

Person-Job Fit and Emotional Labour as Predictors of Satisfaction with Life Among Nurses in University College Hospital (UCH) Ibadan, Oyo State Nigeria

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ABSTRACT

Studies on satisfaction with life among nurses in Nigeria have been directed on risk factors with few focusing on psychological variables. This study examined the influence of emotional labour and person job fit on satisfaction among nurses in University College Hospital, Ibadan. The theory of Set-Point and Bottom up served as framework for the study. Adopting a survey design, 209 participants were randomly selected for the study. Their mean age was 37.8 (SD= 9.1). Data was collected using 42- items structured questionnaire with three scales: demographic variables, emotional labour scale (0.81), Person Job Fit Scale (0.77), and Satisfaction with life scale (0.78). Hypotheses were tested using t-test, multiple regressions. The result shows that person-job -fit had significant influence on satisfaction with life among nurses $t(207) = 10.789, P < .05$. There is significant gender difference in the level of satisfaction with life among the participants $t(207) = -.272; p > .05$. Age, educational qualifications and marital status had no significant joint influence on satisfaction with life among nurses $\{R=.153, R=.023, F(3,205) = 1.633\}, p > .05$. In conclusion, emotional labour and person job- fit had significant influence on satisfaction with life. The management of university college hospital should give due consideration to the present finding in the management of life satisfaction constructs/issues raised in this study

INTRODUCTION

A cognitive process of assessment, life satisfaction allows people to evaluate their own life's quality based on their own standards. In this process, people determine what their personal priorities are, evaluate their lives overall, balance the positive and negative aspects, and determine if they are more or less satisfying. This definition will be determined by their personal circumstances and the proper context. Subjective wellbeing, a more general term that has been examined in the field of positive psychology, includes life satisfaction. The concept of subjective wellbeing is composed of two parts: a cognitive component known as life satisfaction and an emotional component that may differentiate between positive and negative impact.

Subjective wellbeing, then, encompasses the study of happiness from the standpoint of pleasant feelings and life satisfaction. A happy person lives longer, has better physical health, and builds stronger interpersonal relationships, according to numerous studies on subjective wellbeing.

Similar to this, factors including activity level, work, economic standing, and health have been used to gauge how satisfied people are with their lives. According to Vitterso et al. (2005), life satisfaction (LS), one of the main elements of subjective well-being, is the total of assessments of an individual's life as a whole. The terms have varying degrees of specificity. Pavot and Diener, (1993) claimed that LS is a conscious cognitive evaluation of one's life in which criteria for judgement are up to the person. Furthermore, Rice (1984) defined overall LS as the extent to which a person's life experience meets their needs and desires in several spheres of life, such as as a friend, spouse, parent, or employee. Additionally, LS is viewed from the respondents' own perspective and is responsive to contextual change rather than being a fixed or objective characteristic of an individual (Swami & Chamorro-Premuzic, 2009). According to Beutell's (2006) research, job satisfaction is defined as the evaluation of various aspects of work, while LS is the designation for non-work domains. According to Sirgy et al. (2001), contentment in the non-work domain would therefore entail satisfaction in factors relating to family, leisure, health, education, friendship, culture, and social standing, excluding job satisfaction. There is no question about the connection between LS and job satisfaction (Demaerouti et al., 2000). The concept of person-job fit serves as the traditional foundation for hiring decisions (Werbel & Gilliland, 1999).

The company's top objective was to find applicants who have the necessary abilities and competencies for a vacant position. PJ fit is the alignment of a person's knowledge, skills, and abilities (KSA) with the needs of the job or their wants and desires with what the job offers, according to Edwards (1991) and O'Reilly, Chatman, and Caldwell (1991). Using accurate and realistic job information based on actual job previews, candidates can assess how well their KSA matches the job criteria (Breugh, 1992; Breugh & Starke, 2000). Candidates are more likely to stay in the selection process and accept a job offer if they believe their KSA aligns with the job requirements. According to RJP research, excellent work outcomes—such as minimal attrition from the recruitment process, high job satisfaction, low voluntary turnover, and high work performance—are linked

to accurate and realistic job information during recruitment and selection. Since its humble beginnings as a branch of scientific management, the process of determining P-J Fit has become more sophisticated as methods for measuring P-J fit that are both valid and statistically reliable have been identified.

