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2nd National University – MOA Research Congress Abstracts

Business and Education Industry

ANALYZING THE FINANCIAL LITERACY AND FREQUENCY OF PURCHASES OF NU MOA SENIOR HIGH SCHOOL STUDENTS

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Alexis Mycah Manzanal, Kim Jasmin Capacia, Christine Nicole Victorio

Abstract

Financial literacy is vital for managing personal finances, especially among youth. Purchase frequency describes how often individuals make purchases or have shorter average gaps between transactions. Although many studies examine financial literacy in isolation, its relationship with spending behavior remains underexplored. This study investigates whether financial literacy correlates with purchase frequency among senior high school students at NU MOA and aims to inform educational programs that enhance budgeting saving and spending habits. This quantitative correlational study involved 40 senior high students from the ABM HUMSS and STEM strands at NU MOA selected through stratified random sampling. Two instruments were administered via MS Forms in classroom sessions. The first was a validated 21 item financial literacy questionnaire rated on a five point Likert scale. The second was a 12 item purchase frequency questionnaire adapted from Kaila 2016 that asked how many times students made purchases over a two month period using three categories (1–3, 4–6, more than 6). Data analysis included descriptive statistics the Shapiro Wilk test for normality reliability analysis of both instruments Pearson correlation to assess relationships and linear regression to examine predictive capacity. The analysis showed a weak positive correlation ($r = 0.192$) between financial literacy and purchase frequency with a p value of 0.235 indicating no significant relationship. Students reported making few non essential purchases over the two month period. Participants generally agreed they possessed financial knowledge but remained neutral about their spending and saving behaviors. Linear regression showed that financial literacy explained only 3.691 percent of the variance in purchase frequency. These findings indicate that financial literacy alone does not significantly influence how often students make non essential purchases. We recommend that students apply their financial knowledge through mindful spending practices and real life budgeting exercises. Future research should explore additional factors that may more strongly affect student spending habits to better inform financial education strategies.

Keywords: financial literacy, purchase frequency, financial behavior, spending habits, purchasing behavior

COMPARING AND CORRELATING SUSTAINABILITY AWARENESS AND NUMBER OF PURCHASED SINGLE-USE PACKAGING OF CONCESSIONAIRES AMONG NATIONAL UNIVERSITY NCR+ CAMPUSES

Samantha Norlyn Silvestre, Sofia Laurice Anacan, Amira Mae Buenaventura,
Dustin Anne Largoon, Yza Gertrude Sumulong, Nadine Yap, Christine Nicole Victorio

Abstract

As environmental health continues to deteriorate due to human activities, food concessionaires contribute substantially to waste generation through their packaging choices. Examining the relationship between concessionaires' sustainability awareness and the quantity of single-use packaging they purchase may reveal opportunities to reduce packaging waste and promote sustainable practices. However, existing studies typically examine these variables in isolation and overlook their interrelationship, indicating a gap in correlation knowledge. This correlational quantitative study compared sustainability awareness levels with the number of single-use packaging items purchased by food concessionaires at National University NCR+ campuses. A semi-structured survey was administered both onsite and online to a purposive sample of concessionaires. Data analysis involved tests for normality and homogeneity of variances, followed by a Mann-Whitney U test and a linear regression analysis. Normality testing indicated a non-normal distribution ($p < .001$), while homogeneity of variances testing indicated equal variances ($p = .180$). The Mann-Whitney U test showed a statistically significant difference in packaging purchase counts between concessionaires with high and low sustainability awareness levels ($p = .020$). Linear regression analysis revealed a weak positive correlation between sustainability awareness level and number of single-use packaging items purchased ($r = 0.230$; $r^2 = 0.053$), indicating that awareness level accounted for 5.3 percent of the variance in packaging purchases. Although 86.7 percent of concessionaires exhibited high sustainability awareness, the average number of single-use packaging items purchased remained high (mean = 538.5). These findings demonstrate that awareness alone is insufficient to drive sustainable behavior and underscore the need for supportive policies and access to sustainable alternatives, such as reusable metal straws, to reduce single-use packaging consumption and promote sustainable practices. Future research should include a larger and more diverse sample across multiple campuses and examine additional factors such as socioeconomic status and institutional policies to enhance generalizability.

Keywords: sustainability awareness, single-use packaging (sup), concessionaires, environment, awareness

THE CORRELATION OF EXTRA-CURRICULAR PARTICIPATION AND CAREER READINESS AMONG SENIOR HIGH SCHOOL STUDENTS AT NATIONAL UNIVERSITY – MOA

Distor Shawn Alexander, Chloe Jenina Huang, Claire Ashlie Padrigon,
David Gerard Carrillo, Reign Buenaventura, Christine Nicole Victorio

Abstract

Extracurricular activities are promoted to develop skills beyond academics and enhance career readiness. However, the relationship between the number of activities joined and student career preparedness remains unclear. This study examines whether the frequency of extracurricular participation correlates with career readiness among senior high school students at National University – Mall of Asia. A correlational survey design is used with a non-probability convenience sample of 70 senior high school students in Grades 11 and 12 from the ABM, HUMSS and STEM strands. Participants fill out an online questionnaire that includes the Career Resources Questionnaire–Adolescent Version to assess their career readiness on a 4-point scale, along with a question created by the researcher about how many extracurricular activities they do. Spearman's rank-order correlation tests the association between activity count and readiness scores, and simple linear regression evaluates whether activity frequency predicts career readiness. Spearman's correlation revealed a weak positive association between extracurricular participation and career readiness that was not statistically significant ($r = 0.135$, $p = 0.201$). Simple linear regression produced a small positive slope that also failed to reach significance ($\beta = 0.14$, $p = 0.190$). These results indicated that, within this sample, the quantity of activities did not significantly predict higher career readiness scores. The findings suggested that merely increasing the number of activities was insufficient to boost career readiness, contrasting with literature that emphasizes broad co-curricular benefits. As a result, the quality of involvement may play a more pivotal role than quantity. Prior research recommends deep engagement in a limited number of activities rather than superficial participation in many. For policy and practice, the results suggest that improving extracurricular programs with focused career education elements—like mentorship and project-based learning—is more beneficial than just adding more activities. Future research was advised to investigate how specific qualities of participation affect career readiness and how schools can design high-quality co-curricular experiences to better prepare students for their future careers.

Keywords: extracurricular participation, career readiness, senior high school, spearman correlation, linear regression

THE RELATIONSHIP OF MONTHLY SCREEN TIME AND AVERAGE SPENDINGS OF NU-MOA SENIOR HIGH SCHOOL STUDENTS IN SHEIN

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Denz Zean Acorda, Kyle Steven Valdes, Christine Nicole Victorio

Abstract

Online shopping has become increasingly prevalent as technology integrates into daily life. Among Philippine platforms, SHEIN emerged as a leading fashion brand in 2023 and gained popularity through haul videos. Despite extensive research on screen time's effects on academic performance and emotional well-being, and separate studies on online spending behavior, the relationship between monthly screen time and spending on specific platforms remains underexplored. This study examines the relationship between monthly screen time and average spending on SHEIN among senior high school students at National University – Mall of Asia. A correlational survey design is employed to gather data from 30 randomly selected senior high school students at National University – Mall of Asia who reported purchasing from SHEIN in the past month. An online questionnaire collects information on average monthly screen time, measured in hours, and self-reported monthly spending on SHEIN in Philippine pesos. Spearman's rank-order correlation is used to assess the relationship between screen time and spending. Descriptive analysis showed that participants averaged 19.5 hours of screen time and spent ₱1,288 per month on SHEIN. Spearman's correlation analysis yielded a correlation coefficient of 0.119 and a p value of 0.530, indicating no statistically significant relationship between screen time and monthly spending. The findings indicated that increased screen time did not correspond to higher spending on SHEIN among the sampled students. This lack of correlation suggested that other factors such as allowance limits, promotional offers, and peer influence may play more significant roles in spending behavior. As a result, future research was recommended to include larger and more diverse samples, examine additional online platforms, and explore other variables that could affect the relationship between screen time and online spending.

Keywords: screen time, online spending, shein, spearman correlation, senior high students

THE RELATIONSHIP BETWEEN LEVEL OF EMPLOYEE ENGAGEMENT AND JOB SATISFACTION AMONG FACULTY MEMBERS OF A SELECTED PRIVATE HIGH SCHOOL IN PASAY CITY

Hong Chynna Kun Ying, Juliah Christine Salcedo, Stephen Khen Dizon, Naiobe Anne Manongdo, Ashley Mendoza Villa Ignacio, Prince Keyniel Gueco, Christine Nicole Victorio

Abstract

Employee engagement refers to the psychological and emotional attachment employees feel toward their organization, team, and work, while job satisfaction reflects how positively or negatively employees evaluate their jobs. In educational settings, high engagement and satisfaction among faculty members contribute to retention, motivation, and institutional effectiveness. This study examines the relationship between levels of employee engagement and job satisfaction among faculty members at a selected private high school in Pasay City. A correlational design is employed to evaluate employee engagement and job satisfaction using validated questionnaires. Data are collected from 27 faculty members during the 2024–2025 academic year. Responses are aggregated to calculate general weighted means for each variable, and Spearman's rho is used to test the strength an23d significance of the relationship under conditions of non-normal data distribution. Data analysis revealed high levels of employee engagement (mean = 3.27) and job satisfaction (mean = 3.29), corresponding to "Strongly Agree" and "Very Satisfied" on the respective scales. The Shapiro-Wilk test indicated non-normal distribution ($p < .001$), justifying non-parametric analysis. Spearman's rho demonstrated a moderate positive correlation between engagement and satisfaction ($r = 0.383$, $p = 0.049$), leading to rejection of the null hypothesis. The findings indicated a significant moderate positive relationship between employee engagement and job satisfaction among the faculty members studied. These results suggested that higher engagement levels are associated with greater job satisfaction, underscoring the importance of fostering an engaging work environment to support faculty well-being and retention. As a result, it is recommended that school administrators conduct regular engagement and satisfaction surveys to identify areas for improvement and implement targeted interventions. Extending this research to other sectors, such as small to medium enterprises, could further elucidate engagement–satisfaction dynamics across different professional contexts.

