental aspect of political engagement. This suggests that the majority of respondents are actively involved in the electoral process. Although, the standard deviation (SD = 1.264) shows some disparity in responses, but the general undertone is clearly in favor of voter registration. For the lowest mean (PP4: 2.49) "I have contributed financially to a political party," this is indicative of the fact that financial contributions to political parties are not a common form of participation among respondents, as most disagree with this statement. This suggests that financial engagement in politics may be a less accessible or less prioritized activity for the population surveyed. The SD (1.269) indicates moderate differences in response to this question, however, the overall low mean suggests that financial

contributions are not widely practiced among the respondents.

Overall, the average mean of 3.416 indicates an average level of political participation. While most respondents are registered to vote, other forms of participation like active political party involvement or financial contributions are not really to the interest of the respondents. This suggests that while many individuals engage in certain types of political participation, including activities like joining a political party or donating money, are less preferred.

The implication is that while the standard deviations (Average SD = 1.292) are generally moderate, some items reveal higher differences for example PP2, with SD = 1.402), indicating that there are mixed levels of engagement in activities like political party involvement and activism. Which reflects differing attitudes and practices related to political participation.

Essentially, the results show that political participation is generally average among the respondents, with the highest mean indicating strong voter registration. However, participation in activities like political party involvement and financial contributions to parties is relatively low, highlighting that while many people participate in the voting process, more engaged participation in other methods of political participation are less common. The overall trend points to moderate engagement, with opportunities for improving participation through education, outreach, and more accessible political activities.

Relationship Between Political Interest and Political Participation

Ho1: There is no relationship between political interest and political participation among Nigerian electorates.

Ha1: There is a relationship between political interest and political participation among Nigerian electorates

The Pearson correlation test results exposed a positive and statistically substantial relationship between political interest and political participation, with a p-value below 0.001, well under the 0.05 significance threshold. This finding demonstrates a strong and meaningful correlation between the two variables. Consequently, the null hypothesis (Ho1) is rejected and Ha1 accepted, confirming the presence of a statistically significant relationship.

The correlation coefficient (r = .317**) further confirms a moderate, positive, and significant relationship, meaning that persons with better political interest are more inclined to participate in political activities. This suggests that increased

political interest leads to greater political participation, aligning with findings from Verba et al. (1995) and Bimber et al. (2015), which also identified a significant connection among political interest and participation.

The analysis of political interest and participation in Nigeria reveals that while a significant portion of the population expresses an interest in political participation, this enthusiasm is often hindered by systemic challenges such as bad governance, corruption, lack of accountability, a compromised judiciary and exclusion from policymaking (Abonyi, 2023). Other factors contributing to diminished engagement include economic stagnation and ineffective leadership, which reduce citizens' trust and willingness to participate in political processes (Eze, Areji, & Odey, 2023; Chukwudi, 2023). This complex environment reflects the barriers to translating initial political interest into sustained action.

Political interest is a critical factor influencing political participation, as it shapes individuals' engagement in civic activities like voting, attending meetings, and participating in political debates (Levy & Akiva, 2019; Le & Nguyen, 2021). Studies have demonstrated that individuals who exhibit advanced levels of political interest are more likely to engage actively in political processes (Verba & Nie, 1972; Brady, Verba, & Schlozman, 1995). Furthermore, political interest has been identified as a key predictor of voter turnout, with those more interested in politics demonstrating greater likelihood to vote (Brady et al., 1995). As Prior (2010) suggests, political interest can serve as a mobilizing force, converting political

awareness into concrete action, which is crucial for the health of democratic societies.

Thus, while political interest exists within the Nigerian population, the barriers caused by governance failures and societal challenges undermine its transformative potential into broader political participation.

Relationship Between Political Knowledge and Political Participation

Ho2: There is no significant relationship between political knowledge and political participation among Nigerian electorates

Ha2: There is a significant relationship between political knowledge and political participation among Nigerian electorates

The Pearson's correlation analysis conducted on political knowledge and political participation revealed a positive and statistically significant relationship exists between the two variables, with a p-value of 0.001, which is below the 0.05 significance threshold. This suggests a strong, statistically significant correlation, resulting in the rejection of the null hypothesis Ho2. The findings demonstrate that increased political knowledge is associated with higher political participation, supporting hypothesis Ha2.

With a correlation coefficient of r = .420**, the results signify a moderate, positive correlation between political knowledge and political participation. This implies that people with higher political knowledge are more inclined to participate in political happenings, reflecting the idea that informed citizens are better equipped to understand the importance of their participation. As political knowledge

increases, so does political participation, reinforcing earlier results of Verba et al. (1995) and Delli Carpini and Keeter (1996), which also found a significant connection amid political knowledge and participation in democratic processes.

The connection amongst political knowledge and political participation plays a crucial role in fostering an active and informed citizenry, particularly in democratic societies like Nigeria. Research has demonstrated that individuals with greater political knowledge are extra disposed to engage in various political actions, including voting, joining political rallies, and reaching out to public representatives (Delli Carpini & Keeter, 1996; Verba et al., 1995). According to Prior (2007; 2014), political knowledge acts as a key factor in transforming citizens into informed and active participants, contributing to a more robust democracy. This positive correlation underlines the importance of information in motivating citizens to participate in democratic processes.

In the context of Nigeria, political knowledge plays a significant role in empowering citizens to navigate the complexities of governance and electoral processes. However, the country's political setting is often characterized by low levels of civic education, political disenfranchisement, and corruption, which deter the full participation of many citizens. As a result, despite the potential for political knowledge to drive engagement, many Nigerians remain disengaged due to a lack of accessible and credible political information (Abonyi, 2023; Arijeniwa & Nwaoboli, 2023). Bassey, et al., 2024).

In this regard, political knowledge is not only important for increasing voter turnout but also for fostering a more informed electorate that can hold political leaders accountable and advocate for policy reforms (Brady, Verba, & Schlozman, 1995). Therefore, enhancing political knowledge through educational initiatives and media outreach is critical to improving political participation in Nigeria and strengthening its democracy.

Multiple Regression

Ho3: Political knowledge and political interest do not predict political participation among Nigerian electorates

Ha3: Political knowledge and political interest predict political participation among Nigerian electorates

The main goal of this regression analysis is to investigate the predictive power of the Civic Voluntarism Model (CVM) in understanding the factors influencing political participation. Specifically, the analysis explores how political interest and political knowledge collectively predict political participation. Thus, the multiple linear regression analysis of the independent variables shows that political interest and political knowledge with a p-value of (.046) and <.001 simultaneously are significant predictor of political participation.

By identifying significant predictors of political participation, this study seeks to provide empirical insights into the relationship of these factors and their implications for developing active political participation. The results aim to clarify the roles of significant predictors like political interest and political knowledge, thereby proffering insights for further theoretical and practical implications in political participation studies.

Table 4: Coefficientsa of Predictors in the Model

Model		Unstandardized Coefficients		Coefficients[a] Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-3.513	1.303		-2.696	.007
	PoI. Intrest	.114	.057	.072	2.003	.046
	Pol. knowL	.175	.045	.144	3.846	<.001

a. Dependent Variable: Political Participation

RESULT AND DISCUSSION

The study investigates the influence of political interest and political knowledge on political participation among Nigerian electorates in Lagos State, with a focus on understanding how these factors shape democratic engagement. The results from Pearson's correlation and multiple linear regression analyses provide empirical support for the hypotheses, demonstrating the importance of interest in politics and knowledge in promoting political events. The results demonstrate a positive and statistically significant correlation between political interest and political participation (r = .317**, p < .001), suggesting that people with elevated political interest are more disposed to engage in political activities, like voting, activism, or participation in campaigns. Political interest, conceptualized as the motivation to follow and engage with political events and discussions, emerges as a critical driver of participation, consistent with studies emphasizing its role in boosting awareness and motivating democratic action (Verba, et al., 1995; Dalton, 2018).

However, the moderate correlation coefficient suggests that other structural and contextual factors, such as distrust, corruption, and weak institutional frameworks, may also influence participation, potentially limiting the impact of political interest alone (Giommoni, 2021; Oluseye, 2024). While political interest contributes significantly, systemic issues highlight the need for broader interventions to overcome these barriers. Similarly, political knowledge demonstrates a robust, positive relationship with political participation (r = .420**, p < .001), with individuals possessing greater knowledge of political systems, processes, and actors are more motivated to get participate in civic matters. This finding emphasizes the role of informed citizenship in nurturing meaningful political engagement, aligning with the framework of participatory democracy, which posits that informed citizens are more persuaded to participate in civic activities (Delli Carpini & Keeter, 1996; Zittel, 2006; Ardanaz et al., 2023)

The multiple linear regression analysis underscores the combined predictive power of political interest and knowledge, with p-values of .046 and <.001, respectively. While political knowledge emerges as a stronger predictor, the interplay between these variables suggests that interest drives motivation, while knowledge provides the capacity and tools for effective engagement. These findings emphasize the need for a dual approach to promoting participation, combining strategies to stimulate interest and improve knowledge.

The results carry important implications for Nigerian democracy, where the dearth of meaningful representation, coupled with systemic barriers, has historically contributed to political apathy (Onyenachi, 2018; Akoji & Richard, 2024; Usman & Patrick, 2024). Civic education programs can play a fundamental role in equipping citizens with the necessary knowledge to navigate and engage with political processes, while efforts to make politics more transparent, inclusive, and responsive to citizens' needs can enhance trust and interest in governance. These findings align with global trends demonstrating that democracies thrive when citizens are both

informed and engaged (Verba et al., 1995; Dalton, 2018).

For Nigeria, where voter turnout has declined in recent elections (Oyoru, 2023; Olatunji & Ayo, 2024), these insights offer actionable pathways to reverse political disengagement. Key stakeholders, such as government agencies, civil society organizations, and political parties, must prioritize strategies to improve political literacy and foster genuine interest in governance. The study highlights the significant influence of political interest and knowledge on participation, emphasizing the importance of an informed and motivated citizenry in driving democratic engagement. However, systemic challenges in the Nigerian political landscape must be addressed to realize the full potential of these predictors, ensuring a more participatory democracy.

CONCLUSION

This study highlights the crucial role of political interest and knowledge in influencing political participation among Nigerian voters. The findings confirm that persons with greater political interest and knowledge are significantly predisposed to partake in political activities, including voting, activism, and campaign involvement. While political interest motivates citizens to follow political events and participate, political knowledge equips them with the tools and understanding necessary for effective engagement. These results align with global democratic principles that emphasize the importance of an informed and interested electorate in fostering vibrant political participation.

However, the study also reveals that systemic challenges, including distrust, corruption, and weak institutional frameworks, limit the full realization of these predictors. While political interest and knowledge are significant drivers, the moderate correlation coefficients suggest that structural barriers undermine the potential of even the most motivated and informed citizens. These systemic issues highlight the need for broader institutional reforms and interventions aimed at enhancing transparency, inclusiveness, and accountability in governance. Addressing these barriers is critical to harnessing the full potential of political interest and knowledge in promoting democratic participation.

The findings carry important implications for Nigeria's democratic consolidation. Efforts to strengthen political literacy through civic education programs and targeted awareness campaigns are essential for equipping citizens with the knowledge needed for meaningful engagement. Similarly, boosting political interest requires creating a political environment that is responsive and reflective of citizens' needs. Stakeholders, such as government bodies, civil society organizations, and political parties, must collaborate to address systemic challenges and build a more participatory democracy. By doing so, Nigeria can empower its citizens to play a more active role in governance, ensuring a more robust and inclusive democratic process.

SUGGESTION AND RECOMMENDATION

Based on the study's findings, several important recommendations can be made to improve political participation in Nigeria. A comprehensive civic education program aimed at improving political literacy is essential, especially among young voters. Educational institutions, including schools, universities, and civil society organizations, should take an active role in educating citizens about the political system, electoral processes, and the importance of active political engagement. Such initiatives will equip Nigerians with the knowledge needed to make informed decisions, thereby encouraging meaningful participation in the democratic process.

In addition to improving political knowledge, efforts to enhance political interest are equally vital. While knowledge plays a significant role in participation, political interest is the driving force that motivates individuals to engage in political activities. Creating opportunities for citizens to interact with political debates and events, such as town halls, public discussions, and debates with political leaders, can foster greater engagement. Media platforms should also be used to present political issues in an accessible and engaging manner, sparking curiosity and encouraging broader participation. These combined efforts will not only increase interest but also ensure sustained involvement in democratic practices.

Moreover, addressing the structural barriers that hinder political engagement such as distrust, corruption, and weak institutional frameworks is crucial for fostering broader participation. This requires comprehensive reforms aimed at improving transparency, accountability, and responsiveness within government institutions. Electoral reforms to ensure fair representation and reduce voter disenfranchisement would also help restore citizens' trust in the political system. Additionally, collaboration among political parties, government agencies, civil society organizations, and the media is necessary to create an environment conducive to informed political participation. Such collaboration can include voter education campaigns, timely dissemination of accurate political information, and the promotion of a culture of civic engagement, all of which will combat voter apathy and encourage greater ownership of the political process.

This study makes a valuable contribution to the literature on political participation by examining the influence of political knowledge and interest on the political behavior of Nigerian electorates. The study provides empirical evidence supporting the argument that both political interest and knowledge are essential drivers of political participation in a democratic society. By highlighting the dual role of political interest and knowledge in promoting participation, the study adds depth to the understanding of the factors that drive engagement in Nigeria's democratic process.

REFERENCES

Adenrele, R., & Olugbenga, M. (2017). An assessment of citizens' level of political participation and civic competence. *International Journal of Educational Policy Research and Review* Vol.4 (5), pp. 72-80 ISSN 2360-7076

Agbaje, A., & Adejumobi, S. (2006). Do votes count? 1 the travails of electoral politics in Nigeria. Africa development, 31(3), 25-44.

Ahmad, T., Alvi, A., & Ittefaq, M. (2019). The use of social media on political participation among university students: An analysis of survey results from rural Pakistan. Sage Open, 9(3), 2158244019864484.

Ainoko, A. S., Liman, A. N., Adamu, A. B. D. U. L., Mohammed, A. A., & Godwin, O. B. A. J. E. (2024). Impact of electoral violence on democratic governance and electoral credibility in Kogi state, Nigeria. *World Journal of Advanced Research and Reviews*, 21(2), 1364-1373.

Akoji, D., & Richard, O. (2024). Impact Of Political Apathy on The Democratic Process and Governance in Nigeria: A Case Study of Local Government Election in Ogun State. International Journal of Humanities, Literature and Art Research.

Alelaimat, M. S. (2023). Factors affecting political participation (Jordanian universities students' voting: field study 2017-2018). *Review of economics and political science*, 8(1), 54-67.

Almond, G., & Verba, S. (1963). The civic culture: Political attitudes and democracy in five countries. Princeton: Princeton university.

Amata, D. (2023). Nigeria records only 26.72% voter turnout in 2023 election. Retrieved from Dataphyte July 27, 2024 https://elections.dataphyte.com/insights/ni geria-records-only-2672-voter-turnout-in-2023-election

Amechi, O. R., Innocent, E. O., & Ikechukwu, A. (2018). Political education in Nigeria: the mobilization theory thesis perspective. Art Human Open Acc J, 2(5), 246-256.

Angerbrandt, H. (2018). Deadly elections: post-election violence in Nigeria. *The Journal of Modern African Studies,* 56(1), 143-167.

Ardanaz, M., Otálvaro-Ramírez, S., & Scartascini, C. (2023). Does information about citizen participation initiatives increase political trust? World Development, 162, 106132.

Arijeniwa, A. F., & Nwaoboli, E. P. (2023). Setting agenda for public discourse: Examining the impact of social media on political participation amongst Nigerian youth. *International Journal of Arts, Humanities and Management Studies*, 10(1), 36-53.

Asamoah, L. O. (2024). Citizen participation in local government decision-making in Ghana: a case study of the Suame Municipal Assembly.

Barrett, M., & Pachi, D. (2019). Youth civic and political engagement. Routledge.

Bassey, B. E., Jacob, O. U., & Ngonso, B. F. (2024). Political Communication, Citizens Mobilization and Participatory Democracy in Nigeria: A critical Review. Nigerian Journal of Communication review, Vol. 2., No. 1

Bimber, B., Cunill, M. C., Copeland, L., & Gibson, R. (2015). Digital media and political participation: The moderating role of political interest across acts and over time. *Social science computer review*, 33(1), 21-42.

Brady, H. E., Verba, S., & Schlozman, K. L. (1995). Beyond SES: A resource model of political participation. *American political science review*, 89(2), 271-294.

Bujang, M. A., Omar, E. D., Foo, D. H. P., & Hon, Y. K. (2024). Sample size determination for conducting a pilot study to assess reliability of a questionnaire. Restorative dentistry & endodontics, 49(1).

Cacciatore, M. A., Yeo, S. K., Scheufele, D. A., Xenos, M. A., Brossard, D., & Corley, E. A. (2018). Is Facebook making us dumber? Exploring social media use as a predictor of political knowledge. *Journalism & mass communication quarterly*, 95(2), 404-424.

Dalton, R. J. (2018). Citizen politics: Public opinion and political parties in advanced industrial democracies. CQ Press.

Dataphyte (2023). Dataphyte Handbook of Data Driven Election Reporting. Retrieved August 7, 2024, from https://elections.dataphyte.com/elections-handbook.pdf

Delli Carpini, M. X., & Keeter, S. (1996). What Americans Know About Politics and Why It Matters. Yale University Press.

Dimitrova, D. V., Shehata, A., Strömbäck, J., & Nord, L. W. (2014). The effects of digital media on political knowledge and participation in election campaigns: Evidence from panel data. *Communication research*, 41(1), 95-118.

Dolan, K., & Hansen, M. A. (2020). The variable nature of the gender gap in political knowledge. *Journal of Women, Politics & Policy,* 41(2), 127-143.

Egbokhare, O., & Idowu, S. (2022). Enhancing Political Knowledge and Opinion through Indigenous Language Radio Programs in Oyo State, Nigeria. *Indigenous Language for Development Communication in the Global South*, 45.

Ewum, F. O., & Obi, N. N. (2024). Vote buying in the 2023 general elections in Biase Local Government Area of Cross River state, Nigeria. *Journal of Political Discourse*, 2(2 (1)), 175-189.

Ezeudu, T. S. (2023). Democracy in Diverse Landscapes: Exploring the Nexus of Free and Fair Elections, Voter Apathy, and Civic Engagement in Nigeria's Geo-Political Zones. ESP *International Journal of Science, Humanities and Management Studies*, ISSN: 2583-9756 / Volume 1 Issue 3

Fakih, A., & Sleiman, Y. (2024). The gender gap in political participation: evidence from the MENA region. *Review of Political Economy*, 36(1), 154-177.

Falade, D. A. (2015). Political participation in Nigerian democracy: A study of some selected local government areas in Ondo State, Nigeria. *Global Journal of Human-Social Science Research*, 14(8), 16-23.

Galston, W. A. (2001). Political Knowledge, Political Engagement, and Civic Education. *Annual Review of Political Science*, 4, 217-234.

Gil de Zúñiga, H., Diehl, T., & Ardévol-Abreu, A. (2017). Internal, external, and government political efficacy: Effects on news use, discussion, and political participation. Journal of Broadcasting & Electronic Media, 61(3), 574-596.

Giommoni, T. (2021). Exposure to corruption and political participation: Evidence from Italian municipalities. European Journal of Political Economy, 68, 102000.

Hair Jr, J. F., Anderson, R. E., & Tatham, R. L. (1995). Multivariate data analysis with readings (4th ed.). Prentice Hall.

Halim, H., Mohamad, B., Dauda, S. A., Azizan, F. L., & Akanmu, M. D. (2021). Association of online political participation with social media usage, perceived

information quality, political interest and political knowledge among Malaysian youth: Structural equation model analysis. *Cogent Social Sciences*, 7(1), 1964186.

Héroux-Legault, M. (2023). The impact of political knowledge on the voting decision. *Canadian Journal of Political Science/Revue Canadienne de science politique*, 56(3), 596-619.

Hoffman, L. H., & Thomson, T. L. (2009). The Effect of Television Viewing on Adolescents' Civic Participation: Political Efficacy as a Mediating Mechanism. Journal of Broadcasting & Electronic Media, 53(1), 3-21.

Hue, T. H. H., & Tung-Wen Sun, M. (2022). Democratic governance: Examining the Influence of citizen participation on local government performance in Vietnam. *International Journal of Public Administration,* 45(1), 4-22.

Igiebor, G. O. (2022). Political Alienation and Electoral Participation in Nigeria's Democratization Process: A Survey of Voter Behaviour in the 2019 General Elections. *African Journal of Political Science*, 10(2), 22-38.

INEC, (2019). Independent National Electoral Commission, Voters. Retrieved March 24, 2020, from https://www.inecnigeria.org/voter-education/rights-and-responsibilities-of-the-voter-during-the-2019-general-elections/

INEC, (2023). Report of the 2023 General Election. Retrieved August 15, 2024, from https://inecnigeria.org/wp-content/uploads/2024/02/2023-GENERAL-ELECTION-REPORT-1.pdf

Jeroense, T., & Spierings, N. (2023). Political participation profiles. *West European Politics*, 46(1), 1-23.

John-Eke, E. C., & Gabriel, J. M. O. (2023). Good Governance and Sustainable Democracy in Nigeria: A Review Paper.

Sustainable Governance, Citizenship and National Development, 97.

Kleinbaum, D. G., Kupper, L. L., Muller, K. E., & Nizam, A. (2007). Applied Regression Analysis and Other Multivariable Methods, 4th edn. Thomson Learning. Inc., Belmont, California.

Kraft, P. W., & Dolan, K. (2023). Asking the right questions: A framework for developing gender-balanced political knowledge batteries. *Political Research Quarterly*, 76(1), 393-406.

Kusumarani, R., & Zo, H. (2019). Why people participate in online political crowdfunding: A civic voluntarism perspective. Telematics and Informatics.

Laakso, L. (2019). Electoral violence and political competition in Africa. In Oxford Research Encyclopedia of Politics.

Le, K., & Nguyen, M. (2021). Education and political engagement. *International Journal of Educational Development,* 85, 102441.

Lee, S. (2021). Probing the mechanisms through which social media erodes political knowledge: The role of the news-finds-me perception. In *Social Media News and Its Impact* (pp. 51-73). Routledge.

Levy, B. L., & Akiva, T. (2019). Motivating political participation among youth: An analysis of factors related to adolescents' political engagement. Political Psychology, 40(5), 1039-1055.

Liu, M., & Wang, Y. (2014). Data collection mode effects on political knowledge. Survey Methods: Insights from the Field, 9.

Lohr, S. L. (2019). Sampling: Design and Analysis: Design and Analysis. Chapman and Hall/CRC.

Luskin, R. C. (2002). From Denial to Extenuation (and Finally Beyond): Political Sophistication and Citizen Performance.

Thinking About Political Psychology, 281-305.

Mardia, K. V., Kent, J. T., & Taylor, C. C. (2024). Multivariate analysis (Vol. 88). John Wiley & Sons.

Milner, H. (2002). Civic Literacy: How Informed Citizens Make Democracy Work. University Press of New England.

Mondal, A., & Mandal, A. (2020). Stratified random sampling for dependent inputs in Monte Carlo simulations from computer experiments. Journal of Statistical Planning and Inference, 205, 269-282.

Mustapha, L. K., Olufadi, O. H., Azeez, A. L., Udende, P., & Mustapha, M. L. (2023). Social media and changing political behaviors among the youth in Kwara state of Nigeria. *Democratic Communiqué*, 31(2).

Nasir, M. J., & Ciroma, A. (2023). Impact of Media and Information Literacy in Nigerian Colleges of Education Curriculum: A Case of Detecting Fake News. *American Journal of Communication*, 5(1), 28-37.

Nigeria Bureau of Statistics (2017). Demographic statistics bulletin - National Bureau of Statistics. Retrieved November 18, 2024, from file:///C:/Users/Administrator/Downloads/Demographic%20Statistics%20Bulletin%202 02017.pdf

Nissen, S. (2021). Political Participation: Inclusion of Citizens in Democratic Opinion-forming and Decision-Making Processes. In Peace, Justice and Strong Institutions (pp. 665-675). Cham: Springer International Publishing.

Ogidi, M. (2020). Democracy And the Challenge of Political Accountability in Nigeria. Studies In Politics and Society, 9(1&2).