Since emotions play a vital role in human existence, they are involved in every interaction with humans. A lot of the time, the job requires the portrayal of many emotions. This is particularly true for service providers. In addition to other professions, nurses must be nice and considerate, waiters must wear a smile, police officers must remain composed under pressure, and so on. Everything is ideal as long as the emotions that are felt and those that are portrayed are in harmony. But the issue comes when a person's actual inner feelings do not align with the ones they exhibit as part of their work. This may cause great harm to the person. Managing emotions for a wage has been termed emotional labour (Hochschild, 1983). Hence learning to manage emotions and dealing with them efficiently may reduce the harmful effects caused by emotional labour.

The healthcare industry is becoming more competitive as a result of its expansion. Nurses who are in continual connection with the people they serve are able to improve patient happiness, the quality of healthcare services, and the achievement of healthcare institutions' objectives. The emotional state of nurses who provide healthcare services is equally significant in this process, and they are required to use their emotions to maintain the highest level of patient satisfaction (Tracy, 2005; McClure & Murphy, 2007). The words surface and deep acting were first used by Hochschild (1983) in her groundbreaking book "The Managed Heart," where she made the case that workers utilize these two tactics in order to adhere to display regulations. According to the organization's "display rules," surface acting is the modification of external emotional expression to produce a necessary emotional presentation. Since the employee simply tries to control their visible expressions and body language, rather than attempting to experience the presented emotion, Rafaeli and Sutton (1987) call this "faking in bad faith." A person who engages in surface acting does not always lack feeling; rather, it indicates that the emotion they display is not the same as the emotion they feel.

The second strategy that employees may use to comply with display rules is deep acting. Deep acting has been referred to as 'faking in good faith' (Rafaeli & Sutton 1987) as it refers to the adjustment of internal feeling in order to express the appropriate and required emotional display (Hochschild equated this with method acting). Deep acting requires an adjustment of inner feelings as well as the outward expression of that emotion. Hochschild (1983) suggested deep acting would have a stronger link to emotional exhaustion than would surface acting as it requires the greater use of emotional resources.

Hochschild (1983), the first to introduce the idea of emotional labor in its entirety, states that it is a way to control emotions that other people can see as part of a job and, as a result, manifested through facial and physical expressions. Instead than focusing on the internal control of emotions, Ashforth and Humphrey (1993) examined emotional labor as a pattern of observable behavior. Stated differently, they are unnamed tasks that workers must complete while performing their jobs (Mastracci, Newman, & Guy, 2006). Hochschild (1983) examined behaviors of employees related to their emotions in two dimensions as surface act and deep act. Surface act refers that personnel fake their emotions within the scope of institutional and occupational rules, differentiate them from emotions they really feel and refer them to the receiver (Hochschild, 1983; Brotheridge & Grandey, 2002; Grandey, 2003; Mikolajczak et al., 2009).

In a deep act, the staff members try to communicate their feelings by concentrating on their inner feelings and trying to play the part that is required of them, such as an actor or actress (Brotheridge & Grandey, 2002; Smith & Lorentzon, 2007; Rupp et al., 2008). Grandey (2000) looked at the long-term effects of emotional labor on both an individual and organizational level. Burnout and a decline in job satisfaction are its individual repercussions. Weariness, depersonalization, and a decline in personal success are cited as signs of burnout. Performance and a propensity to retreat from work were cited as its organizational impacts (Grandey, 2000; Gungor, 2009).

LITERATURE REVIEW

Statement of Problem

The quality of the nurses' work and the constantly changing work environment have a greater impact on their lives than other employees, especially in clinical settings. In actuality, nurses' quality of life may be negatively impacted by unfavorable working circumstances and an overwhelming workload. Nurses' life happiness and general well-being can be significantly impacted by job satisfaction and other aspects of work outcomes.