Keywords: employee engagement, job satisfaction, faculty retention, correlational study, educational institutions

EXPLORING THE INFLUENCE OF PEER PRESSURE ON GRADE 12 STEM STUDENTSAT NU MOA IN CHOOSING A CAREER PATH

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Laura Joacquine Trinidad, Aliyah Benjilin Ablin, Rhinoa Bianca Torres,
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Abstract

Career decision-making is the process of choosing a future path, which often proves challenging when students feel uncertain about their interests and abilities. Mtemeri (2020) explains that peers exert significant influence on students' career choices through ongoing social interactions. This study explores how peer pressure shapes the career decisions of Grade 12 STEM students at NU MOA by examining the mechanisms through which peers affect students' choices and sense of belonging. In this research, data are gathered through semi-structured interviews with ten purposively selected Grade 12 STEM students. Each interview includes five guiding questions and is audio recorded with informed consent. Interview responses are transcribed verbatim and subjected to thematic analysis to identify recurring patterns related to peer influence on career decision-making. Three main themes emerged from the thematic analysis: conformity to peer choices, indecisiveness arising from peer input, and the dual role of peer influence as both helpful and confusing. Students reported that peer choices frequently shaped their own decisions, driven by a desire to belong or to avoid being left behind. Several participants second-guessed their genuine interests in response to peer suggestions, which led to delays in decision-making. A subset of participants admitted feeling pressured to pursue career paths misaligned with their personal preferences. However, some students described peer advice as an advantage that encouraged reflection and built confidence. Peer conversations broadened career options and made decisions more informed. Others struggled to balance personal goals with peer expectations, underscoring the importance of self-awareness and independence. Reactions to peer pressure varied according to whether the influence was offered as a suggestion or imposed insistently and by the student's ability to critically evaluate peer input. This study focused on Grade 12 STEM students at NU MOA and revealed how peer pressure influences career decision-making. Future research was encouraged to include students from other academic strands, grade levels, and institutions to better understand peer influence across contexts. It was suggested to examine additional factors such as family expectations, personal interests, and academic performance. The use of surveys was recommended to identify broader patterns, while focus group discussions could deepen insight into shared student experiences.

Keywords: peer pressure, career decision making, stem students, thematic analysis, educational influence

MISSION ACCOMPLISHED: INVESTIGATING THE EFFECT OF GAME-BASED LEARNING ON SENIOR HIGH SCHOOL STUDENTS' ACADEMIC PERFORMANCE IN BASIC AVIATION CONCEPTS

Glenncielle Mari Calayag, Hannah Marie Cadampog, Julia Bien Leonardo, Jonathan Myles Singson, Donna Bautista, Joash Goboy

Abstract

Aviation education is evolving with virtual reality, AI-powered simulators, and digital flight systems. Many programs still rely on outdated equipment and traditional teaching methods, which limits student exposure to industry tools and fundamental aviation concepts essential for modern operations. This study investigates the effectiveness of integrating mission-driven games into the learning of basic aviation concepts. A quasi-experimental design is employed to compare instructional approaches among 60 randomly selected Grade 11 students at National University – Mall of Asia. One group engages with a traditional paper-based reviewer, while the other interacts with a mission-driven digital game focused on aviation concepts. Both groups complete a researcher-designed, 30-item multiple-choice test covering aircraft parts, their functions, and control mechanisms. The test instrument is expert-validated and demonstrates high internal reliability. Data analysis involves descriptive statistics and an independent t-test to determine differences in academic performance. The game-based learning group outperformed the traditional reviewer group, achieving a mean score of 15.8 compared to 13.4 for the control group. Statistical analysis indicated that this difference was significant, demonstrating that exposure to the mission-driven game yielded higher comprehension and retention of aviation concepts than the conventional method. The findings suggested that mission-driven games enhanced understanding and memorization of basic aviation concepts more effectively than paper-based review. The immersive and interactive nature of the game likely promoted deeper cognitive engagement. Limitations included a small sample size, brief exposure period, and restricted access to gaming hardware. As a result, future research was recommended to examine longer implementations, diverse gaming platforms, integration of specialized controllers, and qualitative measures of student motivation and engagement to more fully assess the impact of game-based learning.

Keywords: game-based learning, aviation education, academic performance, mission-driven games, interactive learning

PERCEIVED INFLUENCE OF BIRTH ORDER IN SHAPING POWER DYNAMICS IN CLASSROOM INTERACTIONS OF SENIOR HIGH SCHOOL CLASS OFFICERS AT NATIONAL UNIVERSITY – MALL OF ASIA

Stancheva Sarah Dimitrova, Koreen Bagapuro, Zasha Denise Lunar, Saara Hazel Sobreviñas, Ghaliya Rebese, Kian Matthew Duran, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

Birth order classifications such as firstborn, secondborn, middle child, youngest child, and only child—are proposed to influence personality traits, social interactions, and power strategies (Adler, 1927). Children develop informal power dynamics that parallel familial roles, and these dynamics may extend into classroom settings where hierarchical structures and authoritative behaviors mirror those experienced at home. This study explores the perceived influence of birth order on the power dynamics exercised by senior high school class officers at National University – Mall of Asia. This study employs a phenomenological approach to examine how birth order shapes power dynamics among classroom officers. Ten senior high school students who served at least one academic term as class officers during the 2024–2025 school year at National University – Mall of Asia were purposively selected. Data were collected via semi-structured interviews that explored participants' perceptions of authority, leadership behaviors, and familial role reflections. Thematic analysis was conducted to identify patterns in how birth order traits intersected with classroom power practices. Findings revealed that class officers enacted power through organizing duties, enforcing regulations, and facilitating communication with teachers and peers. These behaviors aligned with French and Raven's (1959) bases of power: informational power in knowledge sharing, coercive power in discipline enforcement, reward power in offering incentives, and referent power through perceived approachability. Most participants displayed leadership behaviors consistent with their birth order position, even when some consciously discounted its relevance. Subconscious references to familial roles and traits indicated that birth order and officer roles subtly intersected to shape how authority was exerted. The results indicated that birth order influences leadership behaviors and power strategies among senior high-class officers, despite occasional conscious refutations of its impact. As a result, future research was recommended to focus on only-child experiences to clarify unique power traits, to map specific birth order positions against individual leadership qualities, and to include other student leadership roles for comparative insights across different classroom environments.

Keywords: birth order, power dynamics, classroom interactions, phenomenological study, senior high school

THE EFFECTS OF ROOM LUMINANCE LEVEL ON MEMORY RETENTION SCORES AMONG SENIOR HIGH SCHOOL STUDENTS AT NATIONAL UNIVERSITY – MOA

Maria Cassandra Goda, John Carl Placer, Samantha Rafols, John Paulo Paz,
Art Josh Emil Casañares, Jordan Austin Marticio, Christine Nicole Victorio

Abstract

Memory retention is a key cognitive function that significantly influences academic performance. In educational settings, environmental factors such as room lighting play a crucial role in supporting or hindering cognition. Prior research has demonstrated that inadequate lighting—whether too dim or excessively bright—can impair focus, productivity, and overall cognitive function (Ohse, 2025). However, the specific effects of lighting on memory retention have not been isolated. This study investigates the influence of three room luminance levels—dim (< 500 lux), moderate (501–1500 lux) and bright (> 1500 lux)—on the memory retention scores of senior high school students at National University – MOA. A quasi-experimental design is employed with 36 senior high school students assigned evenly to three lighting conditions. Memory retention is assessed using the Digit Span Test (DST), a validated measure of short-term and delayed memory. Lighting intensity is verified with a Benetech lux meter to ensure accurate classification of each condition. Due to unequal variances across groups, Welch's one-way ANOVA is used to analyze differences in DST scores among lighting conditions. Students performed better under bright and moderate lighting, achieving mean DST scores of 23.5 and 21.9, respectively, compared to a mean score of 12.2 under dim lighting. Welch's ANOVA indicated a significant effect of luminance on retention scores ($p < 0.001$). Post hoc comparisons using Tukey's honestly significant difference test revealed significant differences between the dim condition and both moderate and bright conditions, while no significant difference emerged between bright and moderate lighting. These findings corroborated earlier studies that emphasize the importance of proper lighting for cognitive performance. For example, Golmohammadi et al. (2017) reported that increased lighting intensity enhances cognitive activation and alertness, supporting memory functions. The results demonstrated that both moderate and bright lighting conditions facilitated better memory retention, whereas dim lighting impaired performance. As a result, educational spaces should be designed to maintain lighting levels within the moderate to bright range to optimize learning outcomes. This recommendation holds practical implications for students, teachers, and administrators seeking to enhance academic success through environmental design.

Keywords: memory retention, room lighting, digit span test, quasi-experimental, educational environment

THE RELATIONSHIP AND DIFFERENCE OF GRADE 12 NATIONAL UNIVERSITY MALL OF ASIA ACCOUNTING, BUSINESS, AND MANAGEMENT STUDENTS' MATHEMATICAL PROFICIENCY LEVEL IN THE BUSINESS CONTEXT AND THEIR BUSINESS MATHEMATICS GRADES

Rejiena Ysabelle Ador, Karyn Althea Bangcale, Athena Arian Serato, Rhiana Lei Paule, Jomari Tyler Paliza, Jun Clive Sarmiento, Christine Nicole Victorio

Abstract

Business Mathematics is a specialized subject within the Accounting, Business, and Management Strand of the K-12 curriculum that develops essential skills for accounting, finance, marketing, economics, and entrepreneurship. Mathematical literacy and proficiency in a business context are crucial for understanding these disciplines. This study focuses on two dimensions of mathematical proficiency: conceptual understanding, which entails comprehension of mathematical ideas and relationships, and procedural fluency, which involves executing procedures accurately, efficiently, and flexibly. The study examines the relationship and difference between Grade 12 ABM students' business-context mathematical proficiency levels and their Business Mathematics course grades at National University – Mall of Asia. An online examination is administered to twenty-four Grade 12 ABM students at National University – Mall of Asia. Each student's responses are scored using Andrade et al.'s point system: five points for full demonstration of conceptual understanding, appropriate procedures, and strategic skill use; three points for partial demonstration; and one point when these elements are lacking. Mean scores classify proficiency levels as mathematically proficient (3.68–5.00), moderately proficient (2.34–3.67), or not proficient (1.00–2.33). Pearson's R correlation assesses the relationship between proficiency scores and Business Mathematics grades, while one-way ANOVA tests for differences among proficiency groups. Analysis revealed no significant relationship between mathematical proficiency levels and Business Mathematics grades ($r = 0.xx$, $p > .05$). One-way ANOVA also showed no significant difference in course grades across the three proficiency levels ($F = x.xx$, $p > .05$). These findings indicated that proficiency in business-context mathematical tasks did not significantly correspond to or predict students' Business Mathematics grades. The results suggested that proficiency on the online assessment and course grades were independent. It was also noted that the timing of the proficiency test—separate from the students' enrollment period in Business Mathematics—may have influenced the outcome. As a result, future research was recommended to align testing with classroom instruction and to expand sample size and assessment scope. This study provides a foundation for subsequent investigations into factors affecting Business Mathematics performance.

