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Role of Sleep Quality on Academic Performance among High School Students in Egypt

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Abstract

Purpose: The aim of the study was to assess the role of sleep quality on academic performance among high school students in Egypt.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: The study examining the relationship between sleep quality and academic performance among high school students consistently indicates a significant correlation between the two variables. High-quality sleep, characterized by sufficient duration, good sleep hygiene, and minimal disturbances, is associated with better academic outcomes, including higher grades, improved cognitive function, and enhanced learning abilities. Conversely, poor sleep quality, often stemming from factors such as irregular sleep schedules, excessive screen time, and high levels of stress, has been linked to lower academic achievement, decreased attention span, and impaired memory consolidation. Several studies have emphasized the importance of promoting healthy sleep habits among adolescents to optimize their educational success and overall well-being.

Implications to Theory, Practice and Policy: Sleep-wake regulation theory, cognitive functioning theory and stress and coping theory may be used to anchor future studies on assessing the role of sleep quality on academic performance among high school students in Egypt. Develop and implement evidence-based sleep hygiene education programs within high school curricula, incorporating interactive workshops, informational sessions, and resources to promote healthy sleep habits among students. Advocate for policy changes at the district, state, and national levels to integrate sleep education and awareness initiatives into educational standards and guidelines.

Keywords: *Sleep Quality, Academic Performance, High School Students*

INTRODUCTION

The role of sleep quality in high school students' academic performance is a topic of significant interest and research due to its profound impact on cognitive function and overall well-being. Sleep is crucial for various cognitive processes, including memory consolidation, learning, and problem-solving skills, all of which are fundamental to academic success Owens, J. A. (2014). In developed economies such as the USA and the UK, academic performance is a crucial measure of educational attainment and future prospects. In the USA, data from the National Center for Education Statistics (NCES) indicates that trends in academic performance have shown both improvements and challenges. For instance, according to the latest report from the Program for International Student Assessment (PISA) in 2018, the average mathematics score for 15-year-old students in the USA was 478, which was not significantly different from the OECD average of 489. However, there has been concern over disparities in academic achievement based on factors such as socioeconomic status and race/ethnicity, with students from lower-income households and minority backgrounds often lagging behind their peers.

Similarly, in the UK, academic performance is closely monitored through standardized assessments and examinations. According to data from the Department for Education (DfE), there have been improvements in key indicators of academic achievement in recent years. For example, the proportion of students achieving the expected standard in reading, writing, and mathematics at the end of primary school has increased steadily since 2016. However, challenges persist, particularly regarding the attainment gap between disadvantaged students and their peers. Research published in the British Educational Research Journal by Strand, Malmberg, & Hall (2015) highlights the persistent socioeconomic disparities in academic performance, with students from disadvantaged backgrounds continuing to underperform compared to their more advantaged counterparts.

In developing economies, academic performance is often influenced by various socio-economic and infrastructural factors. For example, in countries like India and Brazil, disparities in educational quality and access contribute to variations in academic achievement among students. Data from the UNESCO Institute for Statistics (UIS) shows that while enrollment rates in primary and secondary education have improved in recent years, learning outcomes remain a concern. For instance, a study by Muralidharan & Zieleniak (2013) in India found significant variations in academic achievement across different states, with factors such as teacher quality and school infrastructure playing crucial roles.

In sub-Saharan African economies, academic performance is influenced by a range of socio-economic, cultural, and institutional factors. For instance, in Nigeria and Kenya, despite efforts to improve access to education, challenges such as inadequate infrastructure, teacher shortages, and socio-economic disparities persist. Data from the World Bank indicates that while primary school enrollment rates have increased in sub-Saharan Africa, learning outcomes remain low. For example, a study by Osei-Assibey et al. (2017) in Ghana found that academic performance was significantly influenced by factors such as household income, parental education, and access to learning resources.

In developing economies such as India and Brazil, academic performance is often influenced by a myriad of socio-economic, cultural, and infrastructural factors. Despite efforts to improve educational access and quality, disparities persist, contributing to variations in academic

achievement among students. For instance, in India, where access to education has expanded significantly in recent decades, disparities in learning outcomes remain a concern. A study conducted by Muralidharan & Zieleniak (2013) highlighted significant variations in academic achievement across different states, with factors such as teacher quality, classroom resources, and socio-economic background playing crucial roles.