Ogwezzy-Ndisika, A. O., Amakoh, K. O., Ajibade, O., Lawal, T. O., & Faustino, B. A. (2023). Fake News and General Elections in Nigeria. *Nigerian media industries in the era of globalization, 61*. Rowman & Littlefield.

Ojebode, A. (2011). Nigeria's freedom of information act: provision, strengths, challenges. *African Communication Research*, ISSN 1821-6544

Ojo, O. G. (2022). Public Trust and Citizen Engagement as Tools of Democracy for Good Governance in Nigeria.

Okoji, C. T., & Azeez, A. L. (2023). Influence Of Social Media on Government Policies and Activities in Nigeria. *Communication, Media and Power Relations in A Multicultural Society*, 61.

Okoro, N., & Nwafor, K. A. (2013). Social media and political participation in Nigeria during the 2011 gen-eral elections: The lapses and the lessons. *Global Journal of Arts Humanities and Social Sciences*, 1(3), 29-46.

Olan, F., Jayawickrama, U., Arakpogun, E. O., Suklan, J., & Liu, S. (2024). Fake news on social media: the impact on society. *Information Systems Frontiers,* 26(2), 443-458.

Olatunji, T. S., & Ayo, O. D. (2024). Voters Education and Credible Election in Nigeria: A Survey of 2023 General Election. International Journal of Humanities, Literature and Art Research.

Olowojolu, O., Rasak, B., Ake, M., Ogundele, O., & Afolayan, M. (2019). Trends in electoral violence in Nigeria. *Journal of Social Sciences and Public Policy,* 11(1), 37-52.

Oluseye, O. (2024). Exploring potential political corruption in large-scale infrastructure projects in Nigeria. Project Leadership and Society, 5, 100108.

Oluwatosin, O., Olusola, A., & Popoola, O. A. (2020). The influence of media on political knowledge amongst undergraduate students in Ibadan, Nigeria. *Global Journal of Social Sciences*, 19, 13-24.

Omotola, J. S. (2010). Political Participation and Voter Turnout in Nigeria's 2011 Elections. Journal of African Elections, 10(2), 54-73.

Onyenachi, O. C. (2018). Political Participation of Youth in the Nigeria National Assembly. University Putra Malaysia.

Orukpe, W. E. (2021). Political alienation In Nigeria: A survey of Electoral Behaviour in the 2019 General Elections. A Journal of Research and Development, 8(1), 66-95.

Oyoru, R. A. (2023). An assessment of factors responsible for low voter turnout in Nigeria: A literature review. Kashere Journal of Politics and International Relations, 1(1).

Pate, U. A., Gambo, D., & Ibrahim, A. M. (2019). The impact of fake news and the emerging post-truth political era on Nigerian polity: A review of literature. *Studies in Media and Communication,* 7(1), 21-29.

Prior, M. (2010). You've Either Got It or You Don't? The Stability of Political Interest over the Life Cycle. *Journal of Politics*, 72(3), 747-766.

Ramey, H. L., Rose-Krasnor, L., Busseri, M. A., Gadbois, S., Bowker, A., & Findlay, L. (2015). Measuring psychological engagement in youth activity involvement. *Journal of Adolescence*, 45, 237-249.

Reichert, F. (2016). How internal political efficacy translates political knowledge into political participation: Evidence from Germany. *Europe's journal of psychology*, 12(2), 221.

Roberts, F. N., Ijaiya, T. A., & Adewumi, A. P. (2023). The frustration of political choice and voter anguish in recent elections in Nigeria. *African Journal of Political Science and International Relations,* 17, 17-27.

Sabo, S. S., & Kente, J. S. (2024). The Role of Radio in Shaping Political Awareness: A Public Perception Study in Nasarawa State, Nigeria. *International Journal of Advanced Multidisciplinary Research and Studies,* 4(1):1384-1391

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). Using multivariate statistics (Vol. 6, pp. 497-516). Boston, MA: Pearson.

Tambe, E. B., & Kopacheva, E. (2024). Age and political participation in Africa's electoral regimes. Representation, 60(1), 97-115.

Usman, H., & Patrick, H. O. (2024). Political Apathy as a Challenge of Democratization in Africa: An Assessment of General Elections in Nigeria. In Democratization of Africa and Its Impact on the Global Economy (pp. 139-155). IGI Global.

Van der Pas, D. J., & Aaldering, L. (2020). Gender differences in political media coverage: A meta-analysis. *Journal of Communication*, 70(1), 114-143.

Verba, S., Schlozman, K. L., & Brady, H. E. (1995). Voice and Equality: Civic Voluntarism in American Politics. Harvard University Press.

Yakubu, M., & Bala, H. A. (2024). Inculcating the right democratic values among Nigerian youth for effective citizenry: implication for social studies and citizenship education. *International Journal of Law, Politics and Humanities Research.*

Yang, J., & Li, F. (2024). Exploring the Path of Integrating Media Literacy into Civic and Political Education of College Students

in the New Media Era. *Applied Mathematics and Nonlinear Sciences*, 9(1).

Zittel, T. (2006). Participatory democracy and political participation. In Participatory democracy and political participation (pp. 25-44). Routledge.

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

RELATIONSHIP BETWEEN STRESS AND COPING STRATEGIES AMONG UNDERGRADUATE STUDENTS IN LAGOS STATE, NIGERIA

Obiora Emeka Chike *[1], Mohamad Salleh Abdul Ghani[2], Mohd Najmi Daud[3]

[1,2,3,] *Department of Human Development and Family Studies, Faculty of Human Ecology, Universiti Putra Malaysia, Malaysia*

ABSTRACT

This study investigates the impact of stress and coping strategies on academic performance among undergraduate students at Lagos State University in Nigeria, addressing a key gap in understanding how stress levels and coping mechanisms vary across demographic factors such as age, gender, and academic level. Given the increasing pressures faced by Nigerian students due to socio-economic instability, lack of institutional support, and academic demands, this research aims to clarify the relationships between stress, coping strategies, and academic performance, with a specific focus on identifying stress as the primary dependent variable. A cross-sectional survey design was used, and data were collected from 164 students in the Psychology Department. Participants completed the Perceived Stress Scale (PSS), Brief COPE Scale, and Academic Achievement Scale (AAS). The study sought to determine whether age, gender, and academic level significantly influence stress levels, to assess the role of academic performance in perceived stress, and to analyze the types of coping strategies used by students, including any gender-based differences. Results showed no significant associations between stress levels and demographic factors, suggesting that age, gender, and academic level do not meaningfully predict stress among Nigerian undergraduates. Additionally, academic performance was not significantly associated with stress, challenging the assumption that higher academic success reduces stress. The regression analysis revealed that only the coping strategies of Instrumental Support and Planning had weak predictive power in reducing stress. The lack of significant gender differences in coping strategy selection indicates similar coping approaches among male and female students. These findings suggest a need for interventions focusing on enhancing adaptive coping skills, such as Planning and Instrumental Support, which may help students manage stress more effectively. Further research is recommended to explore additional stressors unique to Nigerian higher education.

Keywords: stress, coping strategies, academic performance, gender, Nigerian students,

Corresponding author:
Obiora Emeka Chike
Email: chikeobiora4@gmail.com

INTRODUCTION

The relationship between stress and coping strategies among undergraduate students is a critical area of research due to its substantial implications for academic performance, mental health, and overall quality of life. Recent studies highlight that stress levels among students are rising globally, driven by factors such as academic pressures, social challenges, and financial constraints (Coker, Okunrinboye, & Adesokan, 2019; Klonoff-Cohen, 2022). In Nigeria, these stressors are intensified by socio-economic instability, infrastructural deficiencies, and a lack of adequate mental health support systems within educational institutions, particularly in densely populated areas like Lagos State (Hassan, Jimoh, & Idris, 2024; Dada, Babatunde, & Adeleye, 2019). This environment makes it challenging for Nigerian students to manage stress effectively, leading to potential negative impacts on both their academic outcomes and well-being.

Stress has consistently been recognized as a pervasive issue among students, with numerous studies demonstrating its detrimental effects on cognitive functioning, emotional stability, and academic performance. For instance, Edjah et al. (2020) found that high levels of stress negatively impact students' cognitive abilities, resulting in lower academic achievement and reduced engagement. Similarly, Okoro, Biambo, and Jamiu (2021) reported that increased stress is associated with anxiety, depression, and lower grades, which can lead to higher dropout rates and an overall decline in academic commitment. These findings underscore the pressing need to identify effective coping strategies that can mitigate the adverse effects of stress, thus supporting students' academic and personal success.

Coping strategies—techniques individuals employ to handle stress—are generally divided into two main types: problem-focused and emotion-focused coping. Problem-focused coping is about tackling the source of stress directly, often by using strategies like time management, planning for academic tasks, or seeking support in academic matters. In contrast, emotion-focused coping is oriented toward managing the emotional reactions to stressors, using approaches such as cognitive reframing, relaxation techniques, and reaching out for social support (Freire et al., 2020; Ferguson et al., 2021). Effective coping skills are linked to better academic outcomes, yet many students lack adequate guidance on how to employ these strategies effectively. This gap highlights the importance of targeted interventions that equip students with the necessary skills to handle stress, especially in challenging environments like those found in Nigerian universities (Adaramola et al., 2022).

Despite the well-documented relationship between stress, coping strategies, and academic performance, there is a lack of research specific to the unique context of Nigerian students, particularly those in Lagos State. Nigerian students face distinct challenges, including economic hardship, high academic demands, and inadequate institutional support, which may impact their stress levels and coping effectiveness differently compared to students in other regions (Ayodeji et al., 2019; Adaramola et al., 2022). Furthermore, studies indicate that Nigerian universities often lack comprehensive support systems, such as

mental health counseling and stress management resources, which exacerbates stress and leaves students without essential coping resources (Hassan, Jimoh, & Idris, 2024). In addition to having an impact on kids' academic achievement, this impairment has wider ramifications for their mental health and future employment opportunities.

Stress that is not managed can have serious repercussions. Anxiety, sadness, and burnout are just a few of the mental health conditions that high stress levels may cause. These conditions can have a detrimental effect on academic performance and raise the risk of dropping out (Klonoff-Cohen, 2022; Ferguson et al., 2021). Furthermore, poor stress management might impair students' future social interactions, professional success, and general quality of life (Okoro et al., 2021). In light of these possible consequences, it is crucial to comprehend and manage Nigerian students' stress and coping strategies for both their academic achievement and long-term personal and professional wellbeing.

One of the significant gaps in the literature is the need for a detailed examination of how specific stressors impact Nigerian students and how various coping strategies influence their academic performance and mental health outcomes. While coping techniques among Nigerian students during the COVID-19 epidemic have been the subject of some study (Adaramola et al., 2022), there is still a dearth of thorough information on how these tactics change across various contexts and student groups, as well as on their efficacy. Furthermore, despite data that suggests male and female students frequently use distinct coping techniques, little study has looked at the

impact of gender in stress and coping among Nigerian students. According to studies, male students often prefer problem-focused coping mechanisms, whereas female students are more likely to employ emotion-focused ones (Freire et al., 2020; Klonoff-Cohen, 2022). Understanding these gender-specific coping preferences could help inform the development of more tailored support systems and interventions.

Addressing this problem is crucial for several reasons. First, it can guide educational institutions in developing targeted interventions that improve students' ability to manage stress, thereby enhancing both academic performance and mental health. To help students deal with the demands of college life, for instance, schools can implement peer mentorship programs, academic advising services, and stress management seminars (Dada et al., 2019; Freire et al., 2020). Second, the findings can inform policymakers about the specific needs of Nigerian students, facilitating better resource allocation and support services in higher education. Third, addressing this issue can contribute to broader efforts to improve the quality of higher education in Nigeria, which is essential for the country's socio-economic development (Hassan, Jimoh, & Idris, 2024).

With an emphasis on the particular circumstances of Lagos State, this study intends to look into the intricate link among Nigerian undergraduate students between stress, coping mechanisms, academic achievement, and gender. It is anticipated that the results would advance knowledge of the pressures these young people encounter and the coping mechanisms that best promote their success both personally

and academically. In the end, this study aims to provide guidance for methods and regulations that would enhance peer

LITERATURE REVIEW
Stress among Undergraduate Students

Stress is a pervasive issue among undergraduate students globally, with substantial implications for academic performance, mental health, and overall well-being. A combination of academic pressures, social challenges, and financial constraints contributes significantly to stress among students (Coker, Okunrinboye, & Adesokan, 2019). In Nigeria, the impact of these stressors is amplified by socio-economic instability, infrastructural deficiencies, and limited access to mental health resources, making the management of academic stress more challenging (Dada, Babatunde, & Adeleye, 2019). For instance, the educational system in Nigeria often lacks adequate support services such as mental health counseling and academic advising, which leaves students without essential tools to effectively cope with stress (Okoro, Biambo, & Jamiu, 2021).

The academic environment places significant demands on students, requiring them to meet rigorous coursework, adhere to tight deadlines, and perform well in competitive settings. In a study conducted among Nigerian students, Coker et al. (2019) found that academic workload, financial struggles, and limited institutional support were major contributors to elevated stress levels. This is consistent with findings from Ayodeji et al. (2019), who reported that first-year students faced heightened stress due to adjustment challenges and increased academic demands. Such stressors are not limited to

support in Nigerian institutions, giving students greater tools to deal with stress and succeed academically.

Nigeria; similar trends have been observed globally. For example, in Malaysia, Phang et al. (2015) reported high levels of stress among health science students, attributing this to intensive academic requirements and inadequate support systems.

Financial stress also plays a significant role in exacerbating stress among university students. In a study on Ethiopian students, Deressa et al. (2020) highlighted that socio-economic factor, such as financial instability and lack of academic resources, significantly increased stress levels. This finding underscores the importance of financial and academic support systems to alleviate stress and enable students to focus on their studies without the additional burden of economic insecurity.

In addition to academic and financial pressures, social factors further contribute to stress among undergraduate students. Ezeh, Ezeh, and Okey (2016) identified that students often experience social stressors, such as peer competition and the pressure to maintain social relationships, which can detract from academic focus and add to their overall stress levels. These findings suggest that stress is not only academic but also deeply social, requiring a holistic approach to stress management.

Chronic stress has significant effects on mental health. Research shows that mental health conditions including anxiety and depression are frequently associated with high levels of stress among students. According to Okoro et al. (2021), stress was

linked to anxiety and depressive symptoms among Nigerian pharmacy students, highlighting the necessity of mental health treatments. Similar issues were brought up by Edjah et al. (2020) in Ghana, who investigated the effects of stress on students' social and academic life using a structural equation modelling technique and discovered that long-term stress severely damages both interpersonal relationships and academic performance.

Coping Strategies

Coping strategies, which may be broadly divided into two categories—problem-focused and emotion-focused approaches—are the techniques pupils use to control and reduce stress. By changing the circumstance or how one interacts with it, problem-focused coping seeks to directly address the cause of stress. This covers tactics like academic preparation, time management, and asking for help from friends or family (Freire et al., 2020; Adaramola et al., 2022). The goal of emotion-focused coping, however, is to control the feelings brought on by stress. Common coping mechanisms for the psychological effects of stress include acceptance, cognitive reappraisal, relaxation, and seeking emotional support (Ferguson et al., 2021; Klonoff-Cohen, 2022).

Research highlights the effectiveness of problem-focused coping in managing academic stress, especially in environments that demand high performance and rigorous workloads. Adaramola et al. (2022) found that Nigerian medical students predominantly used problem-focused strategies, such as setting academic goals and organizing their study schedules, especially during the challenging COVID-19 pandemic period. This preference for problem-focused coping reflects its effectiveness in helping students maintain control over their academic responsibilities, thereby reducing stress levels and enhancing performance.

Emotion-focused coping also plays a vital role in student well-being, particularly when dealing with stressors that students cannot control, such as external socio-economic pressures or institutional challenges (Ferguson et al., 2021). Emotion-focused strategies, though sometimes regarded as less effective than problem-focused methods, are essential in maintaining emotional stability and mitigating mental health issues such as anxiety and depression (Freire et al., 2020; Okoro et al., 2021). For instance, studies have shown that students who engage in relaxation techniques and seek social support experience lower levels of psychological distress, which enhances their overall resilience and ability to cope with prolonged stress (Coker et al., 2019; Klonoff-Cohen, 2022).

The balance between problem-focused and emotion-focused coping strategies is crucial. While problem-focused coping helps students address controllable aspects of their stress, emotion-focused coping provides psychological relief in situations where stressors cannot be easily altered. Educational institutions play a critical role in promoting both types of coping strategies. By providing workshops on time management, relaxation techniques, and

emotional resilience, universities can equip students with a well-rounded set of skills to manage academic stress effectively (Freire

Gender Differences in Stress and Coping

Undergraduate students' experiences and management of stress are greatly influenced by gender disparities; female students frequently report higher levels of perceived stress than their male counterparts. This disparity can be attributed to various socio-cultural factors, including societal expectations, gender roles, and differing coping mechanisms (Klonoff-Cohen, 2022; Coker et al., 2019). Female students frequently face unique emotional and social pressures, as societal expectations often place a heavier emotional burden on women, demanding that they be more emotionally expressive, empathetic, and socially connected (Okoro et al., 2021). These pressures can increase their stress levels, especially in a high-stakes academic environment where balancing emotional and academic responsibilities is particularly challenging.

Studies have repeatedly demonstrated that female students are more likely to express their feelings and seek out social support as emotion-focused coping mechanisms (Klonoff-Cohen, 2022; Dada et al., 2019). Emotion-focused coping is generally employed when an individual feels they have little control over the stressor, and it includes strategies like venting, seeking emotional support, and cognitive reframing (Freire et al., 2020; Dada et al., 2019). For instance, during the COVID-19 pandemic, Klonoff-Cohen (2022) observed that female students leaned more heavily on their social support networks, including family, friends, and online communities, to manage the increased stress brought on by

et al., 2020; Dada, Babatunde, & Adeleye, 2019).

the uncertainty and isolation of the pandemic. This reliance on social support highlights the critical role of interpersonal connections in helping female students manage stress.

On the other hand, male students are more likely to favour problem-focused coping mechanisms including time management, problem-solving, and routine establishment. When people feel they have some influence over the situation, they tend to utilise problem-focused coping, which is taking direct action to remove or lessen the stressor (Adaramola et al., 2022; Okoro et al., 2021). Male students frequently deal with stress in systematic, solution-focused ways, such as organising their coursework and concentrating on reaching predetermined objectives. This difference in coping styles is partly due to societal expectations that encourage men to adopt more self-reliant, action-oriented behaviors, which align with problem-focused coping (Coker et al., 2019).

The gender-based variation in coping mechanisms has significant implications for developing effective support services in educational institutions. Universities may create gender-sensitive treatments that accommodate these different preferences by taking into account the fact that male students tend to solve problems, whilst female students are more inclined to seek out social assistance. For example, mental health support programs could include counseling services and peer support groups that facilitate emotional expression, which may appeal more to female students.

Conversely, workshops focused on time management, goal-setting, and task prioritization might be particularly

Academic Performance and Stress

The link between stress and academic performance is well-documented, with research consistently showing that high stress levels often correlate with lower academic achievement. This relationship is complex, as stress can affect cognitive functioning, focus, and memory retention, all of which are critical to academic success (Ferguson et al., 2021; Edjah et al., 2020). High stress levels impair cognitive performance, making it difficult for students to concentrate, solve problems, and recall information during exams or assignments.

Dada, Babatunde, and Adeleye (2019) found that students who use adaptive coping strategies, such as time management, academic planning, and setting realistic goals, tend to perform better academically. Adaptive coping strategies allow students to manage their workloads efficiently, reduce anxiety, and maintain a balanced lifestyle, all of which contribute to improved academic performance. On the

Stress and Coping Strategies in Lagos State

The context of Lagos State, Nigeria, presents unique stressors for undergraduate students. As a bustling metropolitan area with high population density, economic pressures, and limited infrastructure, Lagos presents a challenging environment for students, especially those attending universities that may lack adequate resources and support systems (Dada et al., 2019). Economic pressures, in particular, are significant stressors for students who may have to work part-time to support

beneficial for male students (Ferguson et al., 2021).

other hand, maladaptive coping strategies, such as avoidance, procrastination, and substance use, are linked to poorer academic outcomes and can create a cycle of increasing stress and academic decline (Okoro et al., 2021). Students who rely on avoidance or procrastination to cope with stress are more likely to experience last-minute stress, which can exacerbate anxiety and reduce their ability to perform academically.

These findings emphasize the importance of targeted interventions that promote adaptive coping skills. Programs focused on resilience-building, time management, and academic support have been shown to mitigate the adverse effects of stress on academic performance, helping students achieve better outcomes (Freire et al., 2020; Adaramola et al., 2022). Educational institutions can play a critical role in fostering these skills by offering workshops and counseling services that teach students how to handle stress constructively.

themselves financially. This dual responsibility can lead to time constraints, making it difficult to balance work and academic responsibilities effectively.

Dada, Babatunde, and Adeleye (2019) emphasize the role of academic resources and support systems as critical coping tools for students in Lagos State. Many students rely on information-seeking behaviors, such as reaching out to faculty members, utilizing online resources, or collaborating with peers, to manage their academic stress.

However, these resources are often limited, and the lack of adequate mental health and academic support services further exacerbates students' stress.

Adaramola et al. (2022) suggest that incorporating stress management training and support systems into the university curriculum in Lagos could significantly alleviate student stress. By teaching students how to manage their time, set achievable goals, and use relaxation techniques, universities can provide students with the tools they need to handle the pressures of academic life in Lagos. Additionally, providing financial aid programs and affordable housing options could help reduce economic stress, allowing students to focus more on their studies.

METHODOLOGY
Research Design

This study uses a cross-sectional survey approach to investigate how undergraduate students' academic achievement, coping mechanisms, and stress levels relate to one another. The approach is suitable for evaluating correlations between variables because it permits data gathering from a fixed population at a specific moment in time.

Area of Study

The study is conducted at Lagos State University, specifically within the Department of Psychology. The department consists of students from Year 1 to Year 4, providing a diverse sample of undergraduate students. This setting was chosen due to the accessibility of the target population and the relevance of understanding stress and coping strategies in a university environment.

Sampling Method and Sample Size

A convenience sampling method is used in this study. Convenience sampling allows the researcher to select readily available and willing participants within the department. This method is particularly useful when dealing with time and resource constraints. The target population includes all undergraduate students from Year 1 to Year 4 in the Psychology Department at Lagos State University. A sample size of 164 students was chosen to ensure adequate representation across different academic levels, enabling meaningful comparisons and generalizations within the department.

Research Instruments

One well-known instrument for assessing perceived stress levels is the Perceived Stress Scale (PSS), which was created in 1983 by Sheldon Cohen and others. The 10-item PSS-10 version measures how unpredictable, unmanageable, and overpowering people feel about their life using a 5-point Likert scale that goes from 0 ("Never") to 4 ("Very Often"). Questions like "How often have you felt that things were going your way?" and "How often have you felt nervous and stressed?" are among the items. To provide a fair assessment of stress perception, positively phrased items are reverse-scored, with a total score that ranges from 0 to 40. more scores, which are often divided into three categories—low (0–13), moderate (14–26), and high (27–40) stress levels—indicate more perceived stress. The PSS's cultural relevance for Nigerian undergraduate populations has been confirmed by its validation for usage in Nigeria and its application in Nigerian research, including

those conducted for medical students by Adaramola et al. (2022) and Ojobo, Mohamad, and Said (2014).

Charles Carver created the 28-item Brief COPE Scale in 1997 with the goal of evaluating a broad range of coping mechanisms people employ when they are under stress. Researchers can gauge the frequency or severity of particular coping behaviours by rating each item on a 4-point Likert scale, which ranges from 1 ("I haven't been doing this at all") to 4 ("I've been doing this a lot"). Each of the 14 subscales of the Brief COPE measures a distinct coping mechanism, including self-blame, self-distraction, active coping, emotional support, and planning. These subscales shed light on whether people are more likely to employ maladaptive coping mechanisms like substance abuse or denial or adaptive ones like problem-focused techniques like active coping and planning. The Brief COPE has been proven to be reliable and relevant for evaluating coping mechanisms among Nigerian students by being validated in a variety of groups, including studies conducted in Nigeria by Abdul Rahman et al. (2021) and Eni et al. (2020).