Keywords: business mathematics, mathematical proficiency, conceptual understanding, procedural fluency, grade 12 abm students

Engineering, Information, and Communication Technology

THE PERCEPTION IN PRESERVING FILIPINO ARCHITECTURAL HERITAGE IN INTRAMUROS, MANILA

Peejay Orbista, Chriselle Louie Nava, Joanna Honeymae Rodriguez, Amee James Sampang, Zshania Montejo, Jenny Yu, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

Architectural heritage embodies a nation's identity, history and culture. In the walled city of Intramuros, Manila, colonial-era structures offer a tangible link to the past. This study explores how both residents and visitors perceive the preservation of Filipino architectural heritage in Intramuros, examining the values they assign to historic buildings and their attitudes toward conservation efforts. A qualitative approach is employed, gathering data through semi-structured interviews with local residents and tourists in Intramuros. Participants are selected purposively to capture diverse perspectives. Transcripts are analyzed thematically to identify recurring patterns in how interviewees describe the area's cultural significance, their concerns about site deterioration, and their suggestions for preserving heritage structures. Interviewees characterized Intramuros as vintage and evocative of the Spanish colonial era, citing Baroque and Gothic architectural details, stone churches, and aged facades as cultural touchstones. Concerns emerged about structural decay and inadequate maintenance. Participants voiced a strong desire for enhanced government support, including funding, stronger heritage laws, and clear preservation policies. Suggestions included establishing grants, public-private partnerships, and community-driven fundraising campaigns. Emphasis was also placed on educational outreach and public awareness initiatives to foster wider appreciation and engagement. The findings underscored the need for a coordinated preservation strategy combining regulatory measures, financial incentives, and community involvement. Educational campaigns were found to be vital for increasing public support, while national standards could guide restoration practices and limit inappropriate commercial development. Public-private partnerships and responsible tourism promotion were also recommended to ensure sustainable conservation. As a result, preserving Intramuros requires ongoing collaboration across government agencies, private stakeholders, and local communities to safeguard Philippine architectural heritage for future generations.

Keywords: perception, architectural heritage, preservation, intramuros, cultural identity

THE EFFECTIVENESS OF AN ENGINEERED BAMBOO AND SYNTHETIC RATTAN ARMCHAIR ON ITS MAXIMUM LOAD CAPACITY AND STUDENT COMFORT LEVELS

Jan Krizzy Roda, Rilycis John Quilatan, Jamey Felisha Arguelles, Jessica De Luna,
Renoah Deseo, Shainna Mae Mendoza, Donna Bautista, Joash Goboy

Abstract

School furniture significantly influences learning effectiveness, as ergonomic chair designs can enhance student attention and motivation while preventing body complications associated with poor seating (Brett, 2024; Al-Hinai, 2018). The "Silyang Pinoy" program promotes engineered bamboo as a sustainable alternative to hardwood and plastic armchairs, offering comparable cost and environmental benefits (Gil, 2023). This study evaluates whether an armchair constructed from engineered bamboo and synthetic rattan can serve as an effective alternative to conventional classroom chairs by assessing its comfort levels and maximum load capacity. This study employs an experimental design involving Grade 12 students at National University – Mall of Asia. Comfort levels are measured using an adapted Cornell Ergonomic Seating Evaluation Version 21. Following comfort testing, load-bearing capacity is assessed to ensure safety by incrementally applying weight until visible deformation, damage or cracks occur, as recorded on a researcher-constructed checklist. An independent sample t test is conducted to determine whether a significant difference in comfort exists between the prototype and a standard armchair. The engineered bamboo and synthetic rattan armchair withstood a maximum load of 105 kg without visible deformation, although creaking noises were noted between 85 kg and 105 kg. The conventional armchair produced a mean comfort score of 82.2, whereas the prototype achieved a mean score of 105. Statistical analysis yielded a p-value of 0.001, indicating a significant difference in comfort levels between the two chairs. The findings supported previous research demonstrating that bamboo-based seating can improve comfort (Yuan et al., 2020). The superior comfort score and adequate load capacity of the prototype suggest its viability for educational settings. As a result, future studies should refine the armchair design, evaluate long-term durability and assess cost-effectiveness to fully establish its practicality in schools.

Keywords: engineered bamboo, synthetic rattan, armchair comfort, load capacity, ergonomic seating

THE RELATIONSHIP BETWEEN SATISFACTION LEVELS ON AIRPORT TERMINAL'S LAYOUT AND SELF-EFFICACY LEVELS AMONG CUSTODIANS INSIDE NAIA TERMINAL 3, PASAY CITY

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Aunica Brietta Barros, Donna Bautista, Joash Goboy

Abstract

Custodians play a vital role in maintaining the operational efficiency of public facilities such as airports. Research has shown that the work environment influences employee self-efficacy (Abun, 2021) and that self-efficacy in turn affects job performance (Khalique & Singh, 2019). Although physical workspace has been linked to work motivation (Indah & Riana, 2020), evidence remains mixed regarding its impact on perceived performance (Paje, 2020). This study examines the relationship between custodians' satisfaction with the physical layout of Ninoy Aquino International Airport Terminal 3 and their self-efficacy levels. A correlational design is employed involving thirty custodians at NAIA Terminal 3 in Pasay City. Participants are selected via convenience sampling and complete two paper-based questionnaires: one adapted from Adriansse (2007) and Pelletier et al. (1996) assessing satisfaction with terminal layout, and another based on Schwarzer and Jerusalem (1995) and Chen et al. (2001) measuring self-efficacy. Surveys are administered on-site to accommodate the dynamic work environment. Custodians reported high satisfaction with the terminal's physical environment (mean = 3.34 on a 4-point Likert scale) and a correspondingly high level of self-efficacy (mean = 3.42). Pearson's correlation analysis revealed a strong positive relationship between layout satisfaction and self-efficacy ($r = 0.86$, $p < .001$), indicating that higher satisfaction with the workplace design was associated with greater confidence in job performance. The results suggested that a supportive and well-organized physical work environment enhances custodians' confidence in performing their duties. These findings underscored the importance of workplace design in fostering employee motivation and effectiveness. As a result, institutional stakeholders are advised to prioritize ergonomic and functional improvements in airport workspaces to promote custodial well-being and performance.

Keywords: satisfaction, terminal layout, self-efficacy, custodians, workplace design

EXPLORING THE PERFORMANCE OF A SOLAR-POWERED ARDUINO REAL-TIME TRANSMITTER IN MONITORING SOIL MOISTURE, TEMPERATURE, AND PH LEVELS

Jacy Danielle Gonzales, Michelle Dote, Jamiela Anne Trinio, Eve Christlene Calma, Mary Terly Ann Angustia, Jun Balili, Joash Goboy

Abstract

In the past decade, climate change has posed a growing threat to crop production in the Philippines, making soil condition monitoring essential for agricultural sustainability. Traditional monitoring methods, while reliable, often lack efficiency, and modern technology-based solutions can be cost-intensive. This study evaluates the performance of the Solar Powered Arduino Real Time Transmitter (SPARTT) designed to monitor soil moisture, temperature, and pH levels. The prototype is assessed for consistency in data collection and transmission as well as for its capacity to operate sustainably in field conditions. Data collection is conducted in two phases: laboratory-based indoor testing and field-based outdoor testing. Consistency of sensor readings is evaluated using a random soil sample, with mean values and standard deviations calculated to determine reliability. Real-time data transmission performance is assessed by monitoring transmission intervals and recording any delays. Solar power performance is measured by comparing the voltage required to power the device with the voltage delivered by the solar panel. Results revealed that SPARTT generated low standard deviations of 0.014 for moisture, 0.4 for temperature, and 0.11 for pH, indicating tightly clustered and consistent readings. The device's ESP32 module demonstrated reliable data transmission, maintaining regular intervals of 600 minutes for parameter reporting. The solar power system sustained device operation at approximately 12 volts, delivering excess voltages between 3.33 percent and 4.17 percent above the required threshold. The findings indicated that SPARTT has the potential to serve as a consistent and sustainable tool for precise soil monitoring, addressing gaps identified in existing methods. Recommendations for future research included developing a more compact design, expanding sample size and monitoring duration, enhancing calibration techniques and system components, integrating maximum power point tracking, providing a user manual for easier deployment, and consulting agricultural technology experts. As a result, this work can inform the development of affordable monitoring technologies that support improved agricultural practices.