The majority of workers in the healthcare sector are nurses, and they are essential to the standard of care given (Giallonardo et al., 2010). However, compared to other professional healthcare groups, nursing personnel report the highest levels of burnout and the lowest levels of life satisfaction (Fasoli, 2010). Thus, it is essential to pursue a scientific understanding of the psychological mechanisms underlying long-term care nursing staff members' work-related well-being. Fit and its individual-level antecedents must therefore be studied over time when adopting an agentic perspective and viewing a person's compatibility with their job as a continuous and dynamic process (e.g., Bayl-Smith & Griffin, 2018; Jansen & Kristof-Brown, 2006; Shipp & Jansen, 2011). Indicators of healthcare workforce outcomes that impact patient care, nurse retention, and organizational success include nurses' job and life happiness. This literature review explores the relationship between person-job fit, emotional labor, and satisfaction with life among nurses.

However, when compared to other professional healthcare groups, nursing personnel report the highest levels of burnout and the lowest levels of life satisfaction (Fasoli, 2010). Seeking a scientific understanding of the psychological mechanisms underlying the work-related well-being of long-term care nursing staff is therefore imperative. Thus, it is necessary to investigate fit and its individual-level antecedents over time when considering the compatibility of an individual with their job as a continuous and dynamic process (e.g., Bayl-Smith & Griffin, 2018; Jansen & Kristof-Brown, 2006; Shipp & Jansen, 2011) from an agentic perspective. With an impact on patient care, nurse retention, and organizational success, nurses' job and life satisfaction are important markers of healthcare workforce outcomes.

Steps are taken to address the above point in light of the researcher's observations and practical experience, as well as reports from literature reviews of some service sector workers' efforts in emotion labor and the fact that the concept of emotional labor is relatively new in Nigerian organizations and has received little research. Therefore, there is no meaningful correlation between the general well-being of employees and their work experiences. It is also interesting to note that the majority of earlier research on the connection between life happiness, emotional labor, and person-job fit has not connected these three elements in the context of the nursing profession in the healthcare system. The purpose of this study is to fill this gap with empirical evidence. Thus, the purpose of this study is to examine the connection between nurses' job happiness, emotional labor, and person-job fit at UCH Ibadan. To the best of the researcher's knowledge, there is a lack of empirical support for this claim in the literature on life satisfaction among nurses in the university college hospital Ibadan.

Objectives of Study

1. To explore the role of emotional labour on satisfaction with life among nursing staffs in UCH
2. To investigate the relationship between person-job fit and satisfaction with life among nursing staffs in UCH
3. To examine the role of gender on satisfaction with life among Nurses in UCH Ibadan
4. To assess the combined predictive power of Age, educational qualification and marital status on satisfaction with life among Nurses in UCH Ibadan

Hypotheses

1. Emotional labour will have a significant positive influence on satisfaction with life among nursing staffs in UCH
2. Person-Job Fit will significantly predict satisfaction with life among nursing staffs in UCH
3. Female nurses will score significantly higher on satisfaction with life than their male counterpart
4. Age, educational qualification and marital status will significantly and jointly predict satisfaction with life among Nurses in UCH Ibadan

METHODOLOGY

Design

A survey research design was used in this investigation. Questionnaires with self-reports were used to collect data. The current study employed a quantitative methodological approach since it allows the researcher to methodically examine vast volumes of data collected through surveys.

Participants

The participant of the study comprises of Nursing Staffs in the University College Hospital Ibadan, metropolis because in Nigeria a 2021 survey conducted by Nigeria Medical Association (NMA) South West Zone reported that 63.7% of Nurses surveyed experienced a low level of satisfaction with life, which is a sign of employee's dissatisfaction (NMA 2021).

The sample of the study consisted of 251 Nursing Staff of University College Hospital Ibadan with a mean age 45 (age range 18-65). Of the total of 251 Nursing Staff, 90(35.8%) were Males and 161(64.1%) were females. Ethnicity 181(72.1%) were Yoruba, 36(14.3%) were Hausa, 34(13.5%) were Igbo. Religion, 158(62.6%) were Christian, 93(37.4%) were Muslim. Marital status, 17(6.2%) were single, 230(90.2%) were married, 3(1.0%) were widow. Year of Experience, 28(7.6%) has 1-5 years of experience, 142(43.6%) has 6-10 years of experience, 77(29.1%) has 11-15 years of experience, 4(1.2%) has 16-20 years of experience. Age, 46(8.4%) were between 18-22years, 21(8.3%) were between 23-27years, 97(38.6%) were between 28-32years, 52(20.6%) were between 33-37years, 34(9.5%) were between 38years and above.