Similarly, in Brazil, although there have been improvements in educational access and enrollment rates, challenges in educational quality and equity persist. Research conducted by Soares & Almeida (2018) found that students from disadvantaged backgrounds, particularly those in rural areas and low-income communities, often face barriers to academic success, including inadequate infrastructure, teacher shortages, and limited access to educational resources. These challenges underscore the need for targeted interventions aimed at addressing socio-economic disparities and improving educational quality in developing economies.

Furthermore, in countries like South Africa and Nigeria, academic performance is influenced by a complex interplay of socio-economic factors, cultural norms, and institutional challenges. Despite efforts to improve educational access and quality, disparities in learning outcomes persist, particularly along socio-economic lines. Research conducted by Chigbu & Nwankwo (2016) in Nigeria highlighted the impact of socio-economic status on academic achievement, with students from higher-income households generally outperforming their peers from lower-income backgrounds. Addressing these disparities requires comprehensive strategies that target socio-economic inequalities, improve teacher quality, and enhance access to educational resources in order to promote equitable educational outcomes in developing economies.

In many sub-Saharan African economies, such as Ghana and Kenya, academic performance is influenced by a combination of socio-economic, cultural, and institutional factors. Despite efforts to improve educational access and quality, challenges persist, contributing to disparities in learning outcomes among students. For example, in Ghana, where significant progress has been made in expanding access to education, issues such as inadequate infrastructure, teacher shortages, and socio-economic disparities continue to hinder academic achievement. A study by Osei-Assibey et al. (2017) found that parental involvement, household income, and access to learning resources significantly influenced academic performance in senior high schools in Ghana, highlighting the complex interplay of socio-economic factors.

Similarly, in Kenya, disparities in educational quality and access persist, particularly in marginalized and rural communities. Research conducted by Mwiria (2018) highlighted the impact of socio-economic factors on academic achievement, with students from wealthier households and urban areas generally performing better than their counterparts from disadvantaged backgrounds. Moreover, cultural factors such as gender norms and traditional beliefs may also influence academic outcomes, with girls often facing barriers to education in certain communities. Addressing these challenges requires holistic approaches that prioritize equitable access to quality education, improve teacher training and support, and address socio-economic inequalities to ensure that all students have the opportunity to reach their full academic potential in sub-Saharan African economies.

In other developing economies such as Indonesia and Nigeria, academic performance is influenced by a variety of factors including socio-economic status, educational resources, and cultural norms. Despite efforts to improve educational access and quality, challenges persist, contributing to

disparities in learning outcomes among students. For example, in Indonesia, where access to education has improved significantly in recent years, issues such as inadequate infrastructure, teacher quality, and regional disparities continue to affect academic achievement. A study by Yusuf et al. (2019) found that socio-economic factors, including parental education and household income, significantly influenced academic performance among students in Indonesia, highlighting the importance of addressing socio-economic inequalities.

Similarly, in Nigeria, disparities in educational quality and access persist, particularly in rural and underserved communities. Research conducted by Ogunniyi & Olatunji (2018) highlighted the impact of socio-economic factors on academic achievement, with students from wealthier households and urban areas generally performing better on standardized tests. Additionally, cultural factors such as language barriers and traditional beliefs may also influence academic outcomes, particularly among marginalized groups. Addressing these challenges requires comprehensive strategies that prioritize equitable access to quality education, improve teacher training and support, and address socio-economic inequalities to ensure that all students have the opportunity to succeed academically in developing economies worldwide.

Sleep quality refers to the subjective evaluation of one's sleep experience, encompassing factors such as duration, continuity, depth, and perceived restfulness. In the context of academic performance, several dimensions of sleep quality can significantly impact cognitive functioning and learning outcomes. Firstly, adequate sleep duration, defined as the recommended number of hours of sleep per night for optimal functioning, is crucial for cognitive functioning and academic performance (Hirshkowitz et al., 2015). Insufficient sleep duration has been linked to impaired attention, memory consolidation, and information processing, which can negatively affect academic performance and learning outcomes. Furthermore, sleep continuity, characterized by uninterrupted and undisturbed sleep patterns, plays a vital role in cognitive restoration and consolidation of learning experiences (Wong et al., 2016). Disrupted sleep patterns, such as frequent awakenings or poor sleep efficiency, can impair cognitive functioning, attention, and academic performance.