Keywords: solar-powered arduino, real-time transmitter, soil moisture, soil temperature, soil ph, sustainable agriculture

GENERATIONS AND SUSCEPTIBILITY: A COMPARISON ON THE CYBERATTACK SUSCEPTIBILITY OF GENERATION Z AND BABY BOOMERS IN PARAÑAQUE CITY

Loyola Jana Dorathy, Clisha Rae Batangan, Carlos Jordan Datu, Mark Kenneth Cabaccan, Roberto Romano Lim, Joseph Andrei Espiritu, Jun Balili, Joash Goboy

Abstract

Cyberattacks are a rising threat in the digital era due to their growing frequency and complexity (Kuopaei, 2023). Research on factors that influence susceptibility to cyberattacks is essential for effective mitigation. Previous studies have produced contradictory findings regarding the impact of age on cybersecurity. Some research suggests that younger generations are more vulnerable because of poor security practices (Karppinen et al., 2022; Gratian et al., 2017), while others report that older adults face higher risk due to age-related cognitive decline (Pehlivanoglu & Ebner, 2024). This study examines how membership in Generation Z or the Baby Boomer cohort affects susceptibility to cyberattacks among residents of Parañaque City. The objective is to determine the susceptibility levels of both generations and assess whether a significant difference exists between them. A total of 70 participants from Parañaque City completed an adapted questionnaire measuring cybersecurity attitudes, knowledge, and practices. The study employed a causal-comparative design. General weighted means were calculated to gauge overall susceptibility levels, and an independent sample t-test was used to compare the two generational groups. Data analysis was performed using standard statistical software, ensuring that assumptions for parametric testing were met prior to conducting the t-test. Baby Boomers exhibited a higher mean susceptibility score ($M = 2.52$) compared to Generation Z ($M = 2.24$), indicating that older participants were more susceptible to cyberattacks. Despite both groups demonstrating awareness of cybersecurity risks, differences emerged in areas such as formal cybersecurity training, device maintenance habits, and perceptions of future threats. The independent sample t test confirmed that the difference in susceptibility scores between the two generations was statistically significant ($p < .05$). Generation Z participants had adequate cybersecurity knowledge and access to modern security tools but demonstrated inconsistent application of best practices, which placed their susceptibility in the moderate range. Baby Boomers showed higher susceptibility due to limited cybersecurity training, reliance on outdated habits, and lower risk perception. Study limitations included a relatively small and unequal sample size, reliance on self-reported data, and time constraints. The findings underscored the need for age-specific cybersecurity education and training programs. Future research was recommended to employ larger, more balanced samples and experimental designs to further elucidate age-related differences in cyberattack susceptibility.

Keywords: cyberattack susceptibility, generation z, baby boomers, cybersecurity, parañaque city

THE CORRELATION BETWEEN THE FREQUENCY OF ACCESS TO DIGITALLY PIRATED CONTENT AND LEVELS OF CYBERSECURITY AWARENESS OF GENERATION Z

Jhenielle Concepcion, Rianna Jazmine Tampepe, Maric Pauline Brillantes, Selena Riona Lanuza, Ethan Joseph Fadriga, Clyde Alistaire Marcelo, Jun Balili, Joash Goboy

Abstract

Despite improvements in national cybersecurity rankings, access to digitally pirated content among Generation Z continues to rise, creating additional security risks. This study examines the relationship between the frequency of accessing digital piracy and levels of cybersecurity awareness—an aspect often overlooked in existing literature. Given that Generation Z constitutes the largest cohort of digital consumers, understanding this link is essential for promoting safer online behavior. This study aims to measure their frequency of engaging in digital piracy, assess their cybersecurity awareness levels, and determine whether a significant relationship exists between these variables. A quantitative correlational design is employed to evaluate the link between piracy access frequency and cybersecurity awareness. One hundred Generation Z respondents born between 1997 and 2007 at National University – Mall of Asia are recruited via convenience sampling. Data are collected through an online survey comprising a researcher-designed 10-item, 4-point Likert scale on digital piracy access and a 20-item set of dichotomous questions assessing cybersecurity concepts and behaviors. General weighted means and frequency distributions summarize the data, while Pearson's correlation and linear regression analyses test the relationship and predictive value. Analysis revealed that respondents exhibited a high level of cybersecurity awareness (76.95 percent) alongside rare engagement in digital piracy (mean = 2.43). Pearson's correlation indicated a weak negative relationship between piracy access and cybersecurity awareness ($r = -0.235$), suggesting that increased piracy corresponded to a slight decrease in awareness. Linear regression confirmed that piracy access frequency was a significant predictor of awareness ($p = 0.001$), accounting for five percent of the variance. Findings indicated that high cybersecurity awareness coexisted with low piracy engagement and that increased access to pirated content only minimally reduced awareness levels. Although piracy frequency emerged as a significant predictor, its small explanatory power implied that additional factors influence cybersecurity awareness. As a result, educational institutions are advised to implement combined technical and behavior-based training, policymakers should enforce anti-piracy laws more rigorously, and digital platforms ought to integrate robust content protection mechanisms.

Keywords: digital piracy, cybersecurity, cybersecurity awareness, generation z, correlational study

THE RELATIONSHIP BETWEEN THE FREQUENCY OF E-WALLET USAGE AND DIGITAL FINANCIAL LITERACY AMONG MILLENNIALS IN PASAY CITY

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Rei Eezaac Buhain, Albert Ashley Reyes, Jun Balili, Joash Goboy

Abstract

E-wallets have emerged as a key driver of financial inclusion in the Philippines, particularly among millennials who represent the most active user group. Despite widespread adoption, many Filipinos continue to face challenges with digital financial literacy, and the extent to which e-wallet usage frequency contributes to literacy remains unclear. This study investigates the relationship between the frequency of e-wallet usage and levels of digital financial literacy among millennials in Pasay City. A quantitative correlational design is employed to collect data from 100 millennials who have used e-wallets within the past year. Participants, sampled conveniently at a Pasay City mall, complete an online survey via Microsoft Forms. The survey measures e-wallet usage frequency and assesses digital financial literacy across three dimensions—financial knowledge, financial confidence, and use of digital financial tools. Non-normal data distributions are anticipated and tested prior to analysis. Most respondents reported daily e-wallet usage, citing bill payments and money transfers as primary functions. Convenience and ease of use were the main motivators, while security concerns and limited cash-out options deterred some users. Participants demonstrated high digital financial literacy across all three dimensions. Due to non-normal distribution, Spearman's rho analysis revealed a significant but weak positive correlation between usage frequency and literacy ($\rho = 0.XXX$, $p < .05$). Ordinal logistic regression further indicated that e-wallet usage frequency significantly predicted digital financial literacy ($p < .05$), although it accounted for a modest proportion of variance. The findings indicated that millennials who used e-wallets more frequently tended to exhibit higher levels of digital financial literacy. These results suggested that expanding e-wallet access and promoting regular usage could foster improved financial behaviors. Limitations included the convenience sample and narrow age range, which may limit generalizability. As a result, future research was recommended to employ larger, more diverse samples and mixed-methods approaches to identify additional factors influencing digital financial literacy.

Keywords: e-wallet usage, digital financial literacy, millennials, correlational study, financial inclusion

EVALUATING COCOHUSH: EFFECTIVENESS OF UNPROCESSED COCONUT HUSK AS A SOUNDPROOFING MATERIAL IN STUDIO-TYPE RESIDENTIAL SETTINGS

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Abstract

Noise pollution has increased dramatically since the Industrial Revolution, driven by rapid urban growth and higher traffic volumes. In dense urban environments such as Manila, excessive noise poses significant health risks. Conventional soundproofing materials, including polyurethane and rubber, present environmental challenges because they are not biodegradable. This study explores coconut husk, an abundant agricultural waste product in the Philippines, as a sustainable alternative for soundproofing panels in studio-type residential applications. An experimental design was implemented to compare the sound attenuation performance of unprocessed CocoHush panels with that of standard recycled egg trays. CocoHush panels were produced through boiling, bonding with a natural adhesive, and air-drying. Both materials were subjected to multiple trials in a controlled acoustic chamber. Sound reduction measurements were recorded at frequencies ranging from 125 Hz to 4 kHz. Upon examining the findings of this study, CocoHush panels demonstrated comparable sound attenuation to the egg trays across most frequencies, and statistical analysis indicated no significant difference in overall sound reduction ($p > .05$). Variability in attenuation was greater for CocoHush, suggesting that panel uniformity affects performance. Cost analysis showed that egg trays remain more affordable than CocoHush panels in short-term production. The results suggest that unprocessed coconut husk has potential as a natural soundproofing material, although performance consistency and cost efficiency require improvement. Future research should focus on optimizing panel fabrication methods, evaluating alternative binding agents, testing larger panel sizes, and conducting in-situ experiments in fully insulated environments. This study contributes to the growing interest in utilizing agricultural waste for sustainable construction materials and encourages further development of bio-based soundproofing solutions.

Keywords: cocohush, coconut husk, soundproofing material, studio residential settings, agricultural waste, sound attenuation

EXAMINING THE POTENTIAL OF RICE HUSK: COMPARING THE EFFECTIVENESS OF RICE HUSK AND FIBERGLASS AS THERMAL WALL INSULATORS

Mikka Ella Tsugane, Zedrick Dueñas, Ashley Nicole Nazarene Madeja, Reema Mendoza,
Joshua Paul Bautista, Skyler Noelle Cabale, Jun Balili, Joash Goboy

Abstract

Heat energy naturally flows from regions of higher temperature to those of lower temperature, making it challenging to maintain comfortable indoor environments in tropical climates such as that of the Philippines. Thermal insulators act as barriers to extreme heat, with established materials like fiberglass offering reliable performance but posing long-term health and environmental concerns. As a safer and more sustainable alternative, agro-waste products such as rice husk are under investigation to determine their viability as thermal wall insulators. This experimental study compared researcher-produced rice husk insulation with commercial fiberglass board insulation by measuring thermal conductivity, thermal resistance, thermal transmittance, and moisture absorption rate. The rice husk prototype was developed following Solis et al. (2024), involving grinding rice husks, combining them with a rice flour binder, molding panels, and baking under controlled conditions. Six rice husk panels and three fiberglass samples (each 10 cm × 10 cm × 2.5 cm) were prepared. Thermal conductivity was measured using a FOX 200 Heat Flow Meter, while fiberglass conductivity values were obtained from the manufacturer. Thermal resistance and transmittance were calculated using Fourier's Law. Moisture absorption was determined via the oven-dry method adapted from The Constructor (2018), with samples soaked, weighed, and oven-dried until weight stabilization. Experimental replicates ensured consistency, and independent t tests were used to assess significant differences between materials. Statistical analysis revealed significant differences in thermal performance: rice husk panels exhibited a thermal conductivity of 0.0340 W/m·K compared to 0.709 W/m·K for fiberglass ($p < .001$), a thermal resistance of 0.735 m²·K/W versus 0.0342 m²·K/W ($p < .001$), and a transmittance of 1.36 W/m²·K versus 29.4 W/m²·K ($p < .001$). In contrast, moisture absorption rates did not differ significantly between rice husk and fiberglass ($p = .334$). As a result, rice husk shows potential but does not yet match the performance of fiberglass insulation. These findings highlight the need for further optimization of rice husk insulation, particularly under real-world conditions. Recommendations for future research include testing whole husks as reinforcement (Selvaranjan et al., 2021), incorporating borax additives to improve binding (Solis et al., 2024), applying hydrophobic treatments to reduce moisture uptake, and curing prototypes at temperatures below 125 °C to enhance structural integrity (Neira et al., 2024).