The Academic Achievement Scale (AAS) is an 18-item, self-reported measure that assesses students' perceptions of their academic performance, satisfaction, and motivation toward academic success. The AAS goes beyond objective academic metrics by capturing subjective aspects of achievement, such as self-assessed competence, satisfaction with progress, and comparison to peers. Items include statements like "I am satisfied with my current academic performance" and "I believe my academic results align with my career goals," allowing for a holistic view of academic achievement that encompasses both performance and self-perception. The scale has demonstrated strong internal consistency with a Cronbach's alpha of 0.79, making it a reliable measure. By examining factors such as motivation, perceived competence, and satisfaction, the AAS provides valuable insights into the academic lives of students, particularly how their academic self-concept interacts with stress and coping strategies, offering a comprehensive approach to understanding the psychological and behavioral aspects of academic success among Nigerian undergraduates.

Study Procedure

Participants are given self-administered questionnaires by qualified research assistants to complete in order to collect data. The research assistants provide instructions and clarify any questions the respondents may have, ensuring that the questionnaires are filled out accurately. Participants are given sufficient time to complete the questionnaire in a comfortable and confidential setting to minimize response bias and enhance data quality. Ethical considerations, such as informed consent and anonymity, are strictly adhered to throughout the data collection process.

DATA ANALYSIS

The Statistical Package for Social Sciences (SPSS) version 21 is used to analyse the data gathered from the surveys. The statistical techniques listed below are used: Descriptive Statistics: Frequency tables, OLS, or ordinary least squares Regression, Univariate Analysis and Chi-Square test is used to investigate relationships between categorical variables, including academic level and stress categories or gender and coping strategy kinds. Based on demographic characteristics, this test assists in identifying any notable variations in stress and coping mechanisms.

RESULTS

As shown in Table 1, the sample comprised a total of 164 undergraduate students with an approximately balanced gender distribution: 53.0% female (n = 87) and 47.0% male (n = 77). The age distribution showed that the majority of participants were within the 18-22 years age group, accounting for 60.4% (n = 99) of the sample, followed by 28.0% (n = 46) who were older than 23 years, and 11.6% (n = 19) who were younger than 18 years. In terms of academic achievement satisfaction, most participants reported moderate satisfaction with some areas for improvement (40.9%, n = 67), followed by moderate to high satisfaction (37.8%, n = 62). A smaller proportion of participants expressed very high satisfaction and confidence in their academic achievement (20.7%, n = 34), while only 0.6% (n = 1) reported low satisfaction, indicating likely dissatisfaction. Regarding perceived stress levels, 54.9% (n = 90) of the participants fell into the moderate stress category, 26.8% (n = 44) reported high stress, and 18.3% (n = 30) experienced low stress. Finally, the academic level distribution showed that the largest group of participants were in Year 1 (41.5%, n = 68), followed by Year 2 (21.3%, n = 35), Year 3 (16.5%, n = 27), and Year 4 (20.7%, n = 34).

The results in Table 2 present the relationship between gender, age, academic level, and academic achievement on the Perceived Stress Scale (PSS) categories (High, Moderate, and Low Stress) among undergraduate students. The distribution of stress levels across gender shows that among female participants, 31.0% reported high stress, 17.2% low stress, and 51.7% moderate stress. Male participants had a slightly lower percentage of high stress (22.1%) and a higher percentage of moderate stress (58.4%). However, a chi-square test reveals no significant association between gender and stress levels, p=.434, suggesting that the distribution of stress levels does not significantly differ between male and female students.

For age, students in the 18-22 years category predominantly reported moderate stress (58.6%), with 22.2% experiencing high stress and 19.2% low stress. In contrast, those aged over 23 years had the highest proportion of high stress (37.0%) and a slightly lower percentage of moderate stress (43.5%) compared to other age groups. Students under 18 years showed the highest percentage of moderate stress (63.2%) and the lowest percentage of low stress (10.5%). Despite these variations, the chi-square test indicates that the relationship between age and stress level is not statistically significant, p=.305p = .305p=.305, meaning that age does not have a significant effect on perceived stress levels.

When examining academic level, students in Year 1 reported high stress at 27.9%, moderate stress at 55.9%, and low stress at 16.2%. Year 3 students showed the highest proportion of low stress (25.9%) and the lowest proportion of moderate stress (44.4%). However, across all academic levels, moderate stress remained the most frequently reported category, with minimal differences in stress distribution. The chi-square test for academic level and stress was not statistically significant, p=.910, indicating no significant differences in stress levels across different academic years. Similarly, in terms of academic achievement satisfaction, students with "Moderate satisfaction; some areas for improvement" and "Very high satisfaction and confidence" had similar stress distributions, with no significant association observed, p=.436. These results suggest that perceived stress levels among undergraduate students are relatively stable across gender, age, academic level, and academic achievement satisfaction categories.

Table 3 shows the results of a linear regression used to assess the association between undergraduate students' reported stress and different coping mechanisms. At F(14,149)=1.238, p=.254, the whole model was not statistically significant, meaning that the predictors alone only explained 10.4% of the variation in felt stress (R^2=.104; adjusted R^2=.020). Examining the individual predictors, *Instrumental Support* (B=0.644, p=.037) and *Planning* (B=−0.606, p=.045) were statistically significant. Instrumental support positively predicted stress levels, suggesting that higher reliance on instrumental support is associated with increased perceived stress. Conversely, planning negatively predicted

stress, indicating that students who engaged in planning as a coping mechanism tended to report lower stress levels. None of the other predictors were statistically significant, suggesting no substantial relationship between these coping strategies and perceived stress levels among the sample population.

To examine gender-based variations in undergraduate students' choices of coping mechanisms for stress management, an independent samples t-test was used. The outcomes for problem-focused coping techniques, such as instrumental support, positive reframing, active coping, and planning, are displayed in Table 4. None of these problem-focused coping mechanisms showed statistically significant variations between males and females. The mean difference for Active Coping, for instance, was -0.250 (95% CI [-0.872, 0.371]), t(162)=−0.795, p=0.428. With p-values of 0.914 and 0.834, respectively, Instrumental Support and Positive Reframing also did not exhibit any significant differences, suggesting that both genders engaged problem-focused coping mechanisms to comparable degrees. The t-test findings for emotion-focused coping mechanisms, such as self-blame, humour, acceptance, venting, emotional support, and religion, are shown in Table 5.

With a mean difference of 0.529 (95% CI [-0.092, 1.150]), t(162)=1.683, p=0.094, the Emotional Support method did not reveal a statistically significant difference at the traditional 0.05 level, although showing a tendency towards significance. Other emotion-focused techniques, such humour and venting, likewise showed no discernible gender differences (p-values of

0.531 and 0.322, respectively). The t-test result alone was not significant (p=0.668), but the Brown-Forsythe test was significant for the Acceptance method, indicating a possible breach of the assumption of equal variances. The results for avoidance-based coping mechanisms, such as behavioural disengagement, substance use, denial, and self-distraction, are shown in Table 6.

None of these avoidance coping techniques showed statistically significant gender differences, as did the other categories. With a mean difference of 0.216 (95% CI [-0.034, 0.467]), t(162) = 1.706, p=0.090, for example, Denial came close to significance but fell short of the 0.05 cutoff. There were no discernible differences between males and females in terms of other coping mechanisms, such as substance use and self-distraction, with p-values of 0.848 and 0.274, respectively.

Table 1: Frequency Distribution

Variable	Level	Frequency	Total	Percentage
Gender	Female	87	164	0.530
	Male	77	164	0.470
Age	18-22 Years	99	164	0.604
	<18 Years	19	164	0.116
	>23 Years	46	164	0.280
Academic Achievement	Low satisfaction; likely dissatisfaction	1	164	0.006
	Moderate satisfaction; some areas for improvement	67	164	0.409
	Moderate to high satisfaction	62	164	0.378
	Very high satisfaction and confidence	34	164	0.207
Perceived Stress	High Stress	44	164	0.268
	Low Stress	30	164	0.183
	Moderate Stress	90	164	0.549
Academic level	Year 1	68	164	0.415
	Year 2	35	164	0.213
	Year 3	27	164	0.165
	Year 4	34	164	0.207

Table 2: the relationship between age, gender, academic class level on the level of stress faced by undergraduate students

Gender		Perceived Stress Scale				P-value
		High Stress	Low Stress	Moderate Stress	Total	
Female	Count	27.000	15.000	45.000	87.000	
	% within row	31.034 %	17.241 %	51.724 %	100.000 %	
Male	Count	17.000	15.000	45.000	77.000	0.434
	% within row	22.078 %	19.481 %	58.442 %	100.000 %	
Total	Count	44.000	30.000	90.000	164.000	
	% within row	26.829 %	18.293 %	54.878 %	100.000 %	

Age		Perceived Stress Scale				P-value
		High Stress	Low Stress	Moderate Stress	Total	
18-22 Years	Count	22.000	19.000	58.000	99.000	
	% within row	22.222 %	19.192 %	58.586 %	100.000 %	
<18 Years	Count	5.000	2.000	12.000	19.000	
	% within row	26.316 %	10.526 %	63.158 %	100.000 %	0.305
>23 Years	Count	17.000	9.000	20.000	46.000	
	% within row	36.957 %	19.565 %	43.478 %	100.000 %	
Total	Count	44.000	30.000	90.000	164.000	
	% within row	26.829 %	18.293 %	54.878 %	100.000 %	

Academic level		Perceived Stress Scale				P-value
		High Stress	Low Stress	Moderate Stress	Total	
Year 1	Count	19.000	11.000	38.000	68.000	
	% within row	27.941 %	16.176 %	55.882 %	100.000 %	
Year 2	Count	8.000	6.000	21.000	35.000	
	% within row	22.857 %	17.143 %	60.000 %	100.000 %	
Year 3	Count	8.000	7.000	12.000	27.000	
	% within row	29.630 %	25.926 %	44.444 %	100.000 %	0.910
Year 4	Count	9.000	6.000	19.000	34.000	
	% within row	26.471 %	17.647 %	55.882 %	100.000 %	
Total	Count	44.000	30.000	90.000	164.000	
	% within row	26.829 %	18.293 %	54.878 %	100.000 %	

Academic Achievement Scale		Perceived Stress Scale				P-value
		High Stress	Low Stress	Moderate Stress	Total	
Low satisfaction; likely dissatisfaction	Count	0.000	1.000	0.000	1.000	
	% within row	0.000 %	100.000 %	0.000 %	100.000 %	
Moderate satisfaction; some areas for improvement	Count	18.000	10.000	39.000	67.000	
	% within row	26.866 %	14.925 %	58.209 %	100.000 %	
Moderate to high satisfaction	Count	18.000	13.000	31.000	62.000	0.436
	% within row	29.032 %	20.968 %	50.000 %	100.000 %	
Very high satisfaction and confidence	Count	8.000	6.000	20.000	34.000	
	% within row	23.529 %	17.647 %	58.824 %	100.000 %	
Total	Count	44.000	30.000	90.000	164.000	
	% within row	26.829 %	18.293 %	54.878 %	100.000 %	

Table 3: Linear Regression Analysis Predicting Perceived Stress (N = 164)

88

Predictor	B	SE	β	t	p
Intercept	14.160	4.680		3.025	.003
Active Coping	0.266	0.288	0.076	0.924	.357
Self-Distraction	0.252	0.303	0.068	0.832	.407
Denial	0.065	0.697	0.007	0.093	.926
Substance Use	0.586	0.712	0.067	0.823	.412
Emotional Support	0.188	0.283	0.054	0.662	.509
Instrumental Support	0.644	0.307	0.171	2.099	.037
Behavioral Disengagement	0.297	0.263	0.089	1.129	.261
Venting	0.544	0.302	0.151	1.800	.074
Positive Reframing	0.010	0.291	0.003	0.036	.972
Planning	-0.606	0.300	-0.164	-2.019	.045
Humor	0.229	0.309	0.062	0.743	.459
Acceptance	0.183	0.287	0.052	0.636	.525
Religion	-0.360	0.275	-0.108	-1.310	.192
Self-Blame	-0.334	0.301	-0.091	-1.110	.269

Model Summary: $R=.323$ $R = .323$ $R=.323$, $R^2=.104$ $R^2 = .104$ $R^2=.104$, Adjusted $R^2=.020$ $R^2 = .020$ $R^2=.020$, RMSE = 7.011 **ANOVA:** $F(14,149)=1.238$, $p=.254$

Table 4: Independent Samples T-Test on Brief COPE Problem-focused Scores between males and females

	t	df	p	Mean Difference	SE Difference	95% CI for Mean Difference	
						Lower	Upper
Active Coping	-0.795	162	0.428	-0.250	0.315	-0.872	0.371
Instrumental Support	-0.109	162	0.914	-0.032	0.294	-0.613	0.549
Positive Reframing	0.210	162	0.834	0.065	0.309	-0.545	0.675
Planning	0.706	162	0.481	0.212	0.300	-0.380	0.804

Note. Student's t-test.

Table 5: Independent Samples T-Test on Brief COPE Emotional-focused Scores between males and females

	t	df	p	Mean Difference	SE Difference	95% CI for Mean Difference	
						Lower	Upper
Emotional Support	1.683	162	0.094	0.529	0.314	-0.092	1.150
Venting	-0.993	162	0.322	-0.306	0.308	-0.913	0.302
Humor	-0.629	162	0.531	-0.187	0.298	-0.777	0.402
Acceptance	0.430	162	0.668 [a]	0.135	0.314	-0.485	0.754
Religion	0.150	162	0.881	0.050	0.333	-0.607	0.707
Self Blame	-1.095	162	0.275	-0.329	0.300	-0.922	0.264

Note. Student's t-test.

[a] Brown-Forsythe test is significant ($p < .05$), suggesting a violation of the equal variance assumption

Table 6: Independent Samples T-Test on Brief COPE Avoidance Scores males and females

| | t | df | p | Mean Difference | SE Difference | 95% CI for Mean Difference | |
						Lower	Upper
Self-Distraction	1.098	162	0.274	0.326	0.297	-0.261	0.913
Denial	1.706	162	0.090	0.216	0.127	-0.034	0.467
Substance Use	0.192	162	0.848	0.024	0.128	-0.228	0.277
Behavioral Disengagement	-1.457	162	0.147	-0.484	0.332	-1.139	0.172

Note. Student's t-test.

DISCUSSION OF FINDINGS

Examining the connections between stress levels, coping mechanisms, academic achievement, and demographic characteristics (age, gender, and academic level) among undergraduate students in Lagos State, Nigeria, was the main goal of this study. The study aimed to identify specific patterns in stress and coping behaviors that could inform targeted interventions for stress management. The findings provided insights into several dimensions of student stress and coping mechanisms, some of which align with previous research while others highlight unique aspects of the Nigerian undergraduate experience.

The findings show that students' stress levels did not significantly correlate with their gender, age, or academic standing. For instance, the chi-square test results (p-values: gender = 0.434, age = 0.305, academic level = 0.910) show that these demographic factors did not significantly affect stress levels. This is consistent with findings in some previous studies, such as those by Coker et al. (2019), which observed similar non-significant relationships between demographic factors and stress levels in Nigerian university students. However, this contrasts with other research, such as Klonoff-Cohen (2022), which found that gender significantly influenced stress levels in some academic contexts, with female students generally reporting higher stress due to societal expectations and academic pressures. The current study's findings may reflect the unique socio-cultural environment at Lagos State University, where both male and female students experience similar stressors without significant gender-based differences.

The relationship between academic performance and stress levels was examined through the Academic Achievement Scale and the Perceived Stress Scale (PSS), with no significant association observed. This finding aligns with Ayodeji et al. (2019), which similarly reported that academic performance does not always correlate strongly with perceived stress, as students may experience high or low stress regardless of their performance levels. The lack of association suggests that academic success in this sample may not necessarily buffer students against stress, nor does lower academic achievement exacerbate stress levels. This insight challenges assumptions that academic performance directly impacts stress levels, highlighting the need for broader interventions that address other stressors, such as financial or social pressures, that may be more influential among Nigerian undergraduates.

Examining the connection between students' stress levels and coping mechanisms was one of the study's main goals. The linear regression analysis (Table 3) indicated that most coping strategies did

not significantly predict stress levels, with only Instrumental Support (p=0.037p = 0.037p=0.037) and Planning (p=0.045p = 0.045p=0.045) showing weak predictive power. This is partially consistent with Adaramola et al. (2022), who found that problem-focused coping strategies like planning were effective among Nigerian students. However, the lack of significance for other coping strategies suggests that coping mechanisms may be context-dependent or influenced by factors outside academic settings. The low R2R^2R2 value (10.4%) implies that coping strategies, as measured in this study, do not account for a large portion of the variance in stress levels, pointing to the complex, multifactorial nature of stress in this population.

Lastly, the study analyzed gender-based differences in coping strategy selection using independent samples t-tests (Tables 4-6). The results revealed no significant gender differences across problem-focused, emotion-focused, or avoidance coping strategies, with p-values for most strategies well above 0.05 (e.g., Active Coping p=0.428p = 0.428p=0.428, Emotional Support p=0.094p = 0.094p=0.094, Self-Distraction p=0.274p = 0.274p=0.274). This is in contrast to findings from Klonoff-Cohen (2022), who observed that females were more likely to use emotion-focused strategies such as seeking social support. However, the current study's lack of significant gender differences may reflect cultural factors within Nigerian society, where both male and female students may face similar stressors and adopt comparable coping strategies in response.

CONCLUSION

Overall, the study's findings contribute to the literature on stress and coping among Nigerian undergraduate students by suggesting that demographic factors, academic performance, and gender may not play as significant a role in stress and coping as previously thought. These results suggest that interventions focusing on enhancing specific adaptive coping strategies (e.g., Instrumental Support and Planning) could be beneficial for students broadly, regardless of gender, age, or academic level. However, further research is recommended to explore other potential stressors and coping mechanisms unique to the Nigerian academic environment, as well as to examine the role of external factors such as family expectations and financial constraints, which may influence stress in ways not captured in this study.

REFERENCES

Adaramola, O. G., Idowu, O. M., Toriola, O. I., et al. (2022). Coping strategies of Nigerian medical students during the COVID-19 pandemic. *Ghana Medical Journal, 56*(1), 15-22.

Adaramola, O. G., Idowu, O. M., Toriola, O. I., Olu-Festus, D. M., Oyebanji, T. E., Uche-Orji, C. I., Ogunnubi, O. P., & Odukoya, O. O. (2022). Coping strategies of Nigerian medical students during the COVID-19 pandemic. *Ghana Medical Journal, 56*(1), 15–22. https://doi.org/10.4314/gmj.v56i1.3

American Psychological Association (APA). (2020). *Stress in America 2020: A national mental health crisis*. American Psychological Association. Retrieved from https://www.apa.org/news/press/releases/stress/2020/report

Amirkhan, J. H., Sample, K., & Ciarlelli, L. M. (2023). Gender differences in coping: A reexamination. *Personality and Individual Differences, 199*, 111858. https://doi.org/10.1016/j.paid.2022.111858

Coker, A. O., Okunrinboye, H. I., Adesokan, A. O., et al. (2019). Depression, Anxiety, Stress and Self-Esteem among Students in Owo, Southwest, Nigeria. *Nigerian Medical Practitioner, 75*, 14-18.

Dada, J. O., Babatunde, S. O., & Adeleye, R. O. (2019). Assessment of academic stress and coping strategies among built environment undergraduate students in Nigerian higher education. *Journal of Applied Research in Higher Education, 11*(3), 367-378.

Edjah, K., Ankomah, F., Domey, E., et al. (2020). Stress and Its Impact on Academic and Social Life of Undergraduate University Students in Ghana: A Structural Equation Modelling Approach. *Open Education Studies, 2*, 37-44.

Ferguson, K. N., Coen, S. E., Tobin, D., et al. (2021). The mental well-being and coping strategies of Canadian adolescents during the COVID-19 pandemic: A qualitative, cross-sectional study. *CMAJ Open, 9*(4), 1013-1020.

Freire, C., Ferradás, M. D. M., Regueiro, B., et al. (2020). Coping Strategies and Self-Efficacy in University Students: A Person-centred Approach. *Frontiers in Psychology, 11*, 841.

Hassan, I. I., Jimoh, B. E., & Idris, Y. I. (2024). Relationship between academic

stress and coping strategies among students of Federal University of Lafia, Nigeria. *International Journal of Intellectual Discourse, 7*(1), 273-286. Retrieved from https://ijidjournal.org/index.php/ijid/article/view/504

Klonoff-Cohen, H. (2022). College Students' Opinions About Coping Strategies for Mental Health Problems, Suicide Ideation, and Self-Harm During COVID-19. *Frontiers in Psychology, 13*.

Ma, G. L. D. (2023). Stress and coping strategies and academic performance of teacher education students. *Journal for Educators, Teachers and Trainers, 14*(3), 739-748.

Okoro, R. N., Biambo, A. A., & Jamiu, M. O. (2021). Perceived stress and its predictors, stressors, and coping strategies among undergraduate pharmacy students in northern Nigeria. *Current Pharmacy Teaching and Learning, 13*, 804-811

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

RELATIONSHIP BETWEEN SOCIAL ANXIETY, LONELINESS, AND LIFE SATISFACTION AMONG FIRST YEAR STUDENTS AT UNIVERSITI PUTRA MALAYSIA

Syed Hadi Imanuddin Wan Mohamad[1], Zainal Madon[2]

[1]*Department Of Government and Civilization Studies, Faculty of Human Ecology, Universiti Putra Malaysia,43400 Serdang, Selangor, Malaysia*
[2]*Department of Human Development and Family Studies, Faculty of Human Ecology, Universiti Putra Malaysia, Selangor, Malaysia*

ABSTRACT

First year students are the people who need to be focused on the context of life Satisfaction because at this age, they are transitioning from adolescence to adulthood whereby can be one of the most stressful times in person's life. This study aims to determine the relationship between social anxiety, loneliness, and life satisfaction among first year students in Universiti Putra Malaysia. 360 first year students between ages 19 t0 26 years old were selected using the cluster sampling technique. In this study, there were 3 types of instrumentation used to measure the variables related to the research which were The Liebowitz Social Anxiety Scale (LSAS) (Michael Liebowitz,1987) to measure social anxiety, UCLA Loneliness Scale (UCLA)(Daniel Russel,1996) to measure loneliness and The Satisfaction with Life Scale (SWLS)(Diener, Emmnos,Larsen & Griffin,1985)was used to measure life satisfaction. Data was collected using an online platform which was a Google form survey. In accordance with the aim and objectives of this research, two types of analysis which are univariate analysis (descriptive statistics) and bivariate analysis (Pearson correlation analysis and t-test) were used by using software SPSS VERSION 26. The results showed that social anxiety (r=-.320, p<0.05) has had significant negative relationship with life satisfaction of first year students. In addition, results found that loneliness (r=-.641, p<0.05) also had negative correlated with the life satisfaction of the first-year students and that there is no significant difference in life satisfaction between male and female (t=-.764, p>0.05). This study concluded that an increase in social anxiety, loneliness or both can lower the life satisfaction of the first-year student. These findings have positive social change implications and may be utilized to increase practitioner knowledge. Mental Health practitioners and professionals such as counselors, consultants and psychologists are encouraged to expand their knowledge and specialties in mental health issues in counselling. Government also needs to improve mental health policy and allocate resources to address the problems associated with social anxiety and loneliness

Keywords: Social anxiety, Loneliness, Life satisfaction, First year students

Corresponding author:
Syed Hadi Imanuddin Wan Mohamad
Email: syedhardi1@gmail.com

INTRODUCTION

According to research (Lopez-Ortega, Torres-Castro, Rosas-Carrasco, 2016), life satisfaction is one of the most significant indications of successful adaptation to life. It can also be beneficial for health, longevity, and social relationships. According to Diener et al. (2011), there are three main theoretical approaches for explaining life satisfaction at the micro level. The first is a needs-based theory and posits that when diverse needs are met, life satisfaction is attained. The second is activity-based and states that when someone is involved in activities they perceive as meaningful, life satisfaction occurs. The third discusses genetic and personality-predisposition theories, which suggest that one's personality is at the root of a stable degree of life satisfaction. The strategy used here is macro-oriented in that it links the way people live their lives to rules that generally only apply at the country or state level.