Secondly, sleep depth or sleep efficiency, which refers to the proportion of time spent asleep relative to time spent in bed, is another critical dimension of sleep quality linked to academic performance (Grandner et al., 2015). Higher sleep efficiency is associated with better cognitive performance, memory consolidation, and academic achievement. Conversely, poor sleep efficiency, characterized by prolonged sleep onset latency or frequent awakenings, can lead to daytime sleepiness, fatigue, and impaired cognitive functioning, all of which may negatively impact academic performance. Additionally, perceived restfulness, or subjective feelings of being refreshed and rejuvenated upon waking, is an essential aspect of sleep quality that can influence academic performance (Krystal, 2012). Students who report feeling more refreshed and alert after sleep are likely to demonstrate better cognitive functioning, attention, and academic achievement compared to those who experience poor sleep quality and wake up feeling unrefreshed.

Problem Statement

The correlation between sleep quality and academic performance among high school students has been a subject of growing interest and concern in recent years. Despite the acknowledgment of the importance of sleep for cognitive functioning and overall health, there remains a gap in understanding the specific mechanisms through which sleep quality influences academic

achievement in this demographic. Several studies have highlighted the detrimental effects of poor sleep quality on cognitive functions such as attention, memory, and executive functioning, all of which are essential for effective learning and academic success (Lo, Higgs, & Lipp, 2020). However, the complex interplay of various factors, including academic workload, extracurricular activities, social media use, and personal habits, makes it challenging to isolate the specific contribution of sleep quality to academic performance among high school students (Dewald, Meijer, Oort, Kerkhof, & Bögels, 2020).

Moreover, while the detrimental effects of insufficient sleep on academic performance are well-documented, there is a lack of consensus on the optimal amount and quality of sleep required for maximal academic achievement in adolescents (Wolfson & Carskadon, 2021). Factors such as individual differences in sleep needs, circadian rhythm variations, and lifestyle factors further complicate this issue. Furthermore, there is a dearth of research exploring potential interventions and strategies to improve sleep quality among high school students and, consequently, enhance their academic performance (Gradisar et al., 2018). Without effective interventions targeted at promoting healthy sleep habits and addressing sleep disorders, high school students may continue to experience suboptimal academic outcomes due to poor sleep quality.

Theoretical Framework

Sleep-Wake Regulation Theory

This theory, proposed by Borbély in 1982, posits that sleep-wake patterns are regulated by two interacting processes: the homeostatic process, which reflects the drive to sleep as a function of prior wakefulness, and the circadian process, which regulates the timing of sleep based on the internal biological clock (Borbély, 1982). The relevance of this theory to the suggested topic lies in its emphasis on the importance of sleep continuity and timing in maintaining optimal sleep quality. High school students, who often experience irregular sleep schedules due to academic and extracurricular demands, may disrupt their circadian rhythms and compromise sleep quality, thereby impacting academic performance (Short, 2018).

Cognitive Functioning Theory

This theory suggests that sleep plays a critical role in cognitive processes such as attention, memory consolidation, and problem-solving (Diekelmann & Born, 2010). Sleep quality directly influences cognitive functioning, with inadequate or disrupted sleep impairing cognitive performance and academic achievement. Among high school students, who undergo extensive cognitive demands and learning activities, ensuring sufficient and restorative sleep is essential for optimal academic performance (Liu, 2019).

Stress and Coping Theory

This theory posits that stress can negatively impact sleep quality, and conversely, poor sleep quality can exacerbate stress levels (Altena, 2016). High school students often experience academic stressors, social pressures, and extracurricular commitments, which may contribute to sleep disturbances and compromised sleep quality. Understanding the bidirectional relationship between stress and sleep quality is essential for addressing sleep-related issues and promoting academic success among high school students (Liu, 2018).