Keywords: rice husk, fiberglass, thermal wall insulation, thermal conductivity, agro-waste materials

Humanities and Social Sciences

A CORRELATIONAL STUDY BETWEEN ABSTRACT REASONING SKILLS AND PREFERENCE TO FORENSIC OR TESTIMONIAL EVIDENCE AMONG PRE-LAW STUDENTS

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Samantha Mae Punzalan, Jordan Austin Marticio, Christine Nicole Victorio

Abstract

Pre-law students represent the next generation of legal professionals in our country. Given the abundance of conflicting evidence in legal cases, it is crucial to understand how individuals with differing levels of abstract reasoning discern and prioritize evidence. Forensic and testimonial evidence both play critical roles in legal decision making (Ling et al. 2021) and are subject to contamination (Wixted et al. 2018), tampering, and subjective interpretation (Morrison 2022), all of which can affect their reliability and accuracy (Bakhtiar, 2023). Although cognitive abilities such as abstract reasoning are known to influence decision making (Bjöörn and Karlsson 2015; Jin et al. 2019), their impact on evidence preference in legal contexts remains underexplored. The study assessed abstract reasoning skills and evidence preferences in 39 pre-law students enrolled in specified degree programs in Manila. Abstract reasoning was measured using Raven's Advanced Progressive Matrices (Set II; 36 items). Evidence preference was evaluated via a researcher-made questionnaire featuring case simulations. Raw Raven's scores were classified as low, average, or high. Data analysis included frequency distributions, Spearman's rho correlation, and linear regression. Most participants scored in the low range for abstract reasoning ability, a result that contrasts with recent RAPM-based studies. Forensic evidence was predominantly preferred, aligning with past research that highlights its higher perceived credibility. Statistical analysis showed no significant correlation between abstract reasoning skills and evidence preference, nor did reasoning ability predict a preference for forensic versus testimonial evidence within this sample. These findings provide insights into how cognitive abilities influence legal decision making and suggest directions for enhancing legal education. Understanding evidence preferences may inform training and case-analysis practices, promoting more balanced resolutions. Future research should involve larger, more diverse samples and explore additional cognitive factors that affect evidence evaluation.

Keywords: forensic evidence, testimonial evidence, abstract reasoning, cognitive abilities, evidence preference

UNDERSTANDING THE IMPORTANCE OF EMOTIONAL MATURITY ON THE VERBAL COMMUNICATION SKILLS OF GRADE 11 STEM STUDENTS AT NATIONAL UNIVERSITY MALL OF ASIA

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Abstract

It is critical for STEM students to develop both technical expertise and interpersonal competence in preparation for future careers, and emotional maturity supports social adaptation (Joy & Matthew, 2018). This study examines the relationship between emotional maturity and verbal communication skills among Grade 11 STEM students at National University - Mall of Asia. The objectives are to analyze how students regulate emotions during communication, identify strategies employed to enhance verbal expression, and determine the influence of emotional maturity on the development of these skills. A qualitative phenomenological design is employed to explore the lived experiences of Grade 11 STEM students regarding emotional maturity and verbal communication. Pre-assessment forms are distributed to identify ten participants who complete semi-structured interviews based on six open-ended questions. Thematic analysis is then used to organize and interpret the data, revealing patterns in emotion regulation and communication strategies. Participants reported employing methods of regulating emotions such as self-soothing strategies, internalizing responses and selective socializing, although challenges in emotional control were also described. Effective emotion management was found to prevent miscommunication during conversations, and several participants indicated that emotional maturity enhanced comprehension in verbal exchanges. The findings indicated that emotional maturity plays a significant role in verbal communication by enabling individuals to assess emotions before initiating dialogue, leading to more effective interactions. As a result, further research is recommended to explore personal experiences and familial influences on emotional development in larger and more diverse samples. Incorporating Bowen's Family Systems Theory may deepen understanding of how emotional maturity evolves through relational contexts (Yashoda & Devi, 2016).

Keywords: emotional maturity, emotional regulation, verbal communication skills, social adaptation, phenomenological study

EXPLORING THE EXPERIENCES OF GROWING UP IN AN IGLESIA NI CRISTO HOUSEHOLD AS AN LGBTQIA+ IN PARAÑAQUE CITY

Elsheeva Ackley Yulo, Karl Alyson Cortes, Giro Lagarico, Jellaine Alexandra Mikailah Sales, Kylene Frances Quiñones, Jez Zander Ferrer, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

This study explored the experiences of LGBTQIA+ individuals raised in Iglesia ni Cristo households in Parañaque City, focusing on family, religious, and social dynamics. The coming-out process often involves navigating social norms, expectations, and potential risks (McNabb, 2020). Attention was given to how participants negotiated their emotional and lived experiences while belonging to two contrasting communities, highlighting the influence of peer interactions both within and outside the religious environment. A phenomenological approach was employed to gather data from ten LGBTQIA+ members residing in Barangay Sto. Niño, Parañaque City. Participants were selected based on four criteria: identification as LGBTQIA+, disclosure of their sexual or gender identity, legal age, and current residence in Parañaque City. Semi-structured interviews captured personal narratives, which were then analyzed using Interpretative Phenomenological Analysis to elucidate participants' emotional insights and lived experiences. Analysis revealed three major themes: the pressure to uphold Iglesia ni Cristo standards, the fear of rejection by family and friends, and the contrast between conservative religious environments and more accepting spaces outside the church community. Participants reported feelings of discomfort, self-repression, and disconnection within their religious households, yet found affirmation and support in external social circles. These findings align with Doesfler (2022), who noted that Filipino LGBTQIA+ individuals continue to seek balance and equality within a predominantly religious society. The experiences of LGBTQIA+ individuals raised in Iglesia ni Cristo homes underscore the conflict between spiritual and personal identities and the need for empathetic reform within religious communities. As a result, creating supportive spaces and fostering understanding in faith-based settings is imperative. Future research may broaden the scope by examining parent-child relationships, delving deeper into Iglesia ni Cristo cultural contexts, and increasing participant numbers to enhance the generalizability of the findings.

Keywords: iglesia ni cristo, lgbtqia+ experiences, phenomenological study, interpretative phenomenological analysis, parañaque

A STUDY ON THE PERCEPTION OF SENIOR HIGH SCHOOL STUDENTS IN NATIONAL UNIVERSITY - MALL OF ASIA REGARDING FEMALE GENDER STEREOTYPES IN FEMALE-CENTRIC FILMS

Gabrielle Keona Romilla, Reuel Gerard Aldea, Miciel Cabalatungan, Erica Felicity Barrientos, Nathan Joshua Ramos, Maria Bianca Domingo, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

Media, especially films, play a crucial role in shaping society's views on gender roles, as highlighted by Knorr (2017). Films that focus on female protagonists often portray women as overly emotional, dependent on men, or lacking agency. These portrayals influence viewers, particularly young audiences, in shaping their perceptions of the value and role of women in society. Limited awareness exists regarding how such stereotypes shape social norms, which this study addresses by examining how female-centric films influence Senior High School students' perceptions of female gender stereotypes and the broader implications of these representations. This study employed a qualitative phenomenological design to capture the lived experiences of Senior High School students who have viewed female-centric films. Ten participants were selected through purposive sampling, and data were collected via a pre-assessment survey and semi-structured interviews. Thematic analysis based on Braun and Clarke's six-phase approach was used to identify recurring patterns and themes in the students' responses. Participants commonly reported that female-centric films depict women as emotional, reliant on male characters, and confined to traditional domestic roles. Some students indicated that these portrayals influenced their attitudes and behavior toward women, while others remained unaffected due to pre-existing beliefs. Many also noted that the films failed to present accurate or nuanced representations of women, contributing to the normalization of limiting and harmful stereotypes. These findings align with Santoniccolo et al. (2023), which also emphasize how inaccurate media portrayals reinforce societal stereotypes. The findings suggest that films focusing on female protagonists can significantly shape students' understanding of gender roles and influence their expectations of women. While certain films challenge established stereotypes, some continue to reinforce unrealistic portrayals that subtly shape individual attitudes and social norms. The study highlights the need for future research with larger and more diverse samples and calls for the development of media literacy initiatives alongside efforts to promote more accurate and inclusive representations of women in film.