Sampling Technique

The study's participants were chosen using a purposive sampling strategy. The selection process was justified by the fact that, in comparison to other hospitals, the aforementioned hospitals have a higher number of nurses and treat a greater proportion of patients with severe situations.

Tools

Emotional Labour:

The Emotional Labour Scale (ELS), a 15-item self-report questionnaire, was used to quantify emotional labor (Brotheridge & Lee, 2003). The ELS assesses six aspects of emotional display in the workplace, including surface acting, deep acting, and the frequency, intensity, and variety of emotional displays. While the length of a normal encounter is recorded in minutes, the five previously stated aspects are measured on a 5-point Likert scale. This metric is not based on any higher order emotional labor model. Every element explains a distinct aspect of emotional labor. Internal consistency estimates for the subscales ranged from .74 to .91, according to Brotheridge and Lee (2003).

Person-Job Fit:

A scale developed by Brkich, Jeffs, and Carless (2002) was used to quantify person-job fit. Six items on the measure are assessed on a 5-point scale, with 1 denoting "strongly disagree" and 5 denoting "strongly agree." .819 was the Cronbach's alpha for this scale.

Satisfaction with Life Scale

Diener et al. (1985) developed the popular Satisfaction with Life Scale. The scale's Cronbach's alpha was .87. It consists of five self-report questions measuring general life satisfaction, each of which is evaluated on a seven-point Likert scale from "strongly disagree" to "strongly agree." 87

Procedure for Data Collection

Permission was obtained from the chief nursing officer by giving them a formal letter of introduction that has been signed by the department head of the researcher. Respondents received the required guidance from the researcher on how to complete the questions. The researcher distributed and collected surveys using the "drop-off-call-back" strategy (Hair, Anderson, Tatham, & Black, 2006). Participants received assurances of confidentiality and anonymity about their names and replies, along with an explanation of the study's aim. Purposive sampling was used to collect 235 questionnaires was distributed. The data was personally collected by the researcher. The researcher personally explained the purpose of the research and request voluntary participation in the research. Data was collected from nurses in the university college hospital (UCH) Ibadan, Oyo state Nigeria. The questionnaire included demographic information like gender, age, religion, marital status, educational qualification, person-job fit, emotional labour, and satisfaction with life items was delivered to 230 subjects that was randomly selected among nurses in UCH Ibadan.

Data Analysis

Descriptive Statistics Means, standard deviations, and frequencies will be calculated to describe sample characteristics.

Correlation Analysis: Examine relationships between person-job fit, emotional labor, and life satisfaction.

Multiple Regression Analysis: Investigate the predictive power of person-job fit and emotional labor on life satisfaction.

Ethical Considerations

Informed Consent: Participants provided informed consent before completing surveys.

Confidentiality: Data were kept confidential and anonymous.

Institutional Approval: Necessary approvals were obtained from the hospital's ethics committee and relevant authorities.

RESULTS

Hypothesis one stated that participants who score high on emotional labour will report higher levels of life satisfaction than their counterpart who score low on emotional labour. This hypothesis was tested using t-test for independent samples and the results are presented in Table 1.

Table 1. Summary of T-Test Showing the Influence of Emotional Labour on Satisfaction with Life

Emotional labour	N	\bar{X}	SD	Df	t	Sig
High	95	12.80	2.33			
Low	114	12.50	2.07	207	.986	>.05

Table 1 shows that emotional labour had no significant influence on satisfaction with life among nurses $t(207) = .986, p > .05$). The result suggests that differences in nurses' levels of satisfaction with life cannot be attributed to their levels of emotional labour in this study. By implication, high emotional labour ($=12.80$) while low emotional labour had ($=12.50$). The hypothesis is therefore not confirmed and it is rejected.

Hypothesis Two

Hypothesis two stated that participants who score high on person job fit will report higher life satisfaction than their counterpart who score low on person job fit. This hypothesis was tested using t-test for independent samples and the results are presented in Table 2.