According to the findings, there are 19 main factors, including activities of daily living (ADL), aging, childlessness, cognitive ability, daily life decisions, depression, discordant living arrangement, education level, economic status, health status, housing satisfaction, insurance, marital status, perceived discrimination, preferred living arrangement quality, quality and duration of sleep, religiosity, and social function, are affecting life satisfaction among older adults (Khodabakhsh, 2022). First year students is one of the people that need to be focus in context of life satisfaction. This is because at this age, they are transitioning from adolescence to adulthood whereby it can be one of the most stressful times in a person's life. The

psychological distress among university students have adverse effect on student's health, development, educational attainment, quality of life, and also the deteriorating influence on their family and institutions (Damota, Mekuria & Bitew, 2019). First year students face changes in quality of life as they move away from home and families for education. They will face bio-psychosocial problems and adapt to new environments, affecting their overall well-being (Gokalp & Topal, 2019). University transitions can be stressful for first-year students (James, Krause, & Jennings, 2010)).

One issue that affects 1 to 7 percent of population worldwide is social anxiety disorder also known as social phobia or social anxiety disorder (Stein et al., 2017). Anxiety can be brought on by a number of factors in the educational setting, particularly in environments like school, college, and universities. The high standard for academic achievement, the competitive atmosphere, the quality of the work delivered, and the demanding evaluation process are among the factors that cause anxiety. (Arizona, Nurlela, & Jannati, 2019). Several previous studies have shown a positive relationship between social anxiety and loneliness. The findings of a number of these studies focus on the relationship between social anxiety and loneliness as well as a variety of other variables, such as the relationship between social anxiety and loneliness among people with internet use disorders. (Huan, Ang, & Chye, 2014).

Loneliness is universal and may have evolved in our species as a signaling mechanism to change behaviour and avoid

dangerous isolation (Cacioppo & Patrick, 2008). According to Hawkley and Cacioppo (2010), loneliness the feeling that one's desired level or quality of social relationships is not being fulfilled. Loneliness is significantly predicted by social isolation. (Tomova et ., 2020). Human wellbeing suffers from both social

isolation and loneliness. Social isolation leads to loneliness and life dissatisfaction which has a negative impact on wellbeing. It should be mentioned that social isolation and loneliness can result in losing touch with friends, family members, and other members of the community, which can worsen mental health.

METHOD

Population and sample selection

This study was conducted in 4 faculty in Universiti Putra Malaysia. The participants of this study were first year students. According to website of Universiti Putra Malaysia, the total number of registered first year student is 3,553 for the year 2022. Based on Cochran's formula, the sample size obtained for this study is 359.51 according to the population size at 3,553 and is rounded off to 360. Next, the sample research was selected using cluster sampling. At the first stage, researchers divided the first-year student into 2 cluster

which are faculties within social sciences and faculties within science and technology. Next, the researcher were randomly select 2 faculties within social sciences which are Faculty of Human Ecology and School of Business Economics and 2 faculties within science and technology which are Faculty of Food Science and Technology and Faculty of Biotechnology and Biomolecular Sciences. Then, researcher will select all programs under every 4 faculty and select all students in every program.

Instrumentation

The Liebowitz Social Anxiety Scale (LSAS) is a short questionnaire used to measure how social anxiety plays a role in different life situations. This social anxiety test was developed in 1987 by Dr. Michael R. Liebowitz, a psychiatrist and researcher at Columbia University. Studies have shown the LSAS to be a cost-effective and efficient way to identify those with social anxiety. The scale features 24 items, 13 relating to performance anxiety and 11 dealing with social situations. Originally designed to be administered by a clinician, it has since become a popular self-report scale (technically, the LSAS-SR) because of its ease of use. Each item on the 24-item

LSAS was scored between 0 and 3 and was separated into two subscales. With a Cronbach's alpha of 0.972, the LSAS presented high reliability.

Russell (1996) used data from past studies of college students, nurses, teachers, and the elderly to evaluate the validity, reliability, and component structure of this new edition of the UCLA Loneliness Scale. Internal consistency (coefficient alpha ranging from .89 to .94) and test-retest reliability over a year ($r = .73$) result shows the measure's high level of dependability. The scale's significant relationships between the scale and other loneliness

measures suggested convergent validity. The construct validity was supported by substantial connections between loneliness and indicators of health and wellbeing as well as significant associations loneliness and measures of the quality of the individual's interactions.

According to the findings of confirmatory factor analyses, a model containing a global bipolar loneliness component, two method factors that reflected the phrasing of the items, and a model combining these three factors provided a very excellent match to the data across samples.

The Satisfaction with Life Scale (SWLS) can be used to measure life satisfaction. Diener, Emmons, Larsen, and Gryphon (1985) were the researchers who created it and was published in a publication in the Journal of Personality Assessment. This instrument was developed to gauge the subjective well-judgmental being (SWB) component. The measure is to assess an individual's cognitive evaluation of their overall satisfaction with their life. The SWLS is an questionnaire with just five statements. On a seven-point scale, with 1 indicating "strongly disagree" and 7 indicating "strongly agree," respondents are asked to score their feelings regarding each of the items. A higher score on this test indicates higher degree in a person's state of satisfaction in life. The Satisfaction with Life Scale has been reported to have excellent test-retest reliability, with a correlation of 0.82 over a two-month period, and very good internal consistency, with an alpha of 0.87 (Magyar-Moe, 2009). The SWLS has been proved to be a valid and reliable measure of life satisfaction that can be used with a wide range of age groups and applications, saving time and money

when compared to other life satisfaction measures.

Data collection

The process for gathering data has been determined once the study design has been selected. It becomes critical that the researcher follow the procedure and start to gather data. To gather all the necessary information, the researcher used an online platform which was a Google form survey. Using a Google form test or questionnaire was one of the quantitative ways of data collection which can help the researcher to gather data. The researcher also designed the criteria and instructions of the questionnaire so that the participants could easily understand and reply to the items to collect more efficient, accurate, and authentic data. Researchers highlighted the importance of data, whether genuine or heuristic, analytical or deductive, in acquiring reliable data. The researcher then gathered data using a suitable instrument to ensure the study was on track. On the other hand, using a ready-made instrument did not necessarily ensure that it was suitable for the subject being measured. Therefore, the researcher rewrote, adapted, and updated materials to guarantee that they satisfy the letter's and the study's requirements.

Data Analysis

The software SPSS version 26 was used to analyse the data that was collected for this study. In accordance with the aim and objectives of this research, two types of analysis which are univariate analysis (descriptive statistics) and bivariate analysis (Pearson's correlation analysis and t-test) were used to analyse the research hypotheses and provide answers to the research questions.

Univariate Analysis

The univariate data was generated by the univariate analysis using the descriptive statistic. The demographic characteristics of the adolescent, including age and sex, as well as the independent variables of social anxiety and loneliness and the dependent variable of life satisfaction were studied in this data analysis. In order to describe the basic features of the data in ad study which include the frequency value, mean score, percentage, minimum value, maximum value, and standard deviation, the researcher used the descriptive statistics.

Bivariate Analysis

The research hypothesis was also examined using inferential statistics such the T-test, and Pearson's correlation analysis. The relationship between the independent variables (social anxiety and loneliness) and the dependent variables (life satisfaction) was analyse using a Pearson correlation analysis. Through this analysis, the researcher can determine whether there is a positive, negative, or no relationship at all between the two variables. The t-test was used to determine the difference in life satisfaction between male and female first year students.

RESULTS AND DISCUSSION

Relationship between social anxiety, loneliness, and life satisfaction among first year students in Universiti Putra Malaysia

Life Satisfaction		
r	P	
Social anxiety	320.-	001. <
Loneliness	641.-	001. <

Table 1: The correlation between social anxiety, loneliness, life satisfaction among first year students

According to the result displayed in the table above, the Pearson correlation value between social anxiety, loneliness and life satisfaction among first year students is -.320 for social anxiety whereas the significant value is at <.001. This showed that there is a significant relationship between social anxiety and life satisfaction among first year students and it is low negative correlated, $r = -.320$, $p < .05$.

Therefore, the (H01) null hypothesis 1 for third objective where it is no significant between social anxiety and life satisfaction among first year students in Universiti Putra Malaysia is rejected. Based on hypothesis 1 was rejected because the researcher found that social anxiety has a significant relationship with life satisfaction among first year students in Universiti Putra Malaysia. This constant

with the recent study Indian and Grieves (2013), Dryman et al. (2015), Jazaieri et al. (2016), Taha et al. (2017), and Hajure and Abdu (2020), which found that social anxiety negatively impact the life satisfaction.

Pearson correlation value between social anxiety, loneliness and life satisfaction among first year students is -.641 for loneliness whereas the significant value is <.001. This showed that there is a significant relationship between loneliness and life satisfaction among first year students and moderate negative correlated, r = -.641, p < .05. Therefore, based on (H02)

null hypothesis 2 for third objective where it is no significant relationship between loneliness and life satisfaction among first year student in Universiti Putra Malaysia is rejected. Based on hypothesis 2 was rejected because the researcher found that loneliness has a significant relationship with life satisfaction among first year students in Universiti Putra Malaysia. This align with past research conducted Tu and Zhang (2014), Peltzer and Pengpid (2019), Ponnusamy et al. (2020), and Padmanabhanunni and Pretorius(2021), which found that among Malaysian university students, loneliness is negatively correlated with life satisfaction.

The differences of life satisfaction between male and female

The third objective of the studies conducted was to identify relationship of life satisfaction between male and female among first year students in Universiti Putra Malaysia. The analysis was done by using T-test by running the collected data in SPSS.

Variable	Life satisfaction			
	n	Mean	t	P
Gender			764.-	0.446
Male	139	22.65		
Female	221	23.23		

Table 2: The differences of life satisfaction between male and female among first year students in universiti putra malaysia

The findings showed that there is no significant difference in psychosocial well-being between male and female preschool children (t = -.764, p > 0.05). Therefore, based on (H03) null hypothesis 3 for fourth objective where it is no significant

relationship between loneliness and life satisfaction among first year student in Universiti Putra Malaysia is failed to be rejected. Based on hypothesis 3 was failed to be rejected because the researcher found that loneliness has no significant

relationship with life satisfaction among first year students in Universiti Putra Malaysia. The mean of the life satisfaction for female was slightly higher at 23.23 compared to male at 22.65. This indicated that female had slightly higher level of life satisfaction in comparison to male. This constant with the past research by Mayungbo (2016), Ahmad and Silfiasari

(2019), found that there is no difference in life satisfaction between different gender could be due to cultural and other factors. However, it not in line with past research conducted by De Neve and Ward (2017), Jovanovic (2019), Geerling and Diener (2019), which found that there is different life satisfaction between male and female.

CONCLUSION

In conclusion, the present study was conducted to determine the relationship between social anxiety, loneliness, and life satisfaction among first year students in Universiti Putra Malaysia. Further information of the respondents such as gender, age, race, religion, faculty, and course were also obtained for descriptive analysis. It focuses on first year students in Universiti Putra Malaysia, as a respondent. An initial review of the past literature reveals that there are few studies on related with social anxiety, loneliness and life satisfaction among first year student. Next, for the independent, there was a significant

negative relationship for both independent which are social anxiety and loneliness with dependent variable which is life satisfaction among the first year students in Universiti Putra Malaysia. This indicate that the higher level of social anxiety and loneliness will decreasing the level of life satisfaction of first year students. Moreover, from the T-test analysis, there is no significant different in life satisfaction between male and female first year students in Universiti Putra Malaysia. The result showed that the mean of the female was higher than male of first year student in Universiti Putra Malaysia.

RECOMMENDATION

Furthermore, in this present study, researcher only investigated two independent variables which were social anxiety and loneliness. Hence, other variables that may influence life satisfaction of first year students in Universiti Putra Malaysia can be included in future research to understand the predictors of psychosocial well-being in depth. According to this present study, the social anxiety and loneliness did now show a significant relationship with life satisfaction. So, researcher anticipate that

future research will incorporate more potential affecting variable life satisfaction, comparing anxiety, loneliness or life satisfaction between men, women, children or adult or investigate the indirect effects of the variables used in this study.

Besides, researcher only limit the study for four faculty in Universiti Putra Malaysia only. This means the population of sample is small and not widespread. It recommends the researcher to increase sample size by choosing more faculties as actual samples.

It is also necessary to consider the population and samples from various educational backgrounds, income levels, and cultures. With these additions for studies on social anxiety and loneliness in first year students, not only will spread awareness across the country, but it will also help to improve the validity and reliability of these studies in university especially.

Moreover, the questionnaire is given by online using the google form to the respondents. This make the researcher cannot fully explain about the instrument that have been used in this research. Maybe it can make the result make less accuracy due to some of the respondent are not fully understand about the item that have been given for them. So, for the future study, the researcher can make the physical questionnaire such as giving hardcopy and brief to the respondents before they want to start the answer to increase their understanding about the instrument. This also can increase the accuracy of the results due to respondent to answer the questionnaire honestly and understand each item because they can ask directly to researcher.

REFERENCES

Ahmad, M. D., & Silfiasari. (2019). Life satisfaction based on gender. Proceedings of the 4th ASEAN Conference on Psychology, Counselling, and Humanities (ACPCH 2018). https://doi.org/10.2991/acpch-18.2019.53

Arizona, A., Nurlela, N., & Jannati, Z. (2019). Relaxation Technique within Group Counseling to Reduce Student's Anxiety on Facing Exam. Islamic Guidance and Counseling Journal, 2(1), 33. https://doi.org/10.25217/igcj.v2i1.310

Cacioppo, J. T., & Patrick, W. (2008). Loneliness: human nature and the need for social connection. Choice Reviews Online, 46(03), 46–1765. https://doi.org/10.5860/choice.46-1765

Damota, M. D., Mekuria, E. G., & Bitew, A. F. (2019). The prevalence and correlates of psychological distress among undergraduate students of Madda Walabu University, Ethiopia. Journal of Medicine, Physiology and Biophysics. https://doi.org/10.7176/jmpb/61-02

De Neve, J., & Ward, G. (2017). Happiness at work. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2943318

Diener E, Oishi S, Lucas R (2011) Subjective well-being: the science of happiness and life satisfaction. In: Snyder CR, Lopez SJ (eds) The Oxford handbook of positive psychology. Oxford University Press, Oxford, pp 187–194

Dryman, M. T., Gardner, S., Weeks, J. W., & Heimberg, R. G. (2015). Social anxiety disorder and quality of life: How fears of negative and positive evaluation relate to specific domains of life satisfaction. Journal of Anxiety Disorders, 38, 1–8. https://doi.org/10.1016/j.janxdis.2015.12.003

Geerling, D. M., & Diener, E. (2018). Effect size strengths in Subjective Well-Being research. Applied Research in Quality of Life, 15(1), 167–185. https://doi.org/10.1007/s11482-018-9670-8

Gökalp, M., & Topal, T. (2019). Investigation of life satisfaction of university students according to various variables. Turkish Online Journal of Educational Technology, 2, 191–204. http://files.eric.ed.gov/fulltext/ED602489

Hajure, M., & Abdu, Z. (2020b). <p>Social Phobia and Its Impact on Quality of Life Among Regular Undergraduate Students of Mettu University, Mettu, Ethiopia</p> Adolescent Health Medicine and Therapeutics, Volume 11, 79–87. https://doi.org/10.2147/ahmt.s254002

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness and blood pressure in Older adults: Defining connections. Aging Health, 6(4), 415–418. https://doi.org/10.2217/ahe.10.41

Huan, V. S., Ang, R. P., & Chye, S. (2014). Loneliness and shyness in adolescent problematic internet users: The role of Social anxiety. Child & Youth Care Forum, 43(5), 539–551. https://doi.org/10.1007/s10566-014-9252-3

Indian, M., & Grieve, R. (2013). When Facebook is easier than face-to-face: Social support derived from Facebook in socially anxious individuals. Personality and Individual Differences, 59, 102–106. https://doi.org/10.1016/j.paid.2013.11.016

James R., Krause K., Jennings C. (2010). The first year experience in Australian universities: Findings from 1994 to 2009. Melbourne, Australia: Centre for the Study of Higher Education. https://www.youthcoalition.net/public/EBulletin/documents/28%20April%202010/FYE_Report_1994_to_2009.

Jazaieri, H., Goldin, P. R., & Gross, J. J. (2016). Treating Social Anxiety Disorder with CBT: Impact on Emotion Regulation and Satisfaction with Life. Cognitive Therapy and Research, 41(3), 406–416. https://doi.org/10.1007/s10608-016-9762-4

Jovanović, V. (2017). Measurement invariance of the Serbian version of the satisfaction with life scale across age, gender, and time. European Journal of Psychological Assessment, 35(4), 555–563. https://doi.org/10.1027/1015-5759/a000410

Khodabakhsh, S. Factors Affecting Life Satisfaction of Older Adults in Asia: A Systematic Review. J Happiness Stud 23, 1289–1304 (2022). https://doi.org/10.1007/s10902-021-00433-x

López-Ortega M., Torres-Castro S., Rosas-Carrasco O. Psychometric properties of the Satisfaction with Life Scale (SWLS): secondary analysis of the Mexican Health and Aging Study. Health Qual Life Outcomes. 2016;14(1):170. https://doi.org/10.1186/s12955-016-0573-9.

Magyar-Moe, J. L. (2009). Positive psychological tests and measures. In Elsevier eBooks (pp. 43–72). https://doi.org/10.1016/b978-0-12-374517-0.00003-6

Mayungbo, O. (2016). Gender differences, self esteem and life satisfaction. African Journal for the Psychological Study of Social Issues, 19(2), 2–12. https://www.ajol.info/index.php/ajpssi/article/view/176096

Padmanabhanunni, A., & Pretorius, T. (2021). The loneliness–life satisfaction relationship: The parallel and serial mediating role of hopelessness, depression and ego-resilience among young adults in South Africa during COVID-19. International Journal of Environmental Research and Public Health, 18(7), 3613. https://doi.org/10.3390/ijerph18073613

Peltzer, K., & Pengpid, S. (2019). Loneliness correlates and associations with health variables in the general population in Indonesia. International Journal of Mental Health Systems, 13(1). https://doi.org/10.1186/s13033-019-0281-z

Ponnusamy, S., Iranmanesh, M., Foroughi, B., & Hyun, S. S. (2020). Drivers and outcomes of Instagram Addiction: Psychological well-being as moderator. Computers in Human Behavior, 107, 106294. https://doi.org/10.1016/j.chb.2020.106294

Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, Validity, and factor structure. Journal of Personality Assessment, 66(1), 20–40. https://doi.org/10.1207/s15327752jpa6601_2

Stein, D. J., Lim, C. C. W., Roest, A. M., De Jonge, P., Aguilar-Gaxiola, S., Al-Hamzawi, A., Alonso, J., Benjet, C., Bromet, E. J., Bruffaerts, R., De Girolamo, G., Florescu, S., Gureje, O., Haro, J. M., Harris, M. G., He, Y., Hinkov, H., Horiguchi, I., Hu, C., . . . Scott, K. M. (2017). The cross-national epidemiology of social anxiety disorder: Data from the World Mental Health Survey Initiative. BMC Medicine, 15(1). https://doi.org/10.1186/s12916-017-0889-2

Taha, A. A., AA El-shereef, E., Ismail Mohammed Abdullah, T., Ismail Mohammed Abdullah, R.,Abdullah Mutheeb Aldahasi, W. (2017). Social Anxiety Disorder and Its Correlates among Female Students at Taif University, Saudi Arabia. Research in Psychology and Behavioral Sciences, 5(2), 50–56. https://doi.org/10.12691/rpbs-5-2-3

Tu, Y., & Zhang, S. (2014). Loneliness and Subjective Well-Being among Chinese Undergraduates: The Mediating Role of Self-Efficacy. Social Indicators Research, 124(3), 963–980. https://doi.org/10.1007/s11205-014-0809-1

Tomova, L., Wang, K. L., Thompson, T., Matthews, G. A., Takahashi, A., Tye, K. M., & Saxe, R. (2020). Acute social isolation evokes midbrain craving responses similar to hunger. Nature Neuroscience, 23(12), 1597–1605. https://doi.org/10.1038/s41593-020-00742-z

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

FACTORS INFLUENCING THE INTERNAL PARTY DEMOCRACY OF THE ALL-PROGRESSIVE CONGRESS (APC) IN THE 2018 KADUNA STATE PRIMARY ELECTION, NIGERIA

Mohammed Abubakar[1], *, Zatul Himmah Adnan[2]*, Zaid Ahmad[3], Jayum Anak Jawan[4]

[1,2,3,4]*Department of Government and Civilization Studies, Faculty of Human Ecology, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.*

[1]*Department of Public Administration, Nuhu Bamalli Polytechnic, Zaria, Kaduna State, Nigeria*

ABSTRACT

The Progressive Congress (APC) internal party democracy (IPD) in Kaduna state was contested, particularly because the process of conducting the 2018 primaries is considered ineffective and inadequate. The process was accused of irregularities that led to bedevilled crises in the party in varying proportions, ranging from distrust among members, instability of the democracy, political thuggery, inter-party defections, anti-party politics, verbal warfare, and physical violence. This paper aims to explore the factors that influenced the conduct of the 2018 primary elections of the APC, which implies the various steps involved in the nomination of party flag bears or the party candidates for the general election. This paper was part of a study on the party's IPD during the 2018 Primary Election in Kaduna State, Nigeria. The data collection was based on one-to-one interviews with 18 informants selected from five distinct groups: party officials, ad-hoc delegates, politicians, rank-file members, and political analysts. In brief, the study found that personal interest, incumbency, incentives, and candidate selection methods as factors that influenced the conduct of the APC 2018 primary elections in Kaduna state. The study shows that the morals and integrity of the political actors affected the reputation of the party during the 2018 primary election. Based on this, it is pertinent that party stakeholders should shun all forms of interest and be committed to the implementation of internal party democratic doctrines in the conduct of party politics as a prerequisite for political party prosperity, democratic sustainability as well as democratic consolidation in Nigeria.

Keywords: Democracy, Internal Party Politics, Primary Election, Internal Party Democracy and Political Parties.

Corresponding author:

Zatul Himmah Adnan
Email: zatul@upm.edu.my

INTRODUCTION

Primary election is one of the significant activities within every political party in a democratic polity (Ichino & Nathan, 2016). The primary election is a term most popular in African party politics to describe the selection of a political party flag bearer for the general election. In other democracies, the concept of primary election can also be referred to as candidate selection or party nomination. In the United States, the process of nominating candidates by the party is regarded as a primary election (Pasquino, 2015). For example, the primary election in the United States is a process whereby political parties select their candidates to represent the party in the general election (Ansolabehere, Hansen, Hirano & Snyder 2010) (Ansolabehere et al., 2010). In this regard, the primary election serves as a party nomination for the political office sought by the candidates. In other words, the purpose of primary elections is to serve as the preliminary step in selecting candidates to stand as political party flag bearers aspiring for government public offices in general or national elections. Therefore, the primary election is characterized by a competitive nomination race within both political parties by party members in the voyage for political positions in the general election (Edgerly & Thorson, 2018). The conduct of the party primary usually takes place in preparation for the subsequent democratic tenure. Eligible party members compete for different political positions; in the end, one party member will emerge victorious in each available position (Kura, 2014). Though, the winner of the party's primary election goes on to represent that party in the general election. After a primary winner is determined, the political party will officially nominate that winner at the party's national convention (Edegoh & Anunike, 2016). This is simply a political party's official meeting, where candidates are nominated. This process, to a great extent, infers the strength or weakness of the party's internal democracy and is a determiner of the level of democratic consolidation within a polity (Seeberg, Wahman & Skaaning 2018) (Seeberg et al., 2018).

All-Progressive Congress (APC) is the current ruling party in Nigeria and came into being as a result of a political merger with other political parties such as the Action Congress of Nigeria (ACN), the Congress for Progressive (CPC), the All-Nigeria Peoples Party (ANPP), and a division of the All-Progressives Grand Alliance (APGA) combined to become the All-Progressive Congress (APC) on February 6, 2013 (Udofia & Uduigwomen, 2022) and (Ita et al., 2024). The growth of APC was noteworthy since previous attempts to establish a major party in the nation had failed several times (Omilusi & Adu, 2016). Giving the party considerable strength. Similarly, 49 lawmakers joined the APC's initial 137 members after defecting. Long before the election, this new strategy gave the APC the upper hand in the House of Representatives. On January 29, 2014, 11 senators, led by Bukola Saraki, the former Governor of Kwara State, defected to the APC (Omilusi & Adu, 2016). Former House of

105

Representatives speaker, now the Governor of Sokoto, and Atiku Abubakar, the former vice president, joined the APC. Gen. Muhammudu Buhari (retired), the presidential candidate of the APC, defeated Dr. Goodluck Jonathan, the president-elect of the PDP, on March 28, 2015, by about 2.6 million votes (Udu, 2015).