Keywords: female centric films, gender stereotypes, inclusive portrayals, media literacy, student perceptions

DIGITAL DISCOURSE: ROLE OF FACEBOOK IN SHAPING THE POLITICAL PERSPECTIVES OF GRADE 11 STUDENTS AT NATIONAL UNIVERSITY – MOA

Dorothy Adrielle Chua, Marvin William Alberto, Crizza Mae Arnado, Heranell Michaella Bohol, Kattie Dela Cruz, Mary Mitch Francisco, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

In the digital age, social media platforms like Facebook serve as influential arenas for political discourse among adolescents. Existing literature has examined the role of social media in political engagement; however, limited attention has been given to youths aged 16 to 17 who are actively forming their political identities (Kubin & von Sikorski, 2021). This study investigates how Facebook shapes the political perspectives and engagement of Grade 11 students at National University – MOA, with a focus on emotional processing, algorithmic exposure, and discourse tone. A qualitative phenomenological design grounded in Media Dependency Theory was employed. The researchers conducted face-to-face interviews with ten purposively sampled Grade 11 students aged 16 to 17 from the ABM, HUMSS, and STEM strands. All participants were active Facebook users who engaged with political content through reactions, comments, and sharing. Data were analyzed thematically using the intercoder software Insight7. Thematic analysis yielded three major findings. First, frequent exposure to political content elicited dynamic shifts in students' political perspectives and heightened voter awareness. Second, algorithmic curation of Facebook feeds encouraged political participation and fostered a sense of empowerment. Third, students demonstrated selective engagement: they preferred content that aligned with their values or was presented respectfully, while hostile or inflammatory discourse led to emotional fatigue and disengagement for some. These findings indicate that Facebook significantly influences adolescents' political outlooks through both cognitive and emotional pathways. Although algorithmic exposure can enhance civic awareness, it also risks reinforcing echo chambers and causing emotional strain. Evidence-based and respectful content promotes deeper engagement, whereas toxic discourse deters participation (Bode, 2017). As a result, integrating digital literacy and civil discourse training into the educational curriculum is recommended to foster informed and healthy political engagement among youth.

Keywords: facebook, political perspectives, grade 11 students, digital literacy, civil discourse

UNDERSTANDING THE REPRESENTATION OF GENDER PRONOUNS TOWARDS THE SOCIAL INTERACTION OF GRADE 12 SENIOR HIGH SCHOOL STUDENTS IN NU MOA

Gyle Alodie Caden Anne Casañares, Roldan Tradio, Jon Benedict Ofaga, Bianca Ysabel Lapid,
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Abstract

Understanding and correctly using gender pronouns is essential for creating inclusive environments in educational institutions, yet many schools have inadequate practices. This study examines how proper pronoun use affects social interactions among Grade 12 students at the National University Mall of Asia and explores how students perceive and navigate pronoun usage within their school community. A qualitative approach is employed, with semi-structured interviews conducted among students from the ABM, HUMSS, and STEM strands selected through convenience sampling. Interview data are analyzed thematically to identify patterns in experiences, perceptions, and challenges related to gender pronoun usage. Participants reported that correct pronoun usage affirmed their identities, fostered respectful peer relationships, and supported emotional well-being. Inclusive practices, such as asking for pronouns or using neutral pronouns, helped establish a safe and welcoming environment. However, students also faced challenges, including fears of causing offense, uncertainty about how to communicate inclusively, and negative experiences in non-inclusive settings that impacted their emotional well-being. The findings indicated that the inclusion of gender pronouns plays a vital role in social interactions and student well-being. As a result, schools are encouraged to raise awareness and provide guidance on respectful pronoun practices. Future research is recommended to involve larger and more diverse samples, include the perspectives of teachers and administrators, and conduct cross-regional studies to understand the cultural and organizational factors influencing inclusive language policies in Philippine schools.

Keywords: gender pronouns, inclusive language, social interaction, thematic analysis, senior high students

Natural Science and Mathematics, Curriculum, and Instructions

A COMPARATIVE STUDY ON THE EFFECT OF DYNAMIC TRIPOD GRIP VS. DYNAMIC QUADRUPOD GRIP ON THE MUSCULOSKELETAL PAIN LEVEL OF SHS STUDENTS IN NU MOA

Johanne Ashley Borja, Jaryll-ann Tibon, Jannah Rose Ignacio, Jeah Mae Ogale, Joachim Lael Aldea, Ryan Gabriel Javier, Jordan Austin Marticio, Christine Nicole Victorio

Abstract

The Dynamic Tripod (DT) grip is widely considered the most efficient pen-holding technique, yet the Dynamic Quadrupod (DQ) grip has emerged as a viable alternative. Since, handwriting remains essential in academic contexts, prolonged writing with a suboptimal grip may contribute to Carpal Tunnel Syndrome and other musculoskeletal issues (Dogru et al., 2015). This study therefore compares the ergonomic impact of the DT and DQ grips by measuring musculoskeletal pain levels among senior high school students at National University—MOA. A quasi-experimental, quantitative design was employed. Forty right-handed senior high school students with no musculoskeletal disorders in the past four months and no conditions affecting hand or arm function were randomly assigned to either DT or DQ group. Each participant wrote a standardized passage for 20 minutes daily over five consecutive days, using identical pens and papers to control for external variables. Upon completion, all participants responded to a modified, expert-validated Cornell Hand Discomfort Questionnaire (CHDQ) delivered via Microsoft Forms. Building on Odokuma and Ojigho's (2019) findings that the DT grip offers superior stability and Blyth's (2024) observation that the DQ grip's ring-finger support can enhance comfort, our analysis showed no significant difference in reported pain. The DT group averaged M = 7.86 (SD = 6.10) on the CHDQ, while the DQ group averaged M = 8.99 (SD = 6.72), p = .525, with a negligible effect size (d = -0.120). These results indicate that neither grip confers a clear ergonomic advantage in terms of musculoskeletal pain. Although both DT and DQ grips proved equally effective at minimizing discomfort, future research should expand sample size to improve statistical power. Assigning each participant their habitual grip before intervention may reduce bias, and controlling for writing pressure and posture could help isolate grip-specific effects. These refinements would strengthen ergonomic recommendations for pen-holding techniques.

A COMPARATIVE STUDY ON THE STRESS LEVELS DURING CLINIC HOURS AMONG THIRD-YEAR DENTISTRY STUDENTS FROM FAMILIES OF DENTISTS VS. FIRST-GENERATION STUDENT DENTISTS AT NU MOA

Miwa Mae Ozawa, Ma. Viatrice Ramirez, Gerard Angelo Santos,
Craig Krystan Barrera, Jordan Austin Marticio

Abstract

Stress is pervasive among dental students, particularly during clinical training, which demands intense focus, technical proficiency, patient interaction, and time management. These pressures can undermine students' mental well-being, academic performance, and clinical confidence. This study compares perceived stress levels during clinic hours between two groups of third-year dentistry students at National University - Mall of Asia focusing on those from dentist families and first-generation dental students. The researchers used a quantitative-comparative design. The researchers administered the Perceived Stress Scale (PSS) to 60 purposively sampled third-year dentistry students (30 from dentist families; 30 first-generation). The researchers tested data for normality using the Shapiro-Wilk test and for homogeneity of variance using Levene's test. The researchers then conducted an independent-samples t-test to assess differences in stress scores between the two groups. The results indicated that the t-test yielded $p = 0.349$, exceeding the 0.05 threshold and indicating no significant difference in stress levels between students from dentist families and first-generation students. Both groups identified similar stressors, including academic workload, patient care responsibilities, and performance-related anxiety. These findings suggest that clinical stress is universally experienced, regardless of familial dental background. Although first-generation students may face unique challenges due to limited familial guidance, their stress levels were comparable to those of students with a dental lineage. The researchers recommend implementing universal stress management interventions such as peer mentoring, psychological counseling, and structured wellness workshops to support all dental students. The researchers also suggest that future studies broaden the sample, include diverse demographics, and incorporate qualitative methods to explore deeper emotional and psychological factors influencing stress and coping strategies.

Keywords: stress levels, dentistry students, clinical training, first-generation students, dental families

ASSESSING THE RELATIONSHIP BETWEEN DAILY CALORIE INTAKE AND THE QUALITY OF LIFE SCORE OF PCOS-DIAGNOSED WOMEN IN PASAY CITY

Destienie Gabrielle Jose, Reisha Frances Trinidad, Fatima Domingo, Geraldine Byann Royo, Stephanie Anne Jacinto, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder affecting women of reproductive age. Its symptoms—including hormonal imbalance, weight gain, and mood disturbances—can substantially lower quality of life. Dietary interventions are among the most accessible strategies for managing PCOS symptoms because they are easy to implement and can directly address weight-related complications. Yet the specific link between daily calorie intake and quality of life for women with PCOS remains underexplored. This study used purposive sampling to recruit 30 women diagnosed with PCOS in Pasay City who met predefined inclusion criteria. Data were collected via an online survey comprising two parts. The first was a researcher-designed questionnaire to record average daily calorie intake. The second was an adapted PCOSQ-50 instrument (Nasiri-Amiri et al. 2016), a validated five-point Likert scale, to measure quality of life across PCOS-specific domains. Spearman's rank correlation was employed to assess the relationship between calorie intake and quality of life scores, and linear regression was used to test the predictive value of calorie intake. Spearman's rank correlation showed a moderately strong positive association ($r = 0.646$; $p < 0.001$) between daily calorie intake and quality of life scores, indicating that higher caloric intake corresponds with better reported quality of life. This finding echoes Johnson 2016 on the importance of diet in PCOS management. However, linear regression revealed that calorie intake was not a statistically significant predictor of quality of life ($p = 0.055$), suggesting that additional factors influence well-being. The results imply that while greater calorie consumption may align with improved quality of life among women with PCOS, it does not independently predict quality of life outcomes. Other variables such as physical activity levels and nutrient quality should be examined. Future research should involve larger, more diverse samples and might incorporate qualitative methods to capture the lived experiences of women managing PCOS through diet.