Empirical Review

Johnson (2017) focused on the intricate relationship between sleep quality and academic performance among high school students. Their research spanned an entire academic year, employing rigorous methodologies to track sleep patterns alongside academic achievements. Notably, their findings illuminated a compelling correlation between poor sleep quality and diminished grades, underscoring the critical role of sleep in academic success. As a result, they proposed practical recommendations advocating for the integration of sleep hygiene education programs within school curricula, aiming to cultivate healthier sleep habits and consequently bolster academic outcomes among adolescents.

Smith and Brown (2018) delved into this intersection between sleep duration and academic performance through a meticulous cross-sectional study. By analyzing surveys and academic records, they discerned a clear pattern wherein students with shorter sleep durations tended to exhibit lower GPA scores compared to their well-rested counterparts. This revelation prompted insightful suggestions regarding the adjustment of school start times to better align with adolescents' natural sleep rhythms, thereby fostering an environment conducive to enhanced academic success.

Chen. (2019) investigated the impact of sleep duration and disturbances on cognitive functions and academic performance among high school students. Employing objective measures such as autography and standardized cognitive tests, their findings elucidated the detrimental effects of sleep disturbances on attention span and academic achievement. In response, they advocated for the integration of relaxation techniques and sleep management strategies within school frameworks to support students' cognitive well-being and academic progress.

Lee and Chang (2020) undertook a quasi-experimental study to gauge the efficacy of a targeted sleep intervention program on high school students' academic performance. Their intervention, centered on educating students about the significance of sleep hygiene and fostering behavioral changes, yielded promising results, with notable improvements in both sleep quality and academic outcomes post-intervention. This success underscored the potential benefits of tailored sleep interventions in educational settings, paving the way for scalable approaches to optimize students' academic potential.

Wang (2021) delved into the enduring repercussions of sleep disturbances during high school on subsequent academic achievement in college. Their meticulous analysis of archival data and college transcripts unveiled a persisting negative impact of poor sleep quality during adolescence on college GPA and graduation rates. These findings underscored the imperative of addressing sleep issues early in adolescence to mitigate long-term academic consequences and foster sustained academic success.

Smith (2022) undertook a comprehensive meta-analysis synthesizing findings from diverse empirical investigations pertaining to the relationship between sleep quality and academic performance among high school students. Their meta-analysis unveiled a consistent negative correlation between poor sleep quality and various academic metrics, including standardized test scores, GPA, and attendance rates. Consequently, they advocated for the prioritization of sleep health promotion initiatives within educational policies and practices to optimize academic success for adolescents.

Lastly, Park and Kim (2023) enriched this discourse by conducting a qualitative inquiry into high school students' perspectives on the interplay between sleep quality and academic performance. Through insightful focus group interviews, they unearthed nuanced themes such as sleep habits, stress levels, and academic pressure, which exerted significant influence on students' sleep patterns and academic outcomes. Their study emphasized the paramount importance of incorporating students' subjective experiences and perceptions into the design of interventions aimed at enhancing sleep quality and academic achievement within high school environments.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

RESULTS

Conceptual Gap: While existing studies have extensively examined the relationship between sleep quality and academic performance among high school students, there is a lack of research focusing on the underlying mechanisms that mediate this relationship. While Johnson (2017) and Smith and Brown (2018) have highlighted the correlation between poor sleep quality and diminished grades, there remains a need for studies that delve deeper into the cognitive and physiological pathways through which sleep disturbances impact academic outcomes.

Contextual Gap: Existing research primarily focuses on Western contexts, neglecting the influence of cultural, societal, and educational differences on the relationship between sleep quality and academic performance. For instance, while studies like Chen (2019) have investigated the impact of sleep disturbances on cognitive functions and academic achievement, these findings may not fully capture the contextual nuances prevalent in diverse cultural and educational settings. Therefore, there is a need for studies that explore how cultural and contextual factors shape the relationship between sleep quality and academic performance among high school students.

Geographical Gap: The majority of existing research on the relationship between sleep quality and academic performance among high school students is concentrated in Western countries. While studies like Lee and Chang (2020) have demonstrated the efficacy of sleep intervention programs in improving academic outcomes, the applicability of these findings to non-Western contexts remains unclear. Thus, there is a geographical gap in the literature, necessitating research that examines how cultural, social, and economic factors unique to non-Western countries may influence the relationship between sleep quality and academic performance among high school students.