The advent of the APC in 2015 gave hope to many that the party has a political structure and manifestation for democratic consolidation. The party constitution gave power to the state chapter to determine their internal operations, particularly in selecting the party flag bearers for the general election. Three main internal election streams were organized and coordinated by the state party chapters across all states within the Nigerian federation. In many states of Nigeria, of which Kaduna state is inclusive, the conduct of the 2018 APC primaries is bogged down with aberrations that make the process lose credibility and cause much devastation to the party's internal democracy (Muhammad, 2018). The APC Kaduna state chapter declared indirect primaries and used ad-hoc delegates to elect and nominate the party flag bearers for the 2019 general election. Due to non-adherence to internal party democratic doctrines of transparency, members' inclusion, equality and rule of law undermined the credibility of the 2018 APC primaries in Kaduna state. As one of the key players in Nigerian politics, this kind of crisis made Kaduna become the focus of the APC primary election as the concern was raised over the inability of the party to incorporate internal party democratic doctrines in the process of conducting the 2018 primary election in Kaduna state. Against that backdrop, this paper aims to discuss the factors influencing the issues of the APC's internal party democracy during the primary election in 2018.

LITERATURE REVIEW

The study of political parties is always central to the study of Nigeria's democracy. The work by Dode (2010), Obah-Akpowoghaha (2013), Akubo & Yakubu (2014), Omilusi (2016), Musa, Ibietan & Deinde-Adedeji (2020), for example, highlights the importance of political parties to the growth of Nigeria's democratic consolidation. Their studies address issues such as institutional weakness, clientele politics, money politics, electoral violence and internal democracy that challenge the party to function well to the democratic nature. Despite many issues, the study by Odigwe (2015) and Godwin (2016) suggests that the absence of internal democracy is one of the important barriers to the full development of a political party. The performance of democracy depends on the embrace of internal democracy by the members of the party.

Internal democracy, or the internal party democracy (IPD) in Nigeria, has become an essential subject for many scholars due to its significant impact on the country's practice of democratic consolidation. Most scholars focus on the challenges political parties face when observing the principle of IPD. Few issues and challenges to the practice of IPD in Nigeria have been identified by scholars such as Okhaide (2012), Odigwe (2015), Olayinka & Olaniyi (2016), and Awhefeada, Okumagba

& Aloamaka (2023). Among others are leadership issues, candidate selection, conflicting interests or factionalism and financial accountability. Studies conducted about the earlier party, the People's Democratic Party (PDP) 1999-2015 (such as by (Dode, 2010; Egboh & Aniche, 2012; Adekeye, 2017; Mbah, 2022) show that the party has an issue lacking internal party democracy which leads to the losing people confidence on them. Therefore, the similar focus, i.e. the aspect of IDP, becomes the yardstick for people to measure their performance in elections.

Consequently, to ensure smooth electoral practices in Nigeria, the 1999 Constitution, the party Constitution, the Nigerian Electoral Acts, and other informal rules are put in place to guide all democratic practices in the country (Muinat, 2017). The legal framework, yet, makes it mandatory for political parties to ensure that their operation is within the ambit of the concept of internal party democratic doctrines (Paul Okhaide, 2012), such as the rule of law, transparency, inclusiveness, equality, equity and social justice. This has shown some of the indicators that could influence the practice of democracy internally.

The concept of IPD, though, is a very general phrase that covers a variety of techniques for including party members in internal party discussion and decision-making (Ojukwu & Olaifa, 2011). Internal party democracy is a gauge of the political party's durability and health and, consequently, of democracy's future and the character of politics in general. The goal of internal democracy is to create political parties that are more democratic, open, and functional. It highlights particular difficulties with the internal administration

and operation of parties and party systems, particularly during party primaries, which is one the significant activities within politics, selection of party leadership, and policy-making as well as the relationship between the party members (Ojukwu & Olaifa, 2011).

The term "internal party democracy" can stand as a measurable democratic instrument within political parties. The more adherence to terms in conducting political party activities, the more democratic such a party will become. The more internal party elections inclined with IPD principles, the more free, fair, transparent and credible the elections will become. Ojukwu and Olaifa (2011) and Adekeye (2017) identified three major components of IPD: equal participation of party members in the democratic political processes, inclusiveness, and institutionalization. As Adekeye (2017) argue that, the institutionalization of political parties facilitates the spread of democracy since such groups are immune to the whims and avarice of a small number of ambitious leaders inside the party.

According to a historical study of African parties published in 2003, clientelist practices severely impair the ability of African political parties to respond to the needs of the people when in power Mozaffar, Scarritt & Galaich (2003). Party leaders are constantly looking for potential candidates who will aid their organizations in achieving their objectives in a pluralist democracy because political parties hold primaries that act as a recruiting and distribution platform for individuals who are given active political roles (Chiweza et al., 2021) Direct, closed, open, blanket, nonpartisan, and runoff are a few examples

of political party primaries highlighted by (Sinclair & O'Grady, 2018). Each of these primaries has specific rules on how the parties can hold their primaries. Political party primaries that form a direct primary ensure that regular party members directly influence who becomes the party's flag bearer. In a closed primary, voters (rank-and-file) are only permitted to nominate candidates inside the party they are affiliated with. This affiliation is confirmed by registration as a party member. If there is no registration deadline for party membership, the registration will stay open (Nnaoma, 2020).

Party machines have frequently manipulated the procedure using open-ended deadlines. A voter may participate in an open party primary without first being a registered party member. Party officials dread this type of primary election because there is a chance that supporters from the rival party would support unqualified candidates from a different party who will be easily defeated in the general election. The term "jungle primary" also applies to general political party primaries (Holland, 2023). A voter receives a ballot with a list of candidates from every party for every post. Electing public officials with no party affiliation takes place in the nonpartisan primary. Partisanship should not be allowed to influence the choice of some authorities, which is why it is protected. A one-party political system produces runoffs or second primaries. The primary stipulates that a runoff election shall be held between the two front-runners if no candidate receives a majority of the votes for an office. The runoff primary is an effort to address a long-standing issue with a one-party system. All contests are crammed into the dominant party's primary. Political parties in Nigeria

have claimed to either run open or closed primaries (Muinat, 2017). Nevertheless, party bigwigs have always influenced the outcome before and after elections.

Ainka and Cross (2015) argue that political parties use different methods, though influenced by candidate diversity, to accomplish this enormous obligation among direct, indirect, and consensus methods. In the direct primaries, all party members, including the rank files members, participate directly in the selection or election process. In contrast, in the indirect methods, the party uses delegates, and only a few party members, like party executives and influential party members, will be chosen to participate and represent all party members in the process. In any case, the indirect method is referred to as the delegate method. Still, in the consensus method, the party aspirants willingly decide to choose one person among them to stand as the party flag bearer in the general election. In any case, Bjarnegård and Zetterberg (2016) argue that the candidate selection method has to be executed in detail, explicit, standardized, implemented by party officials, and authorized in party documents' written rules.

In an attempt to comprehend factors influencing the internal party democracy within political parties, Kabasakal (2014) in his study identified leadership, candidate selection tools, the pattern of membership recruitment, the pattern of policy formulation and communication inlets as factors that influence the internal party democracy of political parties. On the other, Innocent, Yusoff & Otaida (2020) identified three crucial hallmarks for political parties IPD. Firstly, there should be free, fair, and periodic elections of internal party positions

and candidates for representative offices. Secondly, equal and open participation of all the members and groups in such a manner that would ensure that their interests are fairly represented. The third hallmark is the degree of party institutionalization which implies the extent to which internal decisions and processes are formalised as well as the extent to which the party's collaborative structures pervade its target constituency

Therefore, this research explores the factors that influenced the conduct of the All-Progressive Congress (APC) primary elections in Kaduna. In many states of Nigeria, including Kaduna state, the conduct of the 2018 APC primaries is bogged down with aberrations that make the process lose credibility and cause much devastation to the party's internal democracy (Muhammad, 2018).

METHODOLOGY

The study employed a qualitative case study, and purposive sampling was used to determine the identities of 18 informants. The study was carried out in Kaduna state, one of the states in Nigeria which the APC governed for eight years. The geographic settings of Kaduna specifically help in understanding the internal party crisis and its effects on membership, primaries, and democracy in Nigeria. A total of 18 informants were interviewed from six different categories - four (4) party executives (executives with vast experience who occupied high positions for at least five years), three (3) delegates (party members who serve as delegates in the selection or choose who to be the party's flag bearers during 2018 primaries), six (6) party aspirants (people who are contesting for a position under the party in the 2019 primaries), three (3) rank-file members (party member), and one (2) political analyst (selected political analysts who are well-known in the field of politics and have a vast knowledge of Nigerian politics and democracy).

The informants are tagged with codes to maintain their anonymity. The codes used

are Party Executive (PE), Delegates (PAD), Party Aspirants (ASP), Party Rank-file Members (RFM), and Political Analysts (PA). Each category was further split into 1, 2, 3, and so on. For example, Party Executive (PE) was split into PE1, PE2, PE3, and PE4. The interviews were held in homes and offices and lasted between 45 and 120 minutes. Each interview was taped and written down with the informants' permission. Thematic analysis is used to examine the data from the interviews. This article is premised on the research question raised about the factors that influence the conduct of the 2018 APC primaries in Kaduna state.

The codes, themes, and sub-themes were identified using conventional procedures, and the themes and sub-themes resulted from the interviews. The results have gone through several processes to confirm the accuracy and authenticate the information acquired, including a cross-check with an expert in political studies for validation. Besides interview data, this study was also supported by observation, secondary data, and literature reviews to evaluate the accuracy of the findings.

FINDINGS AND DISCUSSION

The interview analysis identified four main themes as the factors that influence APC's internal party democracy. Figure 1 shows the main factors and their sub-factors and follows with the discussion.

Figure 1: The factors influencing the IPD of APC during the 2018 Primary Elections in Kaduna
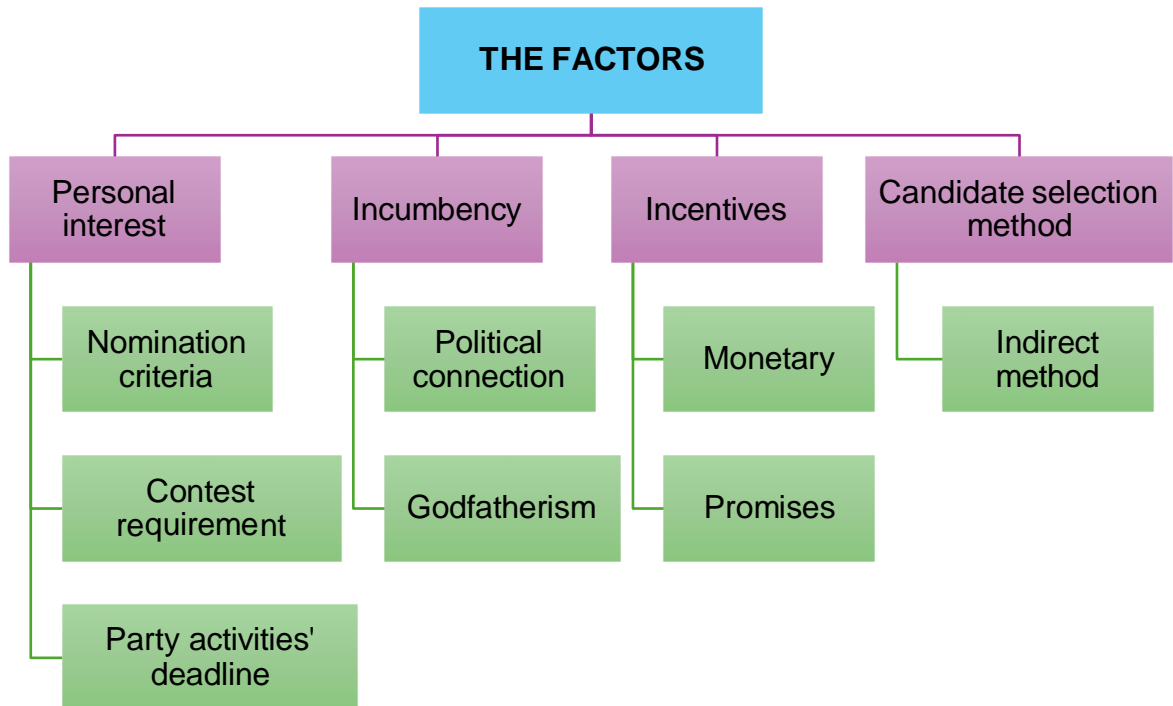
Source: Data Analysis (2022)

Personal Interest

Personal interest is one of the important factors identified by the informants to influence the party practice of democracy. Personal interest refers to issues attached to someone's desire or advantage. As a result, personal interest could be seen as an intentional action done for one's gain. In this regard, it indicated that the personal interests of those who led the party's operations influenced certain measures taken during the primaries. According to

the informants, there have been instances where nomination criteria and contest procedures have been crafted to prioritize the personal interests of a select few over those of the party or majority members. The informants' responses indicated that personal interest had a significant influence on the nomination standards, contest rules, and party activity deadline.

One of the points raised regarding factors that influenced the conduct of the APC 2018 primaries in Kaduna, which related to

personal interest, was non-adherence to the nomination requirements. The process and procedure of party nomination are referred to as the criterion for nomination. Stated differently, it refers to the procedure of establishing uniform guidelines for party operations during the nomination process of the party candidate. Most informants concurred that one of the most critical elements of how political parties behave during primary elections is the nomination criteria. They were concerned that several crucial requirements were not met, jeopardizing the party's nomination process. The majority of informants disclose scheduling modifications for the party that must be shared with several members and candidates. They claim that the Nigerian Electoral Act and the APC constitution established requirements for the party nomination to run for any position within the party or any public office. These requirements include being a party member for a specific amount of time, not less than one year, keeping party members and candidates informed about any issues about the party, including those related to elections and nominations, as well as any changes to the location of party meetings, elections, or other party-related programs. One of the informants stated the following:

"I participated; I contested for my position. Instead of adhering to party rules and the Nigerian electoral act, the primaries took place without internal democracies. It was just interesting that it superseded everything. I was an aspirant or contender but was not around when the primary occurred, so I cannot say anything precisely. Nevertheless, it was organized by some individuals who felt they were close to the governor and could do and undo it.

Normally, as a contestant, I should have been there and been notified when and where the primary was taking place. Rather, the process was hijacked and manipulated by a few individuals, placing those they wanted in specific positions. So, virtually, there was no primary in my case. There was partially a primary but not a normal primary". ASP1

An informant lamented that the party decision of whom to contest under the party is not in the hands of the party executive or party members but rather the party constitution. The informant stands on the opinion that the process and the requirements are products of the party constitution and should be followed accordingly. However, the informant also believed that APC statutes give power to party officials to decide some policy direction within the party. Yet, according to him, policies made by the party officials should not go contrary to the party doctrines. Some informants contended that the above information that the constitution and electoral stands on the criteria for the nomination needed to be followed. They argued that interest was used in the nomination process. For example, an informant (ASP1) believed the party neglected all the guidelines and procedures on the verge of the primary election.

The data highlights that the conduct of the primary election in the APC state chapter of Kaduna faces challenges of misconduct related to interest in the candidate nomination process. It also shows that specific personal interest was exacted, negating the credibility of the party selection. Moreover, most of the informants are dissatisfied with the behaviour of

certain politicians or party executives/officials. Still, a study by Seeberg, Wahman, and Skaaning (2018) shows that the nomination process of candidates for primary elections faces serious misconduct in African democracies. The study further indicates that nomination violence is widespread in both democracies. More so, the level of nomination violence varies greatly among parties within the same party system. It was further confirmed that candidate selection is one of the essential functions of political parties; consequently, the methods, strategies, and styles of candidate selection have long-term consequences for the party and the people chosen and their actions in political office (Muinat, 2017).

An informant also talked about the qualifications for the contest, which are particular requirements that one must meet to run for an elective seat. The Nigerian Election Act lays out the qualifications that a candidate must meet to run for office as a flag bearer in any political party. The APC constitutions also stipulated that before raising the party flag in the general election, candidates vying for any post within the organization must meet several requirements. Thus, it is necessary to adhere to the selection process. Four informants agreed during the interview that every political party, including the APC, has requirements for the contest. Though, some informants claimed that most political parties had purposefully compromised their stated requirements for the contest and the procedure to be followed to support candidates who they were interested in.

An informant says during the interview that there is a particular constitutional provision on requirements to contest, such as the quality of a candidate, educational qualification, and membership status:

> "Before contesting for any position, the party constitution spelt out some requirements to follow and often to fulfil, among which a person who wants to contest for party nomination must be a duly registered and committed party member. Interest is what substituted the stand of the party in the 2018 primaries. Many unqualified candidates emerged victorious because the party, or the party's leadership, is interested in them becoming the flag bearers of APC. Many names of winning contestants were later changed to those of more interest; a classic example is the Kaduna central senatorial seat". This is a clear case of interest that many know. Many requirements were compromised". ASP2

Many winning declarations by the party were challenged by the same party members and often by the aspirates, who felt they needed to be more fairly treated on the grounds of compromising requirements for the contest. This point addressed when one of the informants asked to clarify the accusation of compromise. Some informants responded during the interview that the party executives and the aspirants under the party must meet the requirements set by the party to become party exco or to contest for any public position under APC. This narration is made to counter the accusation level against the party for not providing a level playing ground between the party members, especially during the 2018 primary election.

A standard for what a candidate must have to be eligible to run for office within a party has been established, and it is made explicit in both the election laws and the constitutions of political parties. Respecting that constitutional mandate remained obligatory. All of the aforementioned informants concurred that procedures must be followed by political parties, including the APC when choosing or electing party executives and candidates to run for office in the general election while flying the party's flag. As was alleged, the data above showed that certain needs were sacrificed in favor of others. It was verified that the party's best interests led to the disregard of these criteria. It is crucial to remember that election laws are put in place to direct the political process, and any changes made in violation of the law may have unintended consequences.

The main contention here is that the party leader or other elites' interests should have taken precedence over the contest's conditions, such as being a properly registered member and possessing certain educational qualifications, during the process. These also have an impact on internal party democracy and the choice of the most deserving and popular candidates. This explains why a lot of victorious declarations were examined in court. Ikechukwu (2015) affirmed that Nigeria's current democratic system no longer exists. There is a group of politicians who are so focused on their interests that they are unconcerned with the welfare of Nigerians as a whole. In the same direction, Olarinmoye (2008) also revealed that political corruption is a simple act of subverting the election process by those who are greedy for the personal gain that Nigerian electoral success underwrites.

The dateline for party activities is the time frame set by the party within which political moves are to be carried out. The informants view this as another issue in the conduct of APC primary elections. The party's activities include purchasing/returning nomination forms, screening, campaigns, consultations, etc. The interviews revealed that in the electoral process, there is a time frame upon which certain activities are valid, and a dateline is spelt out. There is a time limit from purchasing the forms, such as the expression of interest and the nomination forms, screening, and conducting the election to filling disputable cases to the party and in court. The party's activities' dateline was found to be the influencing factor in the conduct of the 2018 APC primaries. The informants mention that most of the datelines for purchasing nomination forms, screening, campaign, and election are compromised to favor other contestants or aspirants. Hence, concerning the overhead, the following views from the respondents were quoted:

"The time frame was for sales of the expression of interest and nomination forms, filling and returning the forms, screening, and campaigns. Every aspirant was informed about the time frame and date lines set by the party. This is in line with the APC constitution. The form sales started on September 5, while screening of aspirants who had purchased the forms was slated between 15th and 18th September 2018. The primaries were held between September 27 and October 2 2018. Though, some dates were later

changed due to the security challenges faced in the state." PE1

An informant added that they intentionally hampered the dateline to meet the elites' interest.

"the date lines were deliberately changed to favor the prepared aspirants. I was an aspirant in the 2018 primaries, but nobody informed me about the changes to the election venue; the election was supposed to be conducted in the presence of all aspirants, that is, the stand of the party constitution. I can tell I was not there when the party conducted the primaries I was contesting. After the primaries, the aggrieved aspirants were by law supposed to be given time to gather evidence and present to seek redress, but such constitutional right was not fully granted." ASP1.

From the above analysis, it shows that the conduct of primaries in the APC is somehow hindered by the pronouncements, primarily related to the stipulated datelines for the party activities as claimed. Though the party's national body slatted the datelines, specific unforeseen circumstances did not warrant sticking to the official datelines slatted, as also claimed. The development paved the way for discrediting the process and was regarded as an influencing factor in conducting the party's primaries. Personal interest has ground in the Nigerian party's political process, as Ononogbu & Nwangwu (2014) describe that political parties are established to further the self-promotional goals of their chief founder. Udofia & Uduigwomen (2022) reported

that many political parties, including the APC, face a series of internal democracy fractions leading to violence due to irregularities in form purchases and unannounced deadlines for form returns. This kind of act has affected the party's internal democracy and Nigerian democracy.

Incumbency

Incumbency emerged as a second main factor that influenced the process of conducting the 2018 APC primaries in Kaduna state. Incumbency is a political concept that describes a person currently holding a political position. In other words, the incumbent is the current holder of an office or position, usually about an election. The two most common issues raised by informants under incumbency factors are political connection and godfatherism.

As an issue raised, the political connection is a political relationship in which a political actor is linked. In other words, the political connection could be a bond with another person with a common interest. The informants highlighted that most incumbent candidates who contested in the party primaries used their positions to pave their way to victory during the party primaries. Still, it was also revealed that some candidates are the prepared candidates of the party officials and other top-ranking politicians within the state and that connections helped some candidates achieve victory in the 2018 primaries. At least two of the informants affirmed that:

"We know that some of us who contested with incumbent leader found it very difficult to survive or to emerge winners because some of them happen to be among the party exco, and even those that are not,

you will find that the delegates are their political boys and they must dance the tunes of their bosses. That is why many of us prefer direct primaries so that people can choose who they want. The nature of APC internal politics lends incumbent aspirants better hope and opportunity than those not in position. The only future hope is that the national assembly wants to pass an electoral bill that will make it mandatory for every political party to use direct primary in the candidate's selection process." ASP1

Another informant lamented that party excos use their power to favour the candidates or party members they want.

"Well, the fact remained that those in authority, especially the party executives, use their positions to favour some of the candidates of their choices. Many of us were unaware of what happened while selecting the party delegate; we could not sell our idea to them. Our party delegates are ghosts to us, only known to those who choose them. We are still loyal APC members, hoping this kind of treatment will change in future elections. APC is a party we believe in, and our party can carry everyone as one." ASP3

The above assertion certainly infers the standpoint of incumbency in the conduct of the 2018 APC primaries. Many informants confirm the official's role in determining the party flag bearers in the 2018 primaries. Some party officials have confessed their participation in the process. Though,

according to them, their act aligns with the responsibility vested in them by the party constitution and the Nigerian electoral act. Incumbency related to political connection is one factor that influences the conduct of the APC primaries in Kaduna state. Perhaps the party leadership's views and position in the selection process were backed by the party constitution and the Nigerian Electoral Act. This situation portrays that the chances of securing a party nomination solemnly depend on the relationship, obedience, and loyalty with the party leader or the party elites, which are the primary determiners of political connection. This also hinders the credible conduct of the 2018 APC primaries. Hence, democratic principles have encouraged the participation of every member in a democratic set-up, especially that of a political party. The findings support the idea that political party democracy and Nigerian politics are closely related to political connections, which is why most scholars see elite dominance in Nigerian politics. They have the authority to personally choose both the nominees and the winners of elections (Oluwatusin & Daisi, 2018).