Keywords: polycystic ovary syndrome, daily calorie intake, quality of life, pcosq-50, pasay city

CORRELATION BETWEEN THE LEVEL OF EXPOSURE TO HEALTH INFORMATION ON FACEBOOK AND THE LEVEL OF TRUST IN QUACKERY AMONG FACEBOOK USERS RESIDING IN PASAY CITY

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Xandro Derek Mejia, Aisobelle Joy Sarabia, Donna Bautista, Joash Goboy

Abstract

The widespread availability of health information on social media platforms such as Facebook has increased public access to medical knowledge. However, this accessibility also raises the risk of encountering misleading or unverified health claims, including pseudoscientific remedies commonly referred to as quackery. Existing literature lacks local studies examining whether frequent exposure to health information on Facebook influences users' propensity to trust quackery. This study aims to determine the correlation between the level of exposure to health information on Facebook and the level of trust in quackery among active Facebook users in Pasay City. A quantitative correlational design was employed to investigate exposure to health information on Facebook, trust in quackery, and their relationship among 110 active Facebook users aged 18 to 34 residing in Pasay City. Participants were selected through purposive sampling to meet study requirements. Data were collected via a two-part survey using a 4-point Likert scale. The first section, adapted from Alhaddad (2018), measured exposure to health information on Facebook; the second section, adapted from Islahudin et al. (2017), assessed trust in quackery. Pearson's correlation analysis was used to evaluate the relationship between variables. The general weighted mean for exposure to health information was 2.311, interpreted as sometimes. The general weighted mean for trust in quackery was 2.104, interpreted as disagree. Pearson's correlation analysis indicated a statistically significant relationship between exposure and trust ($r = 0.366$, $p = 0.001$), suggesting a weak positive association and indicating that exposure alone is not a strong predictor of trust in quackery. These findings imply that additional factors likely influence trust in quackery beyond exposure to health information on Facebook. Future Research should explore these factors and include broader age ranges and diverse locations to enhance generalizability. The results underscore the need for enhanced media and health literacy initiatives through collaboration among policymakers, social media platforms, and health educators to develop accessible fact-checking tools and educational content that counteract misinformation.

Keywords: health information, facebook exposure, trust in quackery, social media, media literacy

IMPACT OF AN EDUCATIONAL SEMINAR ON PROMOTING BLOOD DONATION WILLINGNESS AMONG SHS STUDENTS OF NATIONAL UNIVERSITY – MALL OF ASIA

Ma Beatrice Dianthe Diaz, Christina Michaela David, Donna Bautista, Joash Goboy

Abstract

Blood donation shortages remain a critical challenge in the Philippines, with over one million units needed annually despite widespread willingness among youth. Hospitals such as Makati Medical Center illuminated their buildings with red lights in June 2025 to signal blood bank shortages. Senior high school students represent a promising demographic for addressing this crisis, yet many remain reluctant to donate due to misconceptions and psychological barriers. As a result, a significant gap persists between intention and action in this population. This study employs a mixed-methods design to investigate the impact of an educational seminar on blood donation willingness among 22 senior high school students at National University Mall of Asia. Pre- and post-seminar surveys adapted from Mappala et al. (2023) measure knowledge, perceived barriers, factors affecting willingness, and future intentions using a 4-point Likert scale. Qualitative interviews with five participants complement the surveys. A two-hour educational seminar led by Philippine Red Cross experts covers the importance of blood donation, eligibility criteria, donation procedures, and common misconceptions. Results revealed significant improvements across all dimensions. Pre-seminar findings showed moderate awareness (average weighted mean = 3.02) and willingness (AWM = 2.65) alongside considerable perceived barriers (AWM = 2.21). Post-seminar results demonstrated increased awareness (AWM = 3.79), improved willingness factors (AWM = 3.06), reduced perceived barriers (AWM = 1.95), and enhanced future intentions (AWM = 2.94). A paired sample t test indicated a statistically significant improvement in overall willingness (p = 0.010), with mean scores rising from 2.62 to 2.82. Thematic analysis identified three major themes: a perception shift following the seminar, persisting health-related concerns, and newfound recognition of the importance of blood donation. The findings indicated that the educational seminar significantly improved blood donation knowledge, reduced perceived barriers, and increased willingness among senior high school students. However, persistent concerns about health effects suggested that single-session interventions may be insufficient. As a result, sustained and interactive educational programs are recommended to reinforce learning, address lingering fears, and maximize the seminar's real-world impact on alleviating the national blood shortage crisis.

Keywords: blood donation, educational seminar, senior high school students, willingness, philippines

RELATIONSHIP BETWEEN CLINICAL IMMERSION HOURS AND CONFIDENCE LEVELS IN CHOOSING HEALTHCARE PROFESSIONS AMONG GRADE 12 STUDENTS IN PASAY CITY

Kharen Agatha Erroc, Janelle Marlyze Gulinao, Natalie Quilinguen, Kirsten Colleen Calingasan, Alyssa Ashley Eco, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

Clinical immersion, a specialized form of work immersion, is an integral component of senior high school education for students inclined toward healthcare professions. However, the extent to which immersion hours influence career decision-making confidence among Grade 12 students remains unclear. Existing research has predominantly focused on clinical immersion at the tertiary level, leaving a gap in understanding its effects at the senior high school level, particularly within the local context. This study examines the relationship between clinical immersion hours and the confidence levels of Grade 12 students in Pasay City when choosing allied health professions. This study employs a correlational design and purposive sampling to recruit 66 eligible Grade 12 students from a single educational institution in Pasay City. Data are collected via an online and on-site questionnaire distributed through Microsoft Forms, incorporating a pre-assessment form and the adapted Career Decision-Making Self-Efficacy Scale–Short Form (CDMSES–SF) to measure students' confidence. Clinical immersion hours are self-reported, and ethical guidelines are followed throughout data collection. Data analysis included descriptive statistics and Spearman's rank correlation. The weighted mean of reported clinical immersion hours was 28.36 (SD = 8.98), and the weighted mean confidence level was 3.51, interpreted as very confident. Spearman's correlation revealed a weak positive relationship between immersion hours and confidence ($\rho = 0.191$, $p = 0.125$), indicating that increases in immersion hours corresponded to only minimal increases in confidence levels. The findings indicated that Grade 12 students reported high confidence in selecting allied health professions regardless of the variability in immersion hours. The weak, nonsignificant correlation suggested that factors beyond immersion duration may play a more substantial role in career-choice confidence. Study limitations included the single-site sample and reliance on self-reported data, which may affect generalizability. As a result, future research with a more diverse sample and mixed-methods approaches is recommended. Educational institutions are also encouraged to standardize and expand experiential immersion opportunities to better support students' career decision-making processes.

Keywords: clinical immersion, career decision making, self-efficacy, grade 12 students, allied health professions

COMPARATIVE ANALYSIS OF THE MATERNAL OUTCOME SATISFACTION BETWEEN TRADITIONAL CHILDBIRTH AND CESAREAN DELIVERY AMONG MOTHERS IN PARAÑAQUE CITY

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Abstract

Maternal outcome satisfaction is a key indicator of healthcare quality (Olza et al., 2018). However, the effect of delivery method on mothers' satisfaction has not been thoroughly examined in the Philippines. To address this gap, we compared satisfaction levels among 25 mothers who experienced traditional childbirth and 25 mothers who underwent cesarean delivery in Parañaque City using the Birth Satisfaction Scale-Revised. This study employed a causal-comparative design to determine whether satisfaction differed by delivery method. Participants were purposively sampled mothers aged 18 to 35 who had given birth within the past three years and currently reside in Parañaque City. The analysis revealed that maternal outcome satisfaction scores for both delivery types were neutral. An independent t-test yielded a p-value of 0.918, with traditional childbirth scoring a mean satisfaction of 2.392 and cesarean delivery scoring 2.396. These findings indicate no significant difference in satisfaction between the two childbirth methods. This result aligns with Öter et al. (2022), which also reported insignificant differences in maternal satisfaction between groups. These findings suggest that maternal outcome satisfaction is more influenced by the quality of individual care and emotional support provided to mothers than by the childbirth procedure itself. The study excluded mothers with pre-childbirth medical complications and did not examine the effects of socioeconomic status, demographics or the nature of healthcare institutions on satisfaction. Therefore, generalization of the results is not advisable. Future research could address these limitations by including a larger, more diverse sample across multiple regions and considering varying medical and social backgrounds and age ranges to enhance the applicability of results.

Keywords: traditional childbirth, cesarean delivery, maternal satisfaction, philippine healthcare

COMPARISON BETWEEN ONLINE AND IN-PERSON MEDICAL CONSULTATION ON PATIENT SATISFACTION LEVELS AMONG RESIDENTS IN PASAY CITY

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Abstract

Digital healthcare continues to expand, yet comparative research on patient satisfaction between online and in-person consultations remains limited. Existing studies often address each consultation mode separately, with few providing direct comparisons. This study aims to compare patient satisfaction levels among Pasay City residents who experienced either online or in-person medical consultation within the past six months. The findings will support patient-centered improvements in healthcare delivery models. This study used a quantitative, causal-comparative design to assess satisfaction levels between online and in-person consultations. A total of 60 residents aged 18 years and above were recruited through non-probability convenience sampling, with 30 participants in each group. The Clinician and Group Consumer Assessment of Healthcare Providers and Systems (CG-CAHPS) survey was adapted for data collection via online forms. Data analysis comprised descriptive statistics and the Mann-Whitney U test after confirming non-normal distribution. Five key factors of patient satisfaction were identified. The general weighted mean for online consultation was 3.13 (satisfied), while the mean for in-person consultation was 3.30 (highly satisfied). The Shapiro-Wilk test confirmed non-normality ($p < .05$), warranting a non-parametric approach. The Mann-Whitney U test indicated no significant difference in overall satisfaction between online and in-person consultations ($U = 390$, $p = .100$), suggesting both modes are viable in terms of patient satisfaction. These results indicate that online consultations offer convenience and prompt access, whereas in-person consultations provide direct interaction and rapport building with healthcare providers. The comparable satisfaction levels suggest that Pasay City residents can choose either modality without compromising their experience. Healthcare providers may use these insights to strengthen patient-provider relationships across both formats. Policymakers are encouraged to develop and refine regulations and incentives that support diverse consultation options. Future research may incorporate additional control variables and broader demographic sampling to enhance the generalizability of these findings.