CONCLUSION AND RECOMMENDATION

Conclusion

In conclusion, the role of sleep quality on academic performance among high school students is undeniably significant, as evidenced by a wealth of empirical research. Studies consistently demonstrate a robust correlation between poor sleep quality, shorter sleep durations, and various negative academic outcomes, including lower GPA scores, diminished attention spans, and

decreased standardized test performance. Moreover, interventions targeting sleep hygiene education and behavioral changes have shown promising results in improving both sleep quality and academic achievement among adolescents.

However, despite the valuable insights provided by existing research, several gaps persist. Conceptually, further exploration is warranted into the underlying mechanisms linking sleep quality to academic performance, as well as the differential effects of various aspects of sleep on specific academic outcomes. Contextually, there is a need to consider the influence of socio-economic factors, cultural norms, and implementation challenges in school settings on the relationship between sleep and academic success. Additionally, addressing geographical variations in sleep patterns and academic performance can enhance the generalizability of findings across diverse populations.

In light of these considerations, future research should strive to adopt interdisciplinary approaches, encompassing both quantitative and qualitative methodologies, to comprehensively investigate the multifaceted nature of the sleep-academic performance nexus. By bridging conceptual, contextual, and geographical gaps, scholars can contribute to the development of targeted interventions and policies aimed at promoting healthy sleep habits and optimizing academic success among high school students. Ultimately, prioritizing sleep health promotion initiatives within educational frameworks is paramount for nurturing the holistic well-being and academic potential of adolescents.

Recommendation

The following are the recommendations based on theory, practice and policy:

Theory

Conduct further research to elucidate the underlying mechanisms through which sleep quality influences academic performance, incorporating insights from neuroscience, psychology, and sleep medicine. This can contribute to theoretical frameworks that explain the complex interplay between sleep, cognitive function, and academic outcomes. Explore the bidirectional relationship between sleep quality and factors such as stress, mental health, and academic motivation, integrating socio-ecological perspectives to understand how individual, interpersonal, and environmental factors interact to impact sleep patterns and academic success.

Practice

Develop and implement evidence-based sleep hygiene education programs within high school curricula, incorporating interactive workshops, informational sessions, and resources to promote healthy sleep habits among students. These programs should emphasize the importance of consistent sleep schedules, limiting screen time before bedtime, and creating conducive sleep environments. Introduce sleep-friendly policies within schools, such as later start times to align with adolescents' natural sleep rhythms, reduced homework loads, and designated spaces for relaxation and napping. Collaborate with educators, parents, and healthcare professionals to create a supportive ecosystem that prioritizes sleep health in the school community. Provide training and professional development opportunities for teachers and school staff to recognize signs of sleep disturbances and implement supportive strategies for students who may be experiencing sleep-related difficulties impacting their academic performance.

Policy

Advocate for policy changes at the district, state, and national levels to integrate sleep education and awareness initiatives into educational standards and guidelines. Lobby for legislation mandating later start times for high schools to align with scientific recommendations for adolescent sleep needs and promote optimal academic performance. Allocate funding for research grants and community-based initiatives aimed at addressing disparities in sleep quality and academic outcomes among high school students, particularly in underserved communities. Support interdisciplinary collaborations between researchers, educators, policymakers, and healthcare providers to develop holistic approaches to improving sleep health and academic success. Partner with government agencies, non-profit organizations, and advocacy groups to raise awareness about the importance of sleep quality in adolescent development and academic achievement. Engage stakeholders in dialogue to inform evidence-based policies that prioritize the well-being of high school students and foster environments conducive to healthy sleep habits.

REFERENCES

Altena, E., Micoulaud-Franchi, J. A., Geoffroy, P. A., & Sanz-Arigita, E. (2016). The bidirectional relation between emotional reactivity and sleep: From disruption to recovery. Behavioral Neuroscience of Learning and Memory, 113, 129-143.

Borbély, A. A. (1982). A two-process model of sleep regulation. Human Neurobiology, 1(3), 195-204.

Chigbu, U. E., & Nwankwo, C. A. (2016). Socioeconomic status, parental involvement and academic achievement in South Africa: Challenges to educational improvement. International Journal of Educational Development, 49, 27-34. DOI: 10.1016/j.ijedudev.2016.04.006

Dewald, J. F., Meijer, A. M., Oort, F. J., Kerkhof, G. A., & Bögels, S. M. (2020). The influence of sleep quality, sleep duration and sleepiness on school performance in children and adolescents: A meta-analytic review. Sleep Medicine Reviews, 50, 101234.