The second issue is godfatherism. Godfatherism can be described as an act of influencing or pioneering an organization. By the way, Godfatherism is an act of supporting one candidacy by using a position to influence the process. When asked about the facet swaying the APC primaries in Kaduna, most informants unearthed that political connection was among the factors. However, some explain Godfatherism as imperative in politics, especially within political parties. An informant mentioned that;

> *"...the nature of Nigerian politics makes it necessary for any political armature like me to relate with someone already in the system to be guided properly. I cannot deny having a political mentor in APC, but the fact remained that we are one family in APC, and every member is treated as such."* ASP4

The above assertion revealed a political connection, which is, in the informant's opinion, a requirement necessary for party politics, especially in APC. Another informant stated that when asked about the factor that influences the conduct of APC primaries,

> *"Well, I can only say several factors influence our party primaries. Yet, it is clear that those with the upper hand in the party gain more advantage than those who are alone."* RFM3

The above assertions revealed that political connections regarding Godfatherism fiddled a part in the conduct of the 2018 APC primaries in Kaduna state. Still, the strength of the factor, according to myriad informants, is the pattern that gave aid to those with political connections over others. Godfatherism's role and power determine Nigerian politics and the success of party politics involvement. This factor has long stood as an influencing factor in the party-political process in Nigeria. Godfatherism is the fundamental requirement for political success, affecting the conduct of the party primaries and, in general, internal party democracy. It is believed that political connections related to incumbency are one of the factors that influenced the conduct of APC 2018

primaries in Kaduna state. Therefore, the findings are in line with past studies' arguments; for example, Ahmed and Alhaji Ali (2019) argue that the politics of godfatherism has emerged as a global problem in the political evolution of many nations, including Nigeria. Their findings revealed that by consolidating power in the hands of a small number of elites at the expense of the majority (electorates), godfather politics have a detrimental effect on the socio-economic and political growth of the country. As a result, defections, decampments, and confrontations between party members have impacted the nation's economic and political progress. Moreso, Godfatherism has negatively impacted the nation's politics with the growing institutionalization of democracy, leading to discontent, discord, divisiveness, and conflict among diverse political and interest groups. Its sluggish effects have intensified political passivism and apartheid, slowing Nigeria's democratic transition (Osayi, 2015).

Incentives

The third factor identified as one of the main factors that influenced the conduct of the 2018 primary elections in the APC Kaduna state chapter was incentives. Incentives, in this regard, are things that encourage or persuade someone to do something or act in a particular way. Two main issues of incentives associated with the conduct of APC primary election in Kaduna state are monetary and promise incentives. The informant highlight that some aspirants used money during the election to buy the delegates' votes. However, promises were made primarily by

the incumbent aspirants for contracts and public appointments.

Monetary incentives are financial incentives used to persuade individuals to improve their performance or to get compliance to achieve a desired goal or objectives. In the political process, money was used as a source of obedience. For example, the conduct of the 2018 APC primaries in Kaduna state was influenced by the use of monetary incentives to secure victory by some of the aspirants, as narrated by most informants. One of the informants said that money politics was used to manipulate the entire process;

> *"it is clear that money was used to buy delegates' votes during the primaries. Let me tell you, any God-fearing delegates will not be denied what I am saying. The party officials and the delegates collect money from an aspirant before casting their votes. Oga, this is known to everyone; this is not something new. This is why the party official insists on using the indirect method." RFM2*

Another informant was, still, saying that he lost the primaries because he could not offer what his opponent provided to the delegates;

> *"I have all it takes in terms of people support to pick the ticket of my constituency, but I lose the election because I have nothing to offer to the delegates, I cannot give money, and I cannot promise them any political appointment or contract. This is what affects my success in the primary election." ASP3.*

Most informants confirmed that monetary and promise incentives were deliberately used in the country's politics to change voters' preferences. In most cases, this strategy was used by unpopular candidates in exchange for votes to win an election easily.

Promise incentives are another issue that influenced the conduct of the APC primary election in Kaduna. Promise incentive is an act spurring increased action. Incentives are supplied in addition to bets. It refers to additional compensation or benefits provided in acknowledgement of achievement or superior performance. The interview shows that promises and incentives attract most of the party delegates to make their choices. Some of the informants said that the decision of the party delegates during the primaries was solely the decision of the candidates who offered the highest;

> *"The decision of the party delegates during the primaries was solely the product of who made the most extensive offer in terms of money and promises. Most of which is also in line with the choices of their godfathers." PA1.*

Similarly, another informant added that the candidates occasionally meet with delegates before the election, where they negotiate on the price.

> *"Some of the aspirants meet one-on-one with the delegates before the elections, where they make all negotiations. The delegates were paid, and promises were made." RFM 1.*

The above statement shows how the incentives

took part in the 2018 primary election of the APC in Kaduna state. The participants' responses, though, stand differently about the process that paved the way for using money and promised incentives. The party's decision to allow the aspirants to get in contact with the delegates for campaign purposes can stand as a means for making the use of money and other promises that influence the delegates' choice decisions. As a result, many informants confirmed that monetary and promise incentives were deliberately used in the country's politics to change voters' preferences. In most cases, it is a strategy used by unpopular candidates in exchange for votes. Due to its importance and the impact of money in politics, political party finance is a recurring topic in modern democracies. The study by Sule, Adamu & Sambo. (2020) and Sule, Sani & Mat. (2018) highlight that the 2015 General Elections were among the most expensive elections in history, and money politics was prevalent due to the influence of godfathers and the financial backing of candidates from the main parties.

Candidate Selection Method

The internal party rules usually determine this strategy/method, and the internal procedure or the legislation lays down the procedure. There are two and often three recognized candidate selection methods, i.e. centralization, participation, and consensus. The centralized method is the selection method controlled by the current party levels, i.e., national, state, and local levels. In contrast, the participation method is determined by the party rank file members or by the party leadership. Finally, the consensus method is achieved through deliberations between all stakeholders. Although the candidate selection method is

very vague, most of the existing legal frameworks indicate that the political party's process of candidate selection should be democratic.

Most informants focused on the method employed by the party, which has dramatically affected the process of the APC 2018 Primary Election. The direct method allows only the party leadership to control the selection process. Most of the informants revealed that the party officials were the ones who determined the direct selection method and denied the party rank file members the opportunity to take part in the process. One of the informants quoted;

> *"Yes, the party officials have the power to decide the method of candidate selection as stipulated by the party constitution and the Nigerian electoral act, but that power should not supersede the fact that another provision of the same constitution and the electoral act stressed that the method of candidate selection should be democratic in nature." PA2*

Another informant said that the choice of the majority of people is essential in a democracy.

> *"The choice of people is crucial in defining a particular act or action as democratic. Many party members wanted the indirectmethod, but the party leadership insisted on the direct method because it is the only method that can give a simple chance of maneuverer." RFM2*

Therefore, the findings highlight that APC's indirect method for 2018 in Kaduna state is constitutionally recognized, but specific constitutional procedures were sluggish. For example, the party official confirmed that the

national party has agreed to use direct primaries for candidate selection. One of the informants from the aspirants' category confirmed that a constitutional clause that says, "if there is any reason for any chapter of the party to opt out of the direct primaries, a collective decision should come through the chapter executive committee which includes all stakeholders and all aspirants that are contesting in that primary." Most informants confirmed that party leadership uses the indirect method to influence the process because, according to the executive, the decision to use the indirect method of primary election in Kaduna state is because of the security challenge in the state. However, some of the participants disagree with the reason as that cannot be enough reason for opting out from the stand of the national level of the APC on direct primaries. They also mentioned that direct primaries method was adopted in states facing more security challenges than Kaduna state. To this

CONCLUSIONS

Based on the findings and discussion, it is concluded that the APC's internal party democracy during the 2018 primary election in Kaduna State was influenced by deliberative non-compliance to the Electoral laws, party principles and democratic doctrines. This influence arises

extent, the study found that the APC's method of candidate selection in the 2018 primaries influenced the conduct. It can be concluded that the APC primaries faced several instances of misconduct in the process of conducting them. This has also negated the principle of democracy, especially internal party democracy.

The candidate's selection was the final consideration. According to the interview, APC adopted the indirect method in the 2018 primaries in Kaduna state. An indirect primary is one in which party members choose delegates from among themselves, who then select the party's candidates for upcoming elections (Ayodele, 2023). Some scholars think this primary method needs to be revised. For instance, it is such a delegatory task that the purpose of landlord associations or town meetings is to bring together representatives from each home, typically the fathers, to make decisions that affect every person in society. Delegates are also chosen by party members in the political wards. Direct primaries are no less democratic than indirect ones. Indirect primaries are undemocratic because of the shady way some delegates are selected (Ayodele, 2023). In this regard, the indirect primary can be said to be capable of causing controversies that may lead to political apathy and unrest within the political party structure and consequently affect democracy and the consolidation process.

from a strong interest by the influential and stronghold party members of APC in Kaduna state during the 2018 primary election to pave themselves way for continuously marginalizing the polity. This further impacts the overall strengthening of democracy in Nigeria. Therefore, for the

successful functioning of our nascent democracy and for the electorate to continue to have faith in the political processes, as the present political experiment has primarily depended upon them, institutionalization and restructuring of the political party's internal democracy and the judiciary in a most extended position are necessary.

Nevertheless, party leadership and politicians must have faith in the conduct of credible elections and shun all forms of individual interest in the political process. Party leadership and influential party stakeholders should strictly adhere to the doctrines of internal party democracy as a tool for achieving unity within the political party and, by extension, democratic success and development. They should still focus on a nationalistic and visionary leadership style, particularly in steering internal party

affairs. This will safeguard their morality and integrity. They should also articulate political socialization to promote the values of unity, hard work, accommodation and discipline. Democratic governance is always about collectivism, not individualism. They should understand that there is always one winner in any election. Providing the same level playing ground to all APC members of the Kaduna state chapter in the democratic processes of the party should be prioritized. They should emphasize the rank-and-file involvement in the party's policies and representation at party activities and party bodies. Democratic policy-making involves a participative policy development process in debates, consultation meetings, and other platforms. It decentralizes decision-making mandates for the rank and file of political parties.

REFERENCES

Adekeye, M. A. (2017). Party Primaries, Candidate Selection and Intra-Party Conflict in Nigeria : PDP in Perspective. *Covenant University Journal of Politics & International Affairs*, *5*(1), 22–39.

Ahmed, F., & Alhaji Ali, M. (2019). Politics of Godfatherism and its Implication on Socio-Economic and Political Development of Nigeria. *American International Journal of Social Science Research*, *4*(1), 9–19. https://doi.org/10.46281/aijssr.v4i1.243

Anika, G., & Cross, W. (2015). The Influence of Party Candidate Selection Methods on Candidate Diversity. *Representation*, *51*(3), 287–298. https://doi.org/10.1080/00344893.2015.11 08359

Ansolabehere, S., Hansen, J. M., Hirano, S.,

& Snyder, J. M. (2010). More democracy: The direct primary and competition in US elections. *Studies in American Political Development*, *24*(2), 190–205.

Awhefeada, U. V., Okumagba, E. O., & Aloamaka, P. C. (2023). Legal Regulation of Internal Party Democracy in Nigeria. *Journal of Liberty and International Affairs*, *9*(2), 369–384. https://doi.org/10.47305/JLIA2392476a

Ayodele, O. (2023). Politics of direct and indirect primaries. *Vanguard Newspaper August 12*, https://www.vanguardngr.com/2021/10/pol itics-of-di.

Bjarnegård, E., & Zetterberg, P. (2016). Political Parties and Gender Quota Implementation: The Role of Bureaucratized Candidate Selection

Procedures The Role of Bureaucratized Candidate Selection Procedures. *Comparative Politics*, *48*(3), 393–417. https://doi.org/10.5129/001041516818254400

Chiweza, A. L., Kayuni, H., & Muriaas, R. L. (2021). Understanding handouts in candidate selection: Challenging party authority in Malawi. *African Affairs*, *120*(481), 569–589. https://doi.org/10.1093/afraf/adab030

Edegoh, L. O. N., & Anunike, O. W. (2016). Voters' Assessment of Social Media Use for 2015 Electioneering Campaigns by the two Leading Political Parties in Nigeria. *African Research Review*, *10*(4), 18. https://doi.org/10.4314/afrrev.v10i4.2

Edgerly, S., & Thorson, K. (2018). Young Citizens, Social Media, and the Dynamics of Political Learning in the U. S. Presidential Primary Election. *American Behavioral Scientist*, *62*(8), 1042–1060. https://doi.org/10.1177/0002764218764236

Holland, T. P. (2023). *Primary Election Reform and Congressional Elections.*

Ikechukwu, U. G. (2015). Political Nomadism and Its Implications on Political Development in Nigeria : A Critical Analysis. *International Journal of African and Asian Studies*, *9*, 75–86.

Innocent, A. P., Yusoff, K. Z. H., & Otaida, E. (2020). Internal Party Democracy and Institutionalization of Political Parties in Nigeria's Fourth Republic. *South Asian Journal of1*(2), 1–15. https://acspublisher.com/journals/sajssh/archive-issues/2020-oct/internal-party-democracy-and-institutionalization-of-political-parties-in-nigerias-fourth-republic/

Ita, V. E., Udoaka, S. P., & Ekpo,

M. E. (2024). Godfather-Driven Crises And Internal Democracy in Nigeria's Political Parties : A Study of Peoples Democratic Party (PDP) And All Progressives Congress (APC). *Journal of Political Discourse*, *2*(2), 67–82.

Kabasakal, M. (2014). Factors influencing intra-party democracy and membership rights: The case of Turkey. *Party Politics*, *20*(5), 700–711.

Kura, S. B. (2014). "Clientele democracy": Political party funding and candidate selection in Nigeria. *African Journal of Political Science and International Relations*, *8*(5), 124–137. https://doi.org/10.5897/AJPSIR08.066

Mozaffar, S., Scarritt, J. R., & Galaich, G. (2003). Electoral Institutions, Ethnopolitical Cleavages, and Party Systems in Africa's Emerging Democracies. *American Political Science Review*, *97*(3), 379–390. https://doi.org/10.1017/S00030555403000753

Muhammad, A. Y. (2018). Intra-Party Conflict and the Future of Nigerian Democracy: Examining the All Progressives Congress (APC. *Asia Proceedings of Social Sciences*, *2*(4), 20–23. https://doi.org/10.31580/apss.v2i4.248

Muinat, A. A. (2017). Party Primaries, Candidate Selection And

Intra-Party Conflict In Nigeria : PDP in Perspective. *Covenant University Journal of Politics & International Affairs*, *5*(1), 22–39.

Nnaoma, I. H. (2020). Party Primaries and the Quest for Accountability in Governance in Nigeria. *Canadian Social Science*, *17*(1),30–37. https://doi.org/10.3968/11625

Ojukwu, C. C., & Olaifa, T. (2011). Challenges of Internal Democracy in Nigeria's Political Parties: The Bane of Intra-Party Conflicts in The Peoples Democratic Party of Nigeria. *Global Journal of Human Social Science*, *11*(3), 25–34.

Olarinmoye, O. O. (2008). Godfathers, political parties and electoral corruption in Nigeria. *African Journal of Political Science and International Relations*, *2*(4), 66–073. http://www.academicjournals.org/AJPSIR

Oluwatusin, A. O., & Daisi, S. A. (2018). Impact of Party Politics on Decision Making In Government : The Nigerian Experience. *IOSR Journal Of Humanities And Social Science*, *23*(4), 90–98. https://doi.org/10.9790/0837-2304069098

Omilusi, M., & Adu, O. P. (2016). Party Politics and Democratic Governance in Nigeria: Historical Perspective. *International Journal of Multidisciplinary Academic Research*, *4*(4), 37–46.

Ononogbu, O. A., & Nwangwu, C. (2014). The pursuit of material interest and proliferation of political parties in Nigeria, 1999─ 2013. *Global Journal of Art Humanities and Social Sciences*, *2*(6), 64–76.

Osayi, F. O. (2015). Regressive Democracy : the Monstrous Role of. *International Journal of Politics and Good Governance*, *VI*(6), 1–25.

Pasquino, G. (2015). Primary Elections: From the USA to Italy: An Episode in Institutional Imitation. *American Exceptionalism Revisited. Kent State University European Studies*, *2*, 233–253.

Paul Okhaide, I. (2012). Quest for internal party democracy in Nigeria: Amendment of electoral act 2010 as an albatross. *International Journal of Peace and Development Studies*, *3*(3), 57–75. https://doi.org/10.5897/ijpds11.073

Seeberg, M. B., Wahman, M., & Skaaning, S. E. (2018). Candidate nomination, intra- party democracy, and election violence in Africa. *Democratization*, *25*(6), 959–977. https://doi.org/10.1080/13510347.20 17.14 20057

Sinclair, J. A., & O'Grady, I. (2018). *Beyond Open and Closed: Complexity in American Primary Election Reform. In Routledge Handbook of Primary Elections.* Routledge.

Sule, B., Adamu, U., & Sambo, U. (2020). The 2019 General Election in Nigeria: Examining the Issues, Challenges, Successes and Lessons for Future General Elections. *International Journal of Social Sciences Perspectives*,*6*(2), 100–113. https://doi.org/10.33094/7.2017.202 0.62.1 00.113

Sule, B., Mohammed Sani, & Mohammed Azizuddin Mat, B. (2018). Corruption And Electoral Process In Nigeria: Examining The 2015 General Election. *Journal of Techno Social*, *10*(1),23–33. https://doi.org/10.30880/jts.2018.10. 01.00 3

Udofia, C. A., & Uduigwomen, A. F. (2022). Political Defections in Nigeria: Implications for Our Nascent Democracy. *Texas Journal of Multidisciplinary Studies*, *8*, 32–34.

Udu, E. L. (2015). INEC and the 2015 General Elections in Nigeria: Matters Arising. *Journal in Research on Humanities and Social Sciences*, *5*(12), 100–119.

MALAYSIAN JOURNAL OF HUMAN ECOLOGY

THE CHANGING GLOBAL PERSPECTIVES OF SUCCESSFUL AGEING FROM 2019 TO 2023

Yeshulavani Rajeswaran[1], Mohammad Mujaheed Hassan[2], Azlina Mohd Khir[3], Asmidawati Ashari[4]

[1, 2, 4] Malaysian Research Institute on Ageing (MyAgeing®), Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, MALAYSIA

[2, 3, 4] Faculty of Human Ecology, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, MALAYSIA

ABSTRACT

This review paper explores the evolving perspectives on successful ageing from 2019 to 2023. It emphasizes the increasing global significance of this concept due to the growing older population. Successful ageing is typically defined by the absence of major illnesses or disabilities, as well as the maintenance of strong cognitive and physical abilities, and active social engagement. Despite extensive research in developed countries, there is still a gap in understanding how older adults perceive successful aging. The study highlights themes such as physical & psychological well-being, social & environmental factors, financial security & independence, cultural & regional variations, and psychosocial factors. It also brings attention to the concept of gerotranscendence, which involves a positive redefinition of self and relationships, as a potential precursor to successful ageing. The review emphasizes the complexities of defining and measuring successful ageing, given the numerous definitions found in the literature, and stresses the need for a nuanced understanding to inform policies and interventions. With ageing populations on the rise, the demand for health and social care to address age-related challenges will increase. Understanding the predictors of successful ageing and the combined impacts of behaviors and biomarkers is vital for policy development. The study calls for further research into the underlying mechanisms of successful ageing and comprehensive strategies to support the ageing population globally, addressing significant challenges in areas such as pensions, housing, and social security.

Keywords: Successful ageing, aging population, global, perspectives, gerotranscendence

INTRODUCTION

As the global population of elderly individuals continues to grow, the pursuit of enhanced quality of life and increased life satisfaction has rendered successful ageing a focal point of discussion (Okolie et al., 2023) Successful ageing is broadly characterized by the absence of major diseases and disabilities, the maintenance of strong cognitive and physical functioning, and active engagement with life (Jiang & Yang, 2022). However, a significant portion of the research has concentrated on specific highly industrialized countries, such as the USA, leading to a gap in understanding how older individuals in Southeastern European countries, like Romania, perceive successful ageing (Junaković & Ambrosi-Randić, 2022) The concept of successful ageing has undergone evolution over the past half-century, with early models proposed by Havighurst and later refined by Rowe and Kahn emphasizing the avoidance of disease, the preservation of cognitive and physical function, and social engagement. Nonetheless, a definitive consensus on its definition and measurement is yet to be reached (Nakagawa et al., 2021a).

Recent studies have identified various contributing factors to successful ageing, including resilience, autonomy, and social support. Particularly notable is the role of resilience, yet interventions to enhance it in older adults remain underdeveloped (Low et al., 2023). The ageing population has sparked growing interest in cultivating a society that supports successful ageing, which is crucial for addressing age-related challenges and promoting a high quality of life. Perceptions of successful ageing vary widely, with barriers such as age discrimination, social isolation, and resource scarcity often cited. Proposed solutions include intergenerational support, health education, and transparent access to resources (Low et al., 2023).

Research also indicates that emotions significantly impact successful ageing, with both positive and negative affect influencing outcomes. The concept of gerotranscendence, entailing a positive redefinition of self and relationships, has arisen as a potential precursor to successful ageing (Troutman-Jordan, 2020). However, despite extensive literature, discrepancies in operational definitions and measures persist, with over 105 definitions identified. This diversity underscores the complexity of ageing and emphasizes the need for a nuanced understanding to inform policies and interventions aimed at improving the well-being of the elderly (Eustice-Corwin et al., 2020).

As societies continue to age, the demand for healthcare and the need to address age-related diseases and challenges will escalate. Understanding the predictors of successful ageing and the combined effects of behaviors and biomarkers is pivotal for policy development.(Di Ciaula & Portincasa, 2020). The rapid aging of populations poses formidable challenges in areas such as pensions, housing, and social security, necessitating effective strategies to ensure successful ageing. (Harris et al., 2019). Despite the progress made, further research is imperative to explore the underlying mechanisms of successful ageing and to develop comprehensive

strategies to support the ageing population globally.(Mantantzis et al., 2019).

As a result, the purpose of this article is to conduct a thematic assessment of discussions on the evolving perspectives of Successful Ageing (SA) globally from the year 2019 to 2023. The decision to limit the literature review to the years 2019-2023 is made to ensure that the research is both current and pertinent, reflecting the latest trends and evolving perspectives on successful ageing. By focusing on this specific timeframe, the study seeks to capture recent advancements in the field,

particularly in light of demographic shifts, technological innovations, and new challenges the ageing population faces. This timeframe facilitates a contemporary analysis of global perspectives on successful aging, incorporating the most relevant findings and emerging themes that can guide effective policies and interventions to support older adults. This assessment will be guided by the research question: What are the changing perspectives on Successful Ageing (SA) being discussed globally from 2019 to 2023?

METHOD

The term thematic review using ATLAS.ti as the tool as being introduced by (Zairul, 2021b, 2021a; Zairul et al., 2023; Zairul & Zairul, 2020). This method has also been protected by copyright, under the registration number CRLY2023W02032 (Zairul, 2023). TreZ is utilized because the methodology of this study follows the thematic analysis procedure in conducting a literature review. Clarke & Braun (2013) define thematic analysis is a process of identifying the pattern and construct themes over thorough reading on the subject.

Initially, the process begins with formulating the research question. This research question aims to explore and analyse how the concept and perspectives of Successful Ageing (SA) have evolved globally over the period from 2019 to 2024. It seeks to identify the shifts in definitions, theoretical frameworks, and practical applications related to SA across different cultural, socioeconomic, and geographic

contexts. The focus is on understanding the new dimensions, themes, and factors that have emerged in the discourse on SA, including but not limited to resilience, interventions, barriers, emotional impacts, and the diverse operational definitions and measures used in various studies. Additionally, the question looks at how global events, demographic changes, and advancements in gerontology have influenced these perspectives, which serves as a roadmap for the subsequent stages of the review, establishing the focus and scope. Next, the articles screening step.

The aim of this report is to present the findings from literature searches conducted on SCOPUS and Mendeley databases. The searches focused on the perspectives of Successful Ageing (SA) and covered articles published between 2019 and 2023. The objective is to analyze the quantity and nature of the research output related to SA during this period. *(Table 1)* involves identifying and preliminarily selecting studies based on their relevance to the

research question. The searches on SCOPUS and Mendeley yielded a substantial number of articles focused on successful ageing from 2019 to 2023. These articles encompass a broad spectrum of perspectives, reflecting the dynamic and multifaceted nature of the field.

This is followed by the articles filtering stage **(Filter)** *(Figure 1)*, where inclusion and exclusion criteria are applied to refine the selection of studies, ensuring that only the most pertinent articles are retained for further analysis. The fourth step, cleaning

(Finalize) *(figure x)*, involves a thorough double-checking of the metadata of the articles to ensure accuracy and completeness of the data collected. The final step in the process is data extraction **(Synthesis)** *(figure X)*, where a thematic analysis is conducted using tools such as ATLAS.ti to develop themes based on extensive reading of the subject matter in the selected articles. This structured approach enhances the reliability and depth of the review, ensuring a comprehensive analysis of the literature.