Keywords: online consultation, in-person consultation, patient satisfaction, digital healthcare, pasay city

CORRELATION BETWEEN THE FREQUENCY OF HANDLING CONTAGIOUS DISEASES AND NURSE RETENTION IN MANILA

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Abstract

Nurse retention is a critical indicator of healthcare system stability, particularly in the Philippines where natural disasters and recurrent disease outbreaks expose nurses to high-risk conditions and unique work challenges. Existing research has primarily examined retention following single events such as the COVID-19 pandemic, leaving the long-term impact of repeated exposure to multiple contagious disease events insufficiently explored. This Study aimed to determine the correlation between the frequency of handling contagious diseases and nurse retention in selected public hospitals in Manila. This study examined exposure frequency to contagious diseases and retention levels among 30 registered nurses in selected public hospitals in Manila. Participants were selected through cluster sampling. Two instruments were administered, a researcher-designed questionnaire and an adapted American Nurses Foundation Mental Health and Wellness Survey focusing on willingness to stay and overall well-being. Both instruments were validated by subject-matter experts. Data analysis included descriptive statistics and Spearman's rho correlation to assess the relationship between exposure frequency and retention. The findings showed that the general weighted mean for exposure frequency was 2.53, indicating a classification of "often." The general weighted mean for retention was 2.73, falling in the "agree" category, despite moderate overall well-being scores. Spearman's rho correlation analysis revealed a weak positive correlation ($rho = 0.212$, $p = 0.260$) between exposure frequency and retention, indicating no statistically significant association. As a result, exposure frequency alone does not predict nurse retention, suggesting that other variables exert stronger influence. Although frequent exposure to contagious diseases did not significantly influence nurse retention, the findings highlight that retention decisions are shaped by a broader and more complex set of factors. Future studies could examine the type, severity and timing of disease exposure, include diverse healthcare settings and investigate both the challenges and motivators affecting nurse retention.

Keywords: contagious diseases, exposure frequency, nurse retention, public hospitals, healthcare workforce

THE COMPARISON BETWEEN THE WORK-LIFE BALANCE OF NURSES IN PRIVATE HOSPITALS AND PUBLIC HOSPITALS: A FOCUS ON NURSES' WELL-BEING AND WORK ARRANGEMENTS

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Abstract

Nurses in the Philippines face demanding work hours that often lead to burnout, workforce shortages, and migration. Prior studies have explored work-life balance within either public or private hospital settings, but institutional context and its influence on work-life outcomes remain underexamined. This study evaluates the work-life balance of nurses employed in private and public hospitals by examining the impact of work arrangements and overall well-being and determines whether a statistically significant difference exists between the two groups. This study employs a comparative design involving 60 registered nurses in Cabuyao, Laguna, each with at least one year of professional experience. Data are collected via an adapted questionnaire from Govindsamy (2018), which measures two categories: well-being and work arrangements. Scores for each category are analyzed using an independent sample t-test to compare work-life balance between nurses in private and public hospital settings. The independent sample t-test revealed statistically significant differences in work-life balance scores between the two groups. In the well-being category, public hospital nurses reported a mean score of 2.091, while private hospital nurses scored 2.925. In work arrangements, public hospital nurses had a mean of 2.105 compared to 2.454 for private hospital nurses. Overall, nurses in public hospitals exhibited a significantly better work-life balance (M = 2.099) than those in private hospitals (M = 2.690). The findings indicated that more effective scheduling and manageable workloads in public hospitals contributed to higher perceived well-being and superior work-life balance outcomes. Conversely, private hospital nurses experienced poorer work arrangements that detrimentally affected both their professional performance and emotional health. As a result, these results highlight the critical role of institutional support and policy in shaping nurses' quality of life and underscore the need for improved work-life balance initiatives within private healthcare environments.

Keywords: work-life balance, nurses, public hospitals, private hospitals, well-being, work arrangements

THE RELATIONSHIP BETWEEN NURSE-TO-PATIENT RATIO AND PERFORMANCE EVALUATION AMONG NURSES IN CAVITE

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Abstract

Nurse-to-patient ratio is a critical factor influencing both nurse well-being and patient care quality. In settings with high patient loads and limited nursing staff, the risk of burnout increases and may compromise care standards. This study investigates the relationship between nurse-to-patient ratios and performance evaluation scores among nurses working in Cavite. A quantitative correlational design is employed to analyze existing data without intervention. A content-validated, researcher-developed survey measuring nurse-to-patient ratios and self-reported performance evaluation scores is distributed to 20 nurses in the General Ward Department, selected through simple random sampling to ensure equal selection probability. Spearman's rho is used to assess the strength of association, and linear regression analysis evaluates the extent to which nurse-to-patient ratio predicts performance scores. Spearman's rho revealed a weak positive correlation between nurse-to-patient ratio and performance evaluation scores ($\rho = 0.271$, $p = 0.248$), indicating that the relationship was not statistically significant. Linear regression analysis yielded an R^2 of 0.039, demonstrating that nurse-to-patient ratio accounted for only 3.9 percent of the variance in performance scores, and a non-significant p value ($p = 0.402$) reinforced the minimal predictive effect. The findings showed that despite a wide range of patient loads—from five to fifty patients per shift—nurses largely maintained high performance evaluations (scores of 85 or above). These results suggested that factors such as resilience, coping strategies, or institutional support may mitigate the impact of heavy workloads on performance. However, the study's cross-sectional design, small sample size, and single-site scope limited generalizability. Future research should employ longitudinal designs with larger, multi-site samples and examine additional variables such as burnout, job satisfaction, clinical experience, and patient outcomes to inform evidence-based staffing policies that support nurse well-being and patient care quality.

Keywords: nurse-to-patient ratio, performance evaluation, nurse well-being. correlational study, healthcare staffing

SELF-REPORTED EYE FATIGUE LEVELS AND PERCEIVED FREQUENCY OF COUNTING ERRORS IN MANUAL CELL COUNTING AMONG MEDICAL TECHNOLOGY STUDENTS AT NU MOA

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Abstract

Manual cell counting using a hemocytometer and microscope remains a fundamental skill in cell enumeration despite the rise of automated counters (Manzini et al., 2022). Eye fatigue, caused by gradual ocular exhaustion, leads to reduced focus and discomfort during detailed and repetitive microscope work (Wardana et al., 2023). Laboratory professionals frequently report symptoms such as dry eyes, burning sensations, and headaches following extended microscope use. However, limited research has examined eye fatigue and its potential effects on manual cell counting performance among undergraduate medical technology students. This correlational study examines the relationship between self-reported eye fatigue levels and the perceived frequency of counting errors in manual cell counting among 50 third - and fourth-year medical technology students at the National University Mall of Asia. Data were collected via a two-part survey questionnaire: a 10-item Likert scale assessing self-reported eye fatigue levels and a 5-point Likert scale measuring perceived frequency of counting errors. Based on fatigue scores, participants were classified into low, moderate, and high eye fatigue groups. Data analysis employed the Kruskal-Wallis test and Spearman's rank-order correlation. The mean perceived frequency of counting errors was 3.10 for the low fatigue group, 3.47 for the moderate group, and 3.50 for the high group. Statistical tests revealed no significant differences in error frequency across fatigue levels ($p = 0.368$) and a weak, non-significant positive correlation between eye fatigue and counting errors ($\rho = 0.130$). Although perceived counting errors tended to increase slightly with higher fatigue levels, results did not support a significant relationship between eye fatigue and error frequency. Given that professionals' reports focus on reduction under prolonged microscope use (Roudi & Zakerian, 2019), the absence of significant findings may reflect shorter and less intensive exposure among students. These results suggest that subjective eye fatigue does not necessarily translate into higher perceived manual counting errors, underscoring the need for further research using objective performance measures to clarify the impact of eye fatigue on laboratory tasks.

Keywords: eye fatigue, manual cell counting, hemocytometer, spearman correlation, medical technology students

SLUDGE-FILLED VS. SLUDGE-FREE HEALTH-RELATED VIDEOS: A QUASI-EXPERIMENTAL ANALYSIS OF FUNCTIONAL HEALTH LITERACY SKILLS AMONG GRADE 12 STEM HEALTH-ALLIED STUDENTS OF NATIONAL UNIVERSITY - MALL OF ASIA

Ervin Jedrek Pastolero, Aldrich Franz Robles, Renee Margaux Espinocilla, Myron Mañago, Lambert John Balani, Jenny Mae Albarico, Jordan Austin Marticio

Abstract

Social media platforms have become prevalent sources of health information; however, the presentation of content can significantly influence comprehension. A growing trend on platforms such as TikTok involves the use of "sludge"—videos that incorporate excessive or unrelated visuals to retain viewer attention. While some research indicates that sludge content sustains engagement, other studies argue that it introduces cognitive overload and impairs understanding. Despite investigations into digital media integration in health education, the impact of sludge content on functional health literacy remains underexplored. This study examines whether sludge-filled videos differentially affect functional health literacy skills compared to sludge-free videos among Grade 12 STEM health-allied students. A quasi-experimental design was employed using an adapted version of the Test of Functional Health Literacy in Adults (TOFHLA). Forty Grade 12 STEM health-allied students at National University Mall of Asia were randomly assigned to either an experimental group that viewed sludge-filled health videos or a control group that viewed sludge-free versions. Pre- and post-intervention functional health literacy scores were obtained, and mean gain scores were compared. The dataset's non-normal distribution ($p < .001$) warranted use of the Mann-Whitney U test to evaluate differences between groups. Both groups demonstrated minimal improvement in functional health literacy. The experimental group achieved a mean gain score of 1.50, while the control group's mean gain was 1.45. Statistical analysis using the Mann-Whitney U test yielded a p-value of 0.953, indicating no significant difference in mean gain scores between the sludge-filled and sludge-free video groups. The findings suggested that video sludge did not significantly influence functional health literacy gains. This outcome aligned with Cognitive Load Theory, which posits that unnecessary visual elements can induce cognitive overload and hinder comprehension. As a result, comprehension in digital health education may depend more on baseline health literacy, learner engagement, and cognitive capacity than on sludge content alone. Future research is recommended to control for participants' initial health literacy levels and to ensure alignment between the pre-test and post-test instruments, thereby more accurately capturing literacy gains.

Keywords: functional health literacy, sludge-filled videos, quasi-experimental study, cognitive load, grade 12 stem students

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