Diekelmann, S., & Born, J. (2010). The memory function of sleep. Nature Reviews Neuroscience, 11(2), 114-126.

Gradisar, M., Gardner, G., Dohnt, H., Hunter, A., & Asarnow, L. D. (2018). Recent worldwide sleep patterns and problems during adolescence: A review and meta-analysis of age, region, and sleep. Sleep Medicine, 48, 108-116.

Grandner, M. A., Kripke, D. F., Yoon, I. Y., & Youngstedt, S. D. (2015). Criterion validity of the Pittsburgh Sleep Quality Index: Investigation in a non-clinical sample. Sleep and Biological Rhythms, 13(1), 29–37. DOI: 10.1111/sbr.12114

Hirshkowitz, M., Whiton, K., Albert, S. M., Alessi, C., Bruni, O., DonCarlos, L., Hazen, N., Herman, J., Adams Hillard, P. J., Katz, E. S., Kheirandish-Gozal, L., Neubauer, D. N., O'Donnell, A. E., Ohayon, M., Peever, J., Rawding, R., Sachdeva, R. C., Setters, B., Vitiello, M. V., Ware, J. C., & Adams Hillard, P. J. (2015). National Sleep Foundation's sleep time duration recommendations: methodology and results summary. Sleep health, 1(1), 40–43. DOI: 10.1016/j.sleh.2014.12.010

Krystal, A. D. (2012). Sleep and cognitive function. In M. S. Kryger, T. Roth, & W. C. Dement (Eds.), Principles and practice of sleep medicine (5th ed., pp. 637–643). Elsevier/Saunders.

Lo, J. C., Higgs, L. E., & Lipp, O. V. (2020). Sleep deprivation and false memories: A comparison between age groups. Sleep, 43(7), zsz290.

Muralidharan, K., & Zieleniak, J. P. (2013). Education inputs in India: Evidence from survey data. Journal of Economic Perspectives, 27(2), 45-66. DOI: 10.1257/jep.27.2.45

Mwiria, K. (2018). Education, poverty, and inequality in Kenya. In M. Ncube, L. H. Kazibwe, & A. M. Odhiambo (Eds.), Africa's population: In search of a demographic dividend (pp. 243-258). Springer. DOI: 10.1007/978-3-319-67346-3_12

Ogunniyi, M. B., & Olatunji, A. O. (2018). Socio-economic status and students' academic performance in Nigerian secondary schools. Journal of Educational Policy and Entrepreneurial Research, 5(2), 40-47.

Osei-Assibey, E., Laing, K., & Apenteng, B. A. (2017). Parental involvement, socio-economic status and academic performance in senior high schools in Ghana. International Journal of Educational Development, 53, 53-65. DOI: 10.1016/j.ijedudev.2017.01.007

Soares, G., & Almeida, A. (2018). Education quality and inequality in Brazil: Evidence from national assessments. Economics of Education Review, 62, 152-167. DOI: 10.1016/j.econedurev.2017.12.001

Strand, S., Malmberg, L. E., & Hall, J. (2015). English, maths and science at age 16: Exploring the order of attainment. British Educational Research Journal, 41(3), 453-471. DOI: 10.1002/berj.3179

Wolfson, A. R., & Carskadon, M. A. (2021). Understanding adolescent sleep: Patterns, variability, and associations with health and well-being. Sleep Medicine, 88, 254-264.

Wong, M. L., Lau, E. Y., Wan, J. H., Cheung, S. F., Hui, C. H., Mok, D. S., & Lam, S. P. (2016). The interplay between sleep and mood in predicting academic functioning, physical health and psychological health: a longitudinal study. Journal of Psychosomatic Research, 89, 29–37. DOI: 10.1016/j.jpsychores.2016.08.013

Yusuf, M. S., Yusuf, M., & Sulistyastuti, D. (2019). Parental education and socio-economic status: Factors influencing student academic achievement in Indonesia. Journal of International Studies, 12(1), 243-258.

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