Table 1: Search strings from Scopus and Mendeley

SCOPUS	TITLE-ABS-KEY ("successful ageing" AND "aging" AND "perspectives on ageing") AND PUBYEAR > 2019 AND PUBYEAR < 2023 AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (OA , "all"))	**70 results**
Mendeley	Results for "successful ageing" AND "aging" AND "perspectives on ageing" (All Fields) and Open Access and Article (Document Types) and English (Languages)	**30 results**

The next step involves identifying patterns and constructing categories to comprehend the perspectives on successful ageing as discussed in the literature spanning from 2019 to 2023. This phase of the research aims to analyse and interpret the findings to formulate recommendations for future research in the Succesful Ageing (SA) globally. This approach will be instrumental in clarifying the evolution of these perspectives over time and identifying which new directions or findings could be crucial for future developments in these sectors. To ensure a comprehensive and relevant analysis, the selection of literature for this review was guided by specific criteria: 1) the publication date range from 2019 to 2023, ensuring the research is current and

significant; 2) the inclusion of key terms such as 'perspectives' 'successful ageing' in the literature, to focus on studies that are directly relevant to the main themes of this research. This methodical selection process helps in capturing a broad spectrum of contemporary insights and developments in these fields.

The literature review was conducted by searching two major academic databases, SCOPUS and Mendeley, chosen for their comprehensive coverage of peer-reviewed journals relevant to perspectives on successful ageing. In SCOPUS, the search was defined with the keywords "Successful ageing," "perspectives on ageing," and "ageing" in the title, abstract, and keywords (**TITLE-ABS-KEY**), targeting

publications from 2019 to 2023, and restricted to academic articles in English that were open access (**LIMIT-TO (DOCTYPE, "ar")**, **LIMIT-TO (LANGUAGE, "English")**, **LIMIT-TO (OA, "all")**)). This search strategy resulted in 70 articles, indicating a substantial body of recent literature. Conversely, the search in Mendeley was broader, using the same keywords across all fields without specific field restrictions, and focused only on open access articles in English. This approach yielded 30 results. The difference in the number of articles retrieved from each database may reflect variations in their indexing depth, journal coverage, and search algorithm specifics, providing a diverse array of articles for review.

In the context of the thematic review (TreZ) utilizing specific search strings, this research meticulously outlined and executed a selection process to identify pertinent literature across two major academic databases, SCOPUS and Mendeley. Detailed below are the methodological steps undertaken, ensuring a robust selection of studies that enhance the validity and reliability of the review findings (Table 1).

The search began with carefully formulated queries tailored to my study's objectives. These queries were deployed in the SCOPUS and Mendeley, from which I identified a total of 70 and 30 records, respectively. The initial search results were comprehensive, aiming to encompass a broad spectrum of relevant literature. Upon merging the search results from both databases, I proceeded to identify and remove duplicate entries to maintain the uniqueness of each record in subsequent analyses. A total of 15 duplicates were identified and excluded from the dataset.

The consolidated list of records then underwent rigorous screening based on predefined inclusion and exclusion criteria. These criteria were meticulously developed to align closely with the research questions and objectives of my review. During this phase, 25 records were excluded as they did not meet the necessary criteria, ensuring that only the most pertinent studies were retained.

After this thorough screening process, 55 studies were selected for inclusion in my thematic review (TreZ). These studies collectively met all specified eligibility requirements and are expected to provide substantial insights pertinent to my research questions. The systematic approach to study selection outlined above highlights the diligence required to conduct a thorough review. This selection process not only ensures the inclusion of relevant data but also minimizes biases, contributing significantly to the reliability of the review's conclusions. This report serves as a foundational component of my review paper, providing clarity and transparency about the methods used in study selection, which is critical for replicability and trust in the findings presented (Figure 1).
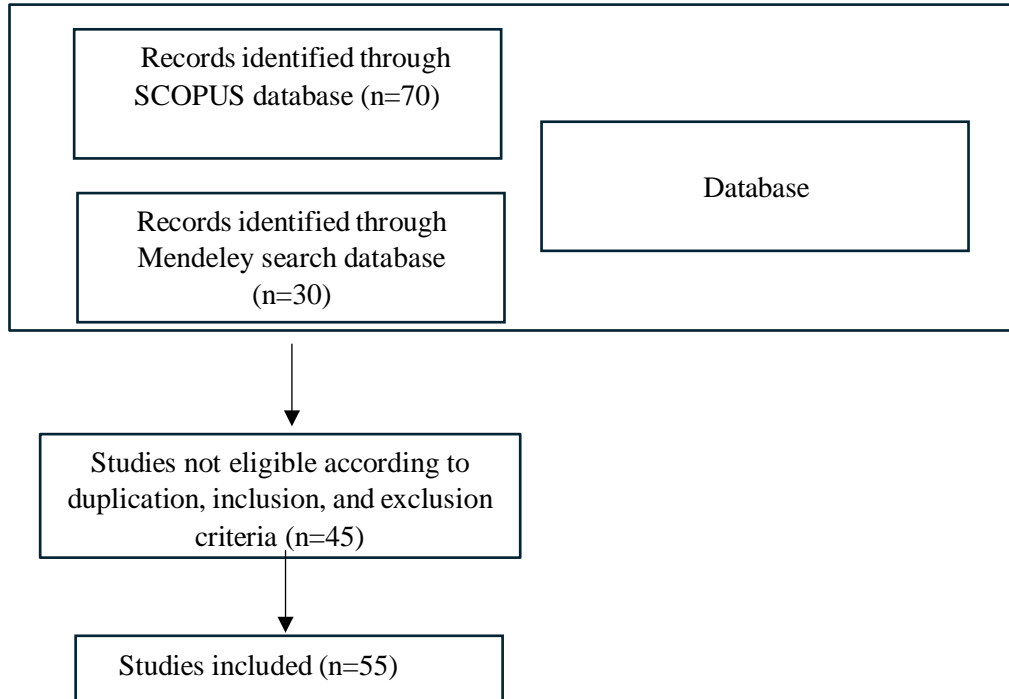
Figure 1: Inclusion and Exclusion Process

The dataset contains an in-depth analysis of the participation of different countries from 2019 to 2023, documenting the yearly frequencies of events and characteristics related to ageing studies. The goal of the study is to shed light on the evolving perspectives on successful ageing during this timeframe. The data indicates significant disparities in the frequency of events among the countries under study. Some countries consistently exhibit high levels of engagement in researching and examining successful ageing over multiple years, while others display sporadic or minimal involvement. The term "perspective" in the title signifies the article's thematic analysis approach, which explores various viewpoints and dimensions related to successful ageing, rather than merely enumerating individual factors. The paper addresses elements such as physical and psychological well-being, social and environmental influences,

financial security, cultural and regional variations, and psychosocial aspects. These themes serve as distinct lenses through which successful ageing is understood globally.

The study stresses the necessity of recognizing how perceptions of successful ageing differ across various contexts and cultures. Each factor presents a unique angle or perspective. For example, cultural and regional variations highlight that definitions of successful aging can change based on societal norms and values. In contrast, psychosocial factors reflect personal attitudes and broader societal influences on aging. Thus, the notion of "perspective" in the title encapsulates a global and multidimensional examination of successful aging, transcending a straightforward factor-based analysis.

Out of the 55 studies surveyed, 36 countries are represented, with the USA

being the most extensively represented in 26 studies, accounting for approximately 36.6% of the total. China and Korea also exhibit significant representation, each contributing 5 studies, or about 7% of the total. The studies encompass various continents, with substantial contributions from Asian countries such as China, Korea, Hong Kong, Japan, Malaysia, and Taiwan. This geographical breakdown offers valuable insights into the origins of the studies highlighted in the review paper, emphasizing both strong representation and potential areas for enhancement in future research.

The study covers a total of 5 years from 2019 to 2023 and includes a total of 55 studies. Breakdown by year reveals the highest representation in 2019, with 19 publications accounting for approximately 33.9% of the total studies. In 2020, there were 15 studies, making up about 25% of the total. The year 2021 had 8 studies, contributing to approximately 17.9% of the total, while 2022 included 7 studies,

representing about 16.1% of the total. The lowest representation was in 2023 with 4 publications, accounting for about 7.1% of the total. This analysis offers a clear insight into the distribution of publication years in the included studies.

The review paper draws from studies conducted in 36 different countries, with a significant focus on research from the USA, China, and Korea, which collectively make up the majority of the studies. The geographic distribution is diverse, encompassing various continents, with substantial representation from Asia and North America. However, there is a noticeable underrepresentation of studies from regions such as Africa and South America. Over the span of five years (2019-2023), the majority of publications were in 2019, followed by 2020. There is a clear downward trend in the number of studies published from 2021 to 2023, possibly influenced by the impact of the COVID-19 pandemic on research activities.

RESULTS AND DISCUSSION

This thematic review (TreZ) provides a comprehensive five-year analysis of global perspectives on successful ageing (SA) in order to gauge the level of awareness of the gerontology field in research. The selected articles highlight the significant role that successful ageing plays in helping people progress in life mentally, physically, and socially, maintaining their role in the community as they age.

The studies provide a comprehensive understanding of SA and the active interactions between multiple determinants of SA. These determinants encompass

physical and psychological well-being, social and environmental factors, financial security and independence, as well as cultural and regional variations. The studies also shed light on the influence of psychosocial factors on overall SA. The included articles conceptually explore the determinants, role, advantages, and challenges associated with social annotation within the themes gathered in this study.

For instance, (Low et al., 2023) highlights that high level of resilience is positively related to SA, and there is a need for

interventions to increase resilience among this group. , while (Thuesen et al., 2023) emphasizes the role of reablement approach in social and health care model as the paper discusses how the key principles , components and outcomes in reablement corresponds with the paradigm of SA. Furthermore, (A. Rubtsova et al., 2020) discusses the discrimination, social stigma and social isolation experienced by elderly people living with HIV. The study also examined the barriers and facilitators of SA among men living with HIV.

The thematic review and findings contribute to the existing literature by offering insights into various aspects of implementing and practicing SA for a more positive ageing experience. The key results of this thematic review are summarized, highlighting the critical areas where SA can enhance sustainability practices where people can age well independently with lesser burden and cost to the government and still contribute socially as ageing is not a disease but just a process that we go through mentally, physically and socially. The quantitative analysis supports the qualitative evaluation, addressing the first research question through quantitative data and the second through qualitative insights.

Quantitative reporting

The table provided presents a comprehensive breakdown of research articles focusing on various aspects of successful ageing (SA). The themes covered in the table encompass a wide range of topics investigated by researchers, including physical and psychological well-being, social and environmental factors, financial security, independence, cultural and regional variations, and psychosocial factors. Notably, the abundance of articles addressing physical and psychological well-being, psychosocial factors, and social environmental factors underscores the crucial importance of these aspects in studying successful ageing in the field of gerontology. The significant emphasis on these key themes underscores the urgent need for effective strategies to achieve objectives related to successful ageing. Each theme plays a unique role in advancing our understanding of evolving perspectives on SA and addresses complex issues to ensure a sustainable approach to global ageing in the future.

Yeshulavani Rajeswaran, Mohammad Mujaheed Hassan, Azlina Mohd Khir, Asmidawati Ashari

Table 1: Author (s) & Theme similarity

Author (s)	Theme 1: Psychological Wellbeing	Theme 2: Environmental Factors	Theme 3: Financial Security & Independence	Theme 4: Cultural & Regional Variations	Theme 5: Psychosocial Factors
(Okolie et al., 2023)	-	-	-	-	/
(Low et al., 2023)	/	-	-	-	/
(Saito et al., 2023)	/	-	-	-	-
(Thuesen et al., 2023)	/	/	-	-	-
(Mancilla et al., 2023)	/	-	-	-	/
(Khan et al., 2023)	-	-	-	/	/
(Jiang & Yang, 2022)	-	/	-	/	-
(Junaković & Ambrosi-Randić, 2022)	-	-	/	/	-
(J. Lewis & Kim, 2022)	-	-	-	/	-
(A. Rubtsova et al., 2022)	-	/	-	-	/
(Roquet et al., 2022)	/	-	-	/	-
(Cohen et al., 2022)	-	-	/	-	/
(Seo et al., 2022)	/	-	-	-	-
(Chung & Yeung, 2021)	-	/	-	/	/
(Wong et al., 2021)	-	-	-	-	/
(Cheng et al., 2021)	/	-	-	-	/
(S. Lee & Wallace, 2021)	-	-	-	-	/
(A. Rubtsova et al., 2021)	-	/	-	-	/
(Nakagawa et al., 2021b)	-	-	-	/	/
(Rafizah et al., 2021)	/	/	-	-	-
(A. Rubtsova et al., 2020)		/	/	-	-
(Whitley et al., 2020)	/	/	-	-	-
(A. Rubtsova et al., 2020)	/	-	-	-	/
(J. Y. Lee et al., 2020)	/	/	-	-	-
(Rodriguez & Mendoza-Ruvalcaba, 2020)	-	/	-	-	-
(Scott & Mayo, 2020)	/	-	-	-	-
(Hamm & Wrosch, 2020)	-	-	-	-	/
(Troutman-Jordan, 2020)	-	-	-	-	/
(Tse et al., 2020)	/	-	-	-	-
(W. J. Lee et al., 2020)	/	-	/	-	-
(Boot, 2020)	/	/	-	-	-
(Nagaich et al., 2020)	-	-	/	-	-
(J. Lewis & Kim, 2020)	/	/	-	/	-
(Eustice-Corwin et al., 2020)	/	-	-	-	-
(Garcia et al., 2020)	/	-	-	/	/
(Di Ciaula & Portincasa, 2020)	/	/	-	-	-
(Gallardo-Peralta & Sánchez-Moreno, 2019)	-	/	-	/	-
(Choi & Kwon, 2019)	/	-	/	/	-
(Tzioumis et al., 2019)	/	-	-	/	-
(G. Lee & Lee, 2019)	/	/	-	-	/
(Lan, 2019)	/	-	-	-	-
(J. P. Lewis & Wortman, 2019)	/	-	-	/	/
(Chen et al., 2019)	/	-	/	/	-
(Nuccio & Stripling, 2019)	/	-	/	-	-
(Webster et al., 2019)	/	/	-	-	-
(Cho et al., 2019)	/	-	-	/	-
(S. Lee et al., 2019)	/	/	-	-	-
(Stewart et al., 2019)	/	/	-	-	/

(Decancq & Michiels, 2019)	-	-	/	-	/
(Ruvalcaba et al., 2019)	/	/	-	-	-
(Harris et al., 2019)	/	-	-	-	/
(Subramaniam et al., 2019)	/	/	-	-	-
(Mantantzis et al., 2019)	/	-	-	-	-
(A. A. Rubtsova et al., 2019)	-	/	-	-	/
(Nosraty et al., 2019)	/	-	-	-	-

Qualitative reporting

The data visualization offers an analysis of the prevalent themes in discussions on successful ageing from 2019 to 2023, encompassing five key themes. The first theme, "Physical & Psychological Well-being," is the most frequently referenced, with 36 mentions, underscoring the significance of upholding physical, mental, and emotional well-being for achieving successful ageing. The second theme, "Social & Environmental Factors," delves into topics such as social inclusion, interpersonal connections, community involvement, and environmental influences, accounting for 22 references. Additionally, Theme 3, "Financial security & independence," is highlighted 9 times, underscoring the notable focus on financial stability and the capacity to live autonomously as crucial factors in successful ageing. Notably, various studies underscore the importance of financial standing, life contentment, and self-sufficiency in daily activities. Theme 4, "Cultural & Regional Variations," is mentioned 15 times, showcasing the diverse viewpoints on successful ageing across different cultures and regions. Finally, Theme 5, "Psychosocial factors," is referenced 22 times, exploring psychosocial attributes like optimism, resilience, and adaptability in embracing ageing as pivotal determinants of successful ageing. These psychosocial factors impact both subjective and objective assessments of successful ageing, influencing how older adults navigate the ageing process.
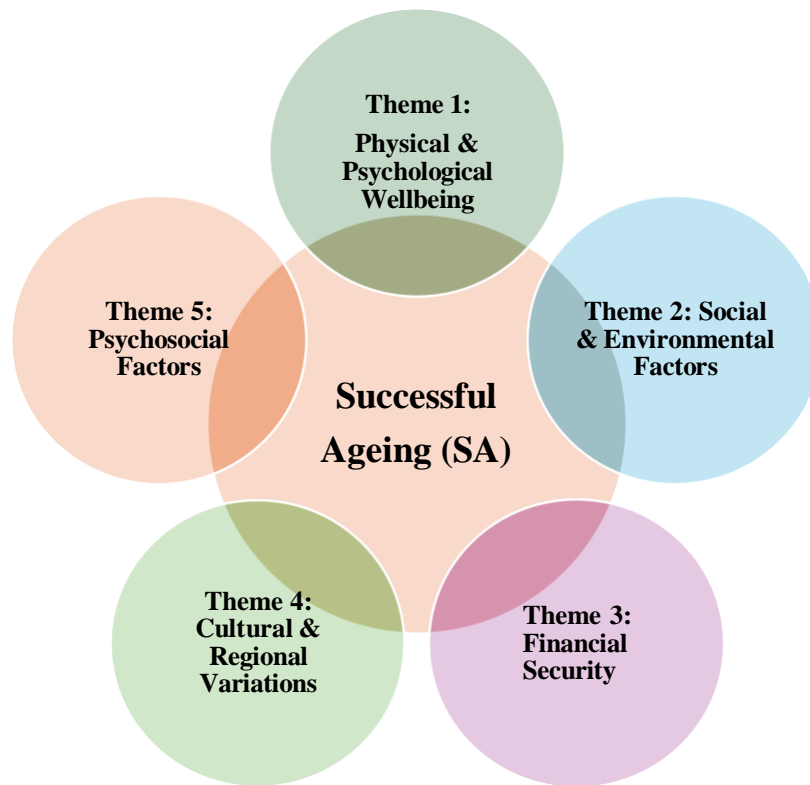
Figure 2: Successful Ageing (SA) based on theme

Theme 1: Physical & Psychological Well-Being

Successful ageing (SA) is a multifaceted concept that encompasses various factors affecting the quality of life in older adults (Garcia et al., 2020). Central to SA are physical and psychological well-being, with research indicating that regular physical activity is crucial for maintaining health and preventing chronic diseases. Rowe & Kahn's Successful Ageing model emphasizes the absence of chronic disease as vital for SA, while increased physical activity positively correlates with subjective well-being (Mancilla et al., 2023). Health is viewed as a fundamental aspect of life, and both psychosocial and health factors are essential to successful ageing (Cheng et al., 2021). A balanced diet, limited intake of fast and processed foods, and nutritional supplements are recommended to optimize health as individuals age. Environmental factors, such as pollution, can negatively affect cardiovascular health, making a healthy diet and physical activity vital for counteracting these effects (Di Ciaula & Portincasa, 2020). Regular health screenings for conditions like hypertension, high cholesterol, and cancer are also critical for early detection and management. Successful ageing is defined as the absence of major chronic diseases and the presence of good physical and psycho-cognitive functions (Rafizah et al., 2021). Mental and emotional health are equally important; maintaining a sound mental state enables individuals to embrace the ageing process and manage stress effectively. Engageing in mentally stimulating activities and

cultivating resilience through community participation are beneficial for SA (Low et al., 2023). Psychological well-being also involves finding purpose and joy in daily life, nurturing gratitude, and living in the present (Seo et al., 2022). Contrasting opinions suggest that the absence of disease and disability may not be essential for SA. Some individuals successfully age despite chronic illnesses, indicating that physical health alone does not define successful ageing (Eustice-Corwin et al., 2020; Tzioumis et al., 2019). Conversely, those with a history of hospitalization may require additional support to age successfully within the community (J. Y. Lee et al., 2020). Overall, SA can be characterized by brisk walking, independence, emotional well-being, and self-assessed health (W. J. Lee et al., 2020). The integration of physical and psychological well-being is vital, as improving physical health can enhance mood and alleviate anxiety and depression. Social activities that provide both physical and mental stimulation, like group exercise classes, offer comprehensive benefits. Successful ageing emphasizes a holistic approach to health, which includes an active lifestyle, balanced nutrition, regular health check-ups, mental health support, strong social relationships, a sense of purpose, and resilience. Addressing these areas can significantly enhance the quality of life and contribute to a fulfilling ageing process.

Theme 2: Social & Environmental Factors on Successful Ageing

Social and environmental factors are crucial in promoting successful ageing, significantly impacting the quality of life, well-being, and longevity of older adults. Strong social support networks, including family, friends, and community organizations, provide essential emotional and practical assistance, reducing feelings of loneliness and enhancing a sense of belonging (Gallardo-Peralta & Sánchez-Moreno, 2019). Participation in community activities, such as group meals and exercise classes, is associated with increased life satisfaction (Webster et al., 2019). Emotional well-being, community engagement, spirituality, and physical health are instrumental in fostering successful ageing (J. Lewis & Kim, 2020). The interactions between health conditions and external environments shape ageing outcomes (Wong et al., 2021). Maintaining healthy relationships involves open communication and mutual respect, which significantly contribute to psychological well-being. Access to affordable health facilities is also crucial for life satisfaction, ensuring social opportunities for all older adults regardless of socioeconomic status (Wong et al., 2021). Environmental health factors, including neighbourhood safety and accessibility, are vital for successful ageing (Di Ciaula & Portincasa, 2020). Creating age-friendly environments involves ensuring homes are safe and promoting universal design in public spaces. The current WHO definition of healthy ageing emphasizes individuals' ability to adapt and self-manage, highlighting the importance of access to health and social services (Whitley et al., 2020). Services like primary healthcare, mental health support, and recreational programs are essential for community-dwelling older adults (J. Y. Lee et al., 2020). Integrating social and environmental factors creates holistic approaches to

successful ageing. An unhealthy environment can accelerate decline and increase vulnerability (Di Ciaula & Portincasa, 2020). Policies supporting affordable housing, transportation, and healthy living can enhance social connections and accessibility. A study identified 12 factors conceptualizing successful ageing, including adequate health, social contributions, and adaptive coping strategies (Chung & Yeung, 2021). In conclusion, social and environmental factors are integral to successful ageing. Strong support networks, community engagement, safe living environments, and access to health services contribute to the overall well-being of older adults. Addressing these factors can enhance the ageing experience and promote a fulfilling life in later years.

Theme 3: Financial Security Financial Security for Successful Ageing

Ageing presents challenges and opportunities, with financial security being a critical aspect influencing the quality of life in old age. Financial security involves planning and manageing resources, encompassing savings, investments, healthcare costs, and social support systems (Junaković & Ambrosi-Randić, 2022). It is essential for maintaining independence and well-being, allowing older adults to afford necessary expenses without financial stress. Studies indicate that older adults who manage their daily lives and experience control define successful ageing (Cohen et al., 2022). The rapid ageing of societies poses policy challenges in areas like pensions, housing, and social security (WHO, 2015; Decancq & Michiels, 2019). Key components of financial security for older individuals include retirement savings, pensions, personal savings, employer-sponsored plans, and government programs. A 2020 study found that while Baby Boomers are confident about their retirement finances, many lack long-term care insurance, highlighting gaps in preparation (Nagaich et al., 2020). Self-management is crucial for successful ageing, involving proactive behaviors and informed decision-making (Cohen et al., 2022). In Shanghai, participants emphasized self-reliance supported by financial security as a goal for successful ageing (Chen et al., 2019). Similarly, a study in Korea identified financial security as a primary determinant of successful ageing, along with physical activity and life satisfaction (Choi & Kwon, 2019; W. J. Lee et al., 2020). In summary, financial security is foundational for a fulfilling ageing process. Proactive financial strategies, including diligent savings and healthcare provisions, can establish a robust foundation for retirement. With effective management, older adults can approach their later years with confidence and financial autonomy.

Theme 4: Cultural & Regional Variations

The theme of cultural and regional variations is essential for understanding how ageing and successful ageing are perceived globally. Diverse cultures emphasize different aspects of ageing, illustrating that priorities can significantly vary. Successful ageing has gained attention as researchers seek to identify

factors that enable individuals to maintain a high quality of life in later years (Urtamo et al., 2019). However, definitions of successful ageing differ across cultures, highlighting the importance of physical, cognitive, social, and psychological well-being (Guo et al., 2020). In the United States, Rowe and Kahn's model defines successful ageing as the absence of disease, maintenance of function, and social engagement. Yet, many older Americans do not fit this definition, as it overlooks those with chronic conditions who still perceive themselves as ageing successfully (Guo et al., 2020; Urtamo et al., 2019). Cultural variations in successful ageing are evident; for instance, older adults in certain Asian and Latin American cultures prioritize family connections and spiritual well-being (Teater & Chonody, 2020). Studies show that successful ageing rates differ across East Asian countries, with Japan noted for its longevity, attributed to preventive healthcare and cultural caregiving practices (Tzioumis et al., 2019). In contrast, North Alaskan populations value emotional well-being, community engagement, and spiritual practices, emphasizing connections to traditional cultural activities (J. Lewis & Kim, 2020). Among indigenous communities, such as the Aymara in Chile, successful ageing correlates with community integration, social support, and an active lifestyle. Interventions focused on community contexts can enhance the

ageing process and prevent mental health deterioration (Gallardo-Peralta & Sánchez-Moreno, 2019). Similar findings apply to Hispanic populations, where psychosocial factors are as important as physical health in self-rated successful aging (Garcia et al., 2020). In Korea, factors like stress, physical activity, and educational level influence successful aging, with universal healthcare and traditional dietary practices playing key roles (Choi & Kwon, 2019). Romanian older adults with positive views on aging reported greater satisfaction linked to social resources and independence (Roquet et al., 2022). In Shanghai, self-reliance emerged as a crucial goal for successful aging, involving physical activity and community connectedness (Chen et al., 2019). Chinese cultural values emphasize respect for elders and familial duties, impacting perceptions of ageing. However, Chinese Americans face unique challenges, including feelings of alienation and safety concerns due to rising anti-Asian hate crimes, which affect their ageing experience (Khan et al., 2023). Overall, cultural and regional variations in successful ageing demonstrate that experiences and perceptions are shaped by cultural values, social norms, healthcare systems, family structures, and economic conditions. Recognizing these differences is vital for developing tailored approaches to support successful ageing that respect the unique needs of diverse older adults.

Theme 5: Psychosocial Factors

The fifth theme of this paper addresses the vital psychosocial aspects of successful ageing (SA), defined as the relationship between social factors and individual

thoughts and behaviors, encompassing emotions, attitudes, and their social influences. Ageism can negatively impact perceptions of ageing, highlighting the

importance of understanding how different age groups view successful ageing (Cheng et al., 2021). Strong social networks and community involvement are essential for emotional support and a sense of belonging, promoting successful ageing in older adults (Kim et al., 2023). Psychological well-being, characterized by positive attitudes, self-esteem, and engagement in intellectually stimulating activities, is crucial for cognitive function and emotional health. Factors such as personal resources, social support, and a sense of control significantly contribute to perceived successful ageing (Harris et al., 2019). Enhancing healthcare and reducing negative attitudes toward older individuals are necessary for supporting their successful ageing (Cheng et al., 2021). Studies indicate that socioeconomic status, health functioning, and social capital greatly affect perceptions of ageing and well-being (Cheng et al., 2021; Yeo & Lee, 2019). Advancements in digital technology play a critical role in maintaining social connections, particularly among rural older women. Access to digital technology can enhance social ties, emphasizing the need for interventions that improve social relationships and digital accessibility (Okolie et al., 2023). Social connectedness and resilience are integral to successful ageing, influencing physical, mental, and emotional well-being. These interconnected factors enhance life satisfaction and health outcomes among older adults (Stewart et al., 2019). Geotranscendence is an emerging concept in gerontology that reflects a shift in perspective during ageing, leading to increased life satisfaction and redefined self-relationships (J. P. Lewis & Wortman, 2019). This emerging concept in

gerontology, as outlined by (Troutman-Jordan, 2020), indicates that ageing presents both opportunities and challenges, manifested through various physical changes and significant life events. The way these events are perceived is profoundly affected by an individual's mental health, which is crucial to the notion of gerotranscendence. This optimistic approach to ageing entails redefining one's sense of self and relationships and is regarded as a precursor to successful ageing. Although, gerotranscendence focuses on inner peace and the way events are perceived in life, it could directly contribute to physical health by reducing stress and promoting mental clarity, which supports the overall psychological and physiological health. Discrete emotions, such as happiness and sadness, also significantly impact the ageing process, with older adults often experiencing enhanced emotional regulation and a focus on positive emotions (Hamm & Wrosch, 2020). Dispositional optimism, the expectation that good things will happen, correlates with better health outcomes, resilience, and life satisfaction. Optimistic older adults engage more in health-promoting behaviors, contributing to successful ageing (G. Lee & Lee, 2019).The psychosocial aspects of successful ageing highlight the importance of social connections, resilience, and a positive outlook, all of which significantly enhance physical health, mental well-being, and overall life satisfaction in older adults. Engaging in meaningful relationships and maintaining optimism enable individuals to navigate the challenges of ageing, resulting in a higher quality of life and a more fulfilling ageing experience.

CONCLUSION

The exploration of evolving perspectives on ageing from 2019 to 2023 provides significant insights into the future of gerontology amid the pressing global phenomenon of ageing. By examining various studies worldwide that seek to understand societal attitudes toward ageing, this research highlights the necessity of integrating key themes derived from the analysis. These themes—namely Physical and Psychological Well-Being, Social and Environmental Factors, Financial Security, Cultural and Regional Variations, and Psychosocial Factors—serve as foundational elements for comprehending the predictors and precursors of the ageing phenomenon. A nuanced understanding of the ageing population and their perceptions can lead to more effective policy actions that address the complexities of ageing, fostering a society that supports healthy and successful ageing (Cheng et al., 2021). Identifying modifiable predictors of successful ageing is particularly crucial for public health policymakers and healthcare providers aiming to develop programs that enhance the quality of life for older adults (Stewart et al., 2019). Jiang and Yang (2022) further emphasize that the insights gained from such studies can inform targeted ageing policies, especially in developing countries, which are often underrepresented in the discourse on successful ageing despite its global relevance (Roquet et al., 2022). Consequently, this thematic analysis successfully gathers information from diverse cultures and regions, encourageing further research on ageing-related topics. The concept of gerotranscendence as described by (J. P. Lewis & Wortman,

2019) helps older people to be more intentional in their relationships and build a stronger connection to traditional cultural and spiritual activities. The understanding of the concept gerotranscendence may be used to develop community specific health promotion and prevention programs to improve services for the elderly.

This knowledge is vital for effectively managing the global ageing phenomenon. Additionally, the thematic analysis serves as a self-management tool for middle-aged and older individuals, facilitating their understanding of self-management as a proactive strategy for addressing the challenges associated with ageing. Cohen et al. (2022) note that this diversity necessitates that each older adult tailor their approach to self-management to navigate their ageing journey successfully. Understanding the concepts of successful ageing and subjective health awareness among frail older adults is crucial for implementing effective interventions (Seo et al., 2022). In conclusion, this study advocates for a comprehensive approach to successful ageing, emphasizing the importance of prioritizing social, physical, psychological, mental, emotional, and environmental support through innovative practices. By employing advanced methodologies, we can foster successful ageing. Embracing these practices and being informed and prepared will ensure a more sustainable transition into the realities of global ageing. The findings underscore that integrating knowledge from various studies on successful ageing is not only achievable but essential for navigating the ageing process effectively.

CONTRIBUTIONS AND BENEFITS OF STUDY

This study makes significant contributions to the field of gerontology, enriching our understanding of successful ageing. It provides an updated review of evolving perspectives on successful ageing from 2019 to 2023, emphasizing the latest trends and research findings. By highlighting the growing global significance of successful ageing in light of demographic shifts, the study underscores the urgency of addressing the needs of an ageing population. Additionally, it identifies and elaborates on key themes related to successful ageing, including physical and psychological well-being, social and environmental factors, financial security, and cultural and regional variations. This comprehensive approach facilitates a deeper understanding of the multifaceted nature of ageing. Moreover, the study introduces and explores the concept of gerotranscendence as a potential precursor to successful ageing, adding a new dimension to the discourse and offering a positive redefinition of self and relationships in older adults and these findings can also be used by health care providers to help elders find meaningful activities that promote health and teach individuals to cope with ageing-related changes (J. P. Lewis & Wortman, 2019).

The review emphasizes the complexities involved in defining and measuring successful ageing, highlighting the necessity for a nuanced understanding to inform effective policies and interventions. It also addresses the increasing demand for health and social care services, emphasizing the need for comprehensive strategies to tackle age-related challenges. By identifying gaps in the current understanding of how older adults perceive successful ageing—particularly across different cultural and regional contexts—the study advocates for further research into the underlying mechanisms and predictors of successful ageing. It stresses the importance of integrating behavioral and biomarker indicators in predicting successful ageing and calls for policies that address critical areas such as pensions, housing, and social security. Overall, this study advances the discourse on successful ageing, offering valuable insights and recommendations for researchers, policymakers, and practitioners dedicated to supporting the ageing population worldwide. The primary benefit of this study lies in its comprehensive understanding of successful ageing, which can assist policymakers in crafting more effective and targeted interventions to support older adults. By pinpointing gaps in the existing literature, particularly regarding older adults' perceptions of successful ageing, the study can direct future research efforts toward areas that warrant further exploration, ultimately enriching the field of gerontology. Furthermore, by disseminating knowledge about successful ageing, the study has the potential to increase public awareness, encouraging individuals to adopt healthier lifestyles and engage in behaviors that promote well-being as they age.

ACKNOWLEDGMENTS

REFERENCES

Boot, W. (2020). The Potential of Artificial Intelligence, Machine Learning, and Novel Analytic Methods to Promote Successful Aging. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.2259

Chen, L., Ye, M., & Kahana, E. (2019). SUCCESSFUL AGING A SELF-RELIANT UMBRELLA: DEFINING SUCCESSFUL AGING AMONG THE OLD-OLD (80+) IN SHANGHAI. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.3056

Cheng, M. Y., Low, S. K., & Pheh, K. S. (2021). Age-based Analysis of the Perceptions of Aging and Successful Aging in Malaysia. *Makara Human Behavior Studies in Asia*, *25*(2), 170–181. https://doi.org/10.7454/hubs.asia.2281121

Cho, J., Nakagawa, T., & Yeung, D. (2019). SUCCESSFUL AGING AND HEALTHCARE SERVICE UTILIZATION IN EAST ASIA: NATIONAL COMPARISONS OF CHINA, KOREA, AND JAPAN. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.2647

Choi, H. S., & Kwon, M. H. (2019). Associated determinants of successful ageing among older Koreans: From the 7th KNHANES. *Indian Journal of Public Health Research and Development*, *10*(11). https://doi.org/10.5958/0976-5506.2019.04307.9

Chung, E. K. H., & Yeung, D. (2021). Development of a Comprehensive Chinese Successful Aging Scale: Incorporating the Viewpoints of Older Adults. *Innovation in Aging*, *5*(Supplement_1). https://doi.org/10.1093/geroni/igab046.827

Cohen, M. T., Rosenblum, S., & Meyer, S. (2022). SELF-TAILORED SUCCESSFUL AGING: OLDER ADULTS' POINTS OF

VIEW. *Innovation in Aging*, *6*(Supplement_1). https://doi.org/10.1093/geroni/igac059.301 8

Decancq, K., & Michiels, A. (2019). Measuring Successful Aging with Respect for Preferences of Older Persons. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *74*(2), 364–372. https://doi.org/10.1093/geronb/gbx060

Di Ciaula, A., & Portincasa, P. (2020). The environment as a determinant of successful aging or frailty. In *Mechanisms of Ageing and Development* (Vol. 188). https://doi.org/10.1016/j.mad.2020.111244

Eustice-Corwin, A., Missell, R., & Sörensen, S. (2020). Successful Aging: Re-Conceptualized. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.225 8

Gallardo-Peralta, L. P., & Sánchez-Moreno, E. (2019). Successful ageing in older persons belonging to the Aymara native community: exploring the protective role of psychosocial resources. *Health Psychology and Behavioral Medicine*, *7*(1), 396–412. https://doi.org/10.1080/21642850.2019.16 91558

Garcia, M., Paredes, A. M., Jeste, D., Moore, A., & Marquine, M. J. (2020). Successful Aging Among Older Hispanics. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.337 0

Hamm, J., & Wrosch, C. (2020). The Complex Role of Discrete Emotions in Successful Aging. *Innovation in Aging*, *4*(Supplement_1).

https://doi.org/10.1093/geroni/igaa057.213 7

Harris, A. P., Nuccio, A., & Stripling, A. M. (2019). HOW AN INDIVIDUAL'S SENSE OF CONTROL INFLUENCES THEIR PERCEPTION OF SUCCESSFUL AGING. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.1235

Jiang, Y., & Yang, F. (2022). Association between internet use and successful aging of older Chinese women: a cross-sectional study. *BMC Geriatrics*, *22*(1). https://doi.org/10.1186/s12877-022-03199-w

Junaković, I. T., & Ambrosi-Randić, N. (2022). Lay Definitions of Successful Ageing and Contributing Factors among Croatian Older Adults: A Thematic Analysis of Qualitative Data. *Psihologijske Teme*, *31*(3). https://doi.org/10.31820/pt.31.3.11

Khan, M., Kang, E., & Li, C.-C. (2023). A CONVERGENT PARALLEL MIXED METHODS ANALYSIS OF SUCCESSFUL AGING IN CHINESE AMERICANS: DOES ACCULTURATION MATTER? *Innovation in Aging*, *7*(Supplement_1). https://doi.org/10.1093/geroni/igad104.122 1

Lee, G., & Lee, K. (2019). THE EFFECT OF DISPOSITIONAL OPTIMISM ON SUCCESSFUL AGING OF OLDER ADULTS AND THEIR PARTNERS. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.2648

Lee, J. Y., Kim, B., Lee, K. H., & Park, C. (2020). Hospitalization and Successful Aging of Community-Dwelling Older Adults: Using the Korean National Survey

Data. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.451

Lee, S., Bae, J., Im, S., & Heo, J. (2019). SENIOR MODELS: SUCCESSFUL AGING AND SERIOUS LEISURE. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.2651

Lee, S., & Wallace, M. (2021). Novel Approaches Examining Sleep Health as a Marker of Successful Aging. *Innovation in Aging*, *5*(Supplement_1). https://doi.org/10.1093/geroni/igab046.1303

Lee, W. J., Peng, L. N., Lin, M. H., Loh, C. H., & Chen, L. K. (2020). Determinants and indicators of successful ageing associated with mortality: A 4-year population-based study. *Aging*, *12*(3). https://doi.org/10.18632/aging.102769

Lewis, J., & Kim, S. (2020). Successful Aging in the North: Lessons Learned, Lessons Shared, and Advice From Those Aging in a Good Way in Alaska. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.1369

Lewis, J., & Kim, S. (2022). INDIGENOUS UNDERSTANDINGS AND APPROACHES TO SUCCESSFUL AGING. *Innovation in Aging*, *6*(Supplement_1). https://doi.org/10.1093/geroni/igac059.1057

Lewis, J. P., & Wortman, E. (2019). GEROTRANSCENDENCE OF ALASKA NATIVE ELDERS AGING SUCCESSFULLY IN THE ALEUTIAN AND PRIBILOF ISLANDS. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.1908

Low, S. K., Cheng, M. Y., & Pheh, K. S. (2023). A thematic analysis of older adult's perspective of successful ageing. *Current Psychology*, *42*(13), 10999–11008. https://doi.org/10.1007/s12144-021-02371-6

Mancilla, I., Rivera, L., Bergstrom, J., & Molina, A. (2023). ACTIVITY LEVEL AND SUCCESSFUL AGING, SUBJECTIVE AGE, AND MENTAL, PHYSICAL, AND GENERAL HEALTH. *Innovation in Aging*, *7*(Supplement_1). https://doi.org/10.1093/geroni/igad104.2304

Mantantzis, K., Gerstorf, D., & Hess, T. M. (2019). PHYSIOLOGY OF SUCCESSFUL AGING: IMPLICATIONS FOR HEALTH AND WELL-BEING. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.1625

Nagaich, R., Redfield, C., Harvill, B., & Schill, S. (2020). Retirement Planning: Reimagined and Revamped for Successful Aging. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.118

Nakagawa, T., Cho, J., & Yeung, D. Y. (2021a). Successful Aging in East Asia: Comparison among China, Korea, and Japan. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *76*, S17–S26. https://doi.org/10.1093/geronb/gbaa042

Nakagawa, T., Cho, J., & Yeung, D. Y. (2021b). Successful Aging in East Asia: Comparison among China, Korea, and Japan. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *76*. https://doi.org/10.1093/geronb/gbaa042

Nosraty, L., Pulkki, J., Raitanen, J., Enroth,

L., & Jylhä, M. (2019). Successful Aging as a Predictor of Long-Term Care Among Oldest Old: The Vitality 90+ Study. *Journal of Applied Gerontology*, *38*(4). https://doi.org/10.1177/073346481771696 8

Nuccio, A. G., & Stripling, A. M. (2019). I GOT THIS! SUCCESSFUL AGING THROUGH THE MAINTENANCE OF AUTONOMY. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.2638

Okolie, T. J., Ekoh, P. C., Onuh, S. C., & Ugwu, E. O. (2023). Perspectives of Rural Older Women on the Determinants of Successful Ageing in Southeast Nigeria. *Journal of Cross-Cultural Gerontology*, *38*(2). https://doi.org/10.1007/s10823-023-09480-8

Rafizah, H. K., Aniza, I., Shamsuddin, K., & Hazlina, M. M. (2021). Determinants Of Successful Aging Among Pre-Retirement Public Servants In Klang Valley, Malaysia. *Malaysian Journal of Public Health Medicine*, *21*(2). https://doi.org/10.37268/mjphm/vol.21/no. 2/art.839

Rodriguez, M. A., & Mendoza-Ruvalcaba, N. M. (2020). Subjective Successful Aging: Factors Related to a Self-Rated Perception. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.136 8

Roquet, A., Barbut, M., Pocnet, C., & Jopp, D. (2022). LAY PERSPECTIVES ON SUCCESSFUL AGING IN ROMANIA. *Innovation in Aging*, *6*(Supplement_1). https://doi.org/10.1093/geroni/igac059.217 0

Rubtsova, A. A., Taylor, T., Wingood, G., Ofotokun, I., Gustafson, D., & Holstad, M. (2019). HIV MADE ME STRONGER: CONCEPTIONS OF SUCCESSFUL AGING AMONG OLDER WOMEN LIVING WITH HIV. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.2812

Rubtsova, A., Moore, D., Jeste, D., & Holstad, M. (2021). Perceptions of Social Determinants of Successful Aging Among Older Men Living With HIV. *Innovation in Aging*, *5*(Supplement_1). https://doi.org/10.1093/geroni/igab046.163 7

Rubtsova, A., Taylor, T., Holstad, M., Wingood, G., Ofotokun, I., Gustafson, D., Jeste, D., & Moore, D. (2022). CONCEPTIONS OF SUCCESSFUL AGING AMONG OLDER MEN AND WOMEN LIVING WITH HIV. *Innovation in Aging*, *6*(Supplement_1). https://doi.org/10.1093/geroni/igac059.104 3

Rubtsova, A., Taylor, T., Wingood, G., Ofotokun, I., Gustafson, D., & Holstad, M. (2020). Barriers to Successful Aging Among Older Women Living With HIV: A Qualitative Study. *Innovation in Aging*, *4*(Supplement_1). https://doi.org/10.1093/geroni/igaa057.161 1

Ruvalcaba, N. M. M., Merino, E. D. A., Villavicencio, M. E. F., & Rodriguez Díaz, M. (2019). PERFORMANCE ON COGNITIVE FUNCTIONING RELATED TO SUCCESSFUL AGING. *Innovation in Aging*, *3*(Supplement_1). https://doi.org/10.1093/geroni/igz038.2426

Saito, Y., Vu, N., & Dang, L. (2023). SUCCESSFUL AGING AMONG OLDER PERSONS IN VIET NAM. *Innovation in Aging*, *7*(Supplement_1).

https://doi.org/10.1093/geroni/igad104.116
0

Scott, J., & Mayo, A. (2020). Compromised Vision Impairs Successful Aging Among Assisted Living Residents. *Innovation in Aging*, 4(Supplement_1). https://doi.org/10.1093/geroni/igaa057.170 8

Seo, J., Song, R., Park, M., & Ryu, A. (2022). A PHENOMENOLOGICAL STUDY ON THE PERCEPTION OF FRAIL ELDERLY IN SUBJECTIVE HEALTH AWARENESS AND SUCCESSFUL AGING. *Innovation in Aging*, 6(Supplement_1). https://doi.org/10.1093/geroni/igac059.211 3

Stewart, J. M., Auais, M., Bélanger, E., & Phillips, S. P. (2019). Comparison of self-rated and objective successful ageing in an international cohort. *Ageing and Society*, 39(7), 1317–1334. https://doi.org/10.1017/S0144686X170014 89

Subramaniam, M., Abdin, E., Vaingankar, J. A., Sambasivam, R., Seow, E., Picco, L., Chua, H. C., Mahendran, R., Ng, L. L., & Ann Chong, S. (2019). Successful ageing in singapore: Prevalence and correlates from a national survey of older adults. *Singapore Medical Journal*, 60(1). https://doi.org/10.11622/smedj.2018050

Thuesen, J., Feiring, M., Doh, D., & Westendorp, R. G. J. (2023). Reablement in need of theories of ageing: Would theories of successful ageing do? *Ageing and Society*, 43(7). https://doi.org/10.1017/S0144686X210012 03

Troutman-Jordan, M. (2020). Meaning of Aging, Gerotranscendence, and Successful

Aging in Older Adults With Chronic Health Conditions. *Innovation in Aging*, 4(Supplement_1). https://doi.org/10.1093/geroni/igaa057.136 4

Tse, D., Finley, K., & Vrooman, K. (2020). Momentary Successful Aging Indicators and Their Short-Term and Long-Term Covariates. *Innovation in Aging*, 4(Supplement_1). https://doi.org/10.1093/geroni/igaa057.208 1

Tzioumis, E., Avila, J., & Adair, L. S. (2019). Determinants of successful aging in a cohort of Filipino women. *Geriatrics (Switzerland)*, 4(1). https://doi.org/10.3390/geriatrics4010012

Webster, N. J., Webster, N., & Antonucci, T. (2019). LINKS BETWEEN SOCIAL ENGAGEMENT AND SUCCESSFUL AGING AMONG AFFORDABLE SENIOR HOUSING RESIDENTS. *Innovation in Aging*, 3(Supplement_1). https://doi.org/10.1093/geroni/igz038.2304

Whitley, E., Benzeval, M., & Popham, F. (2020). Population Priorities for Successful Aging: A Randomized Vignette Experiment. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 75(2). https://doi.org/10.1093/geronb/gby060

Wong, P. H., Kourtit, K., & Nijkamp, P. (2021). The ideal neighbourhoods of successful ageing: A machine learning approach. *Health and Place*, 72(September), 102704. https://doi.org/10.1016/j.healthplace.2021. 102704

Zairul, M. (2021a). A thematic Review on Industrialised Building System (IBS) Publications from 2015-2019: Analysis of

Patterns and Trends for Future Studies of IBS in Malaysia. *Pertanika Journal of Social Sciences and Humanities*, *29*(1), 635–652. https://doi.org/10.47836/pjssh.29.1.35

Zairul, M. (2021b). Opening the Pandora Box of Issues in the Industrialized Building System in Malaysia : A Thematic Review. *Journal of Applied Science and Engineering*, *25*, 297–310. https://doi.org/10.6180/jase.202204_25(2) .0006 1.

Zairul, M. (2023). *Thematic Review template* (Patent No. CRLY2023W02032). Controller of Copyright.

Zairul, M., Azli, M., & Azlan, A. (2023). Defying tradition or maintaining the status quo? Moving towards a new hybrid architecture studio education to support blended learning postCOVID-19. *Archnet-IJAR: International Journal of Architectural Research*. https://doi.org/10.1108/ARCH-11-2022-0251

Zairul, M., Bin Mohd Noor, M. Z., & Zairul, M. (2017). flexZhouse: New business model for affordable housing in Malaysia. In *A+BE Architecture and the Built Environment* (Vol. 2, Issue 2). A+BE Architecture and the Built Environment. https://doi.org/10.7480/abe.2017.2

Zairul, M., & Mohd Zairul. (2020). A THEMATIC REVIEW ON STUDENT-CENTRED LEARNING IN THE STUDIO EDUCATION. *Journal of Critical Reviews*, *7*(02), 504–511. https://doi.org/10.31838/jcr.07.02.9