Table 2. Summary of T-Test Showing the Influence of Person-Job Fit on Satisfaction with Life

Person-Job Fit	N	\bar{X}	SD	Df	t	Sig
High	114	13.83	1.57			
Low	95	11.20	1.95	207	10.789	<.05

Table 2 shows that person-job fit had significant influence on satisfaction with life among nurses $t(207) = 10.789, P < .05$). The result suggests that differences in staff levels of satisfaction with life can be attributed to their person-job fit in this study. By implication, participant who score high on person-job fit scored higher on satisfaction with life ($=13.83$) while low scorers on person-job fit had a significantly lower score on satisfaction with life ($=11.20$). The hypothesis is therefore confirmed and it is accepted.

Hypothesis Three

Hypothesis four stated that female participants will significantly score higher on satisfaction with life than their male counterparts. This hypothesis was tested using t-test for independent samples and the results are presented in Table 3.

Table 3. Summary of T-Test Showing the Influence of Gender on Satisfaction with Life

Gender	N	\bar{X}	SD	Df	T	Sig
Female	119	12.69	2.40			
Male	90	11.47	2.09	207	-.272	>.05

Table 3 shows that there is significant gender difference in the level of satisfaction with life among the participants $t(207) = -.272; p > .05$. The result suggests that differences in nurses' levels of satisfaction with life can be attributed to gender difference. By implication, female reported ($=12.69$) while male had ($=11.47$). The hypothesis is therefore confirmed and it is accepted.

Hypothesis Four

Hypothesis five stated that age, educational qualification, and marital status will jointly and independently predict satisfaction with life among nurses. This was tested using multiple regression analysis and the results are presented in Table 4.

Table 4. Summary of Multiple Regression Showing Demographic Predictors of Satisfaction with Life

Predictors	R	R ²	F(3,205)	Sig	β	T	p
Age					.132	1.370	>.05
Education	.153	.023	1.633	>.05	.050	.596	>.05
Marital status					.234	2.158	<.05

Table 4 shows that age, educational qualifications and marital status had no significant joint influence on satisfaction with life among nurses $\{R=.153, R^2=.023, F(3,205) = 1.633, p > .05\}$. The result indicates that no joint influence but the independent influence analysis indicates that only marital status had contributed a significant independent influence of 23.4% variance to changes observed in satisfaction with life among nursing staff $\{\beta=.234, t=2.158, P<.05\}$. The results largely deviated from the prediction and the hypothesis is therefore not confirmed and rejected.

DISCUSSION

This study aims to explore the impact of person-job fit and emotional labor (deep and surface acting) on nurses' life satisfaction in UCH. As a result of testing four hypotheses, three of the models were accepted or supported, while one was rejected. Several intriguing conclusions were drawn from this investigation. The impact of job fit on life satisfaction is one of the more noteworthy findings; it was found to be significantly inversely correlated with life satisfaction. Life satisfaction was also found to be adversely and strongly correlated with age (old adult nurses).

According to the first hypothesis, those with high emotional labor scores will express greater levels of life satisfaction than those with low emotional labor scores. Using t-test analysis, this theory was put to the test, and the findings showed that emotional labor had no discernible impact on nurses' life satisfaction. According to the findings, nurses' emotional labor levels in this study cannot be linked to variations in their life satisfaction levels. The results align with those of other studies. For instance, a study conducted by Brezo, Turecki, and Paris (2006) found no statistically significant relationship between surface acting and deep acting and health professionals' life satisfaction.

According to the second hypothesis, participants who score well on person-job fit will be more satisfied with their lives than those who score poorly. According to the results of the t-test for independent samples, which was used to test this hypothesis, nurses' person-job fit significantly influenced their level of life satisfaction. This suggests that variations in staff members' life satisfaction levels in this study can be linked to their person-job fit. This result aligns with the findings of earlier research. For example, more contemporary studies investigating this relationship between job fit and life satisfaction further supports top and bottom's theory and implications (e.g., Arria et al., 2009; Kleiman and Liu, 2013; Moody and Smith, 2013). Hirsch and Barton (2011) found that job fit were positively correlated to life satisfaction. Findings have also displayed that a higher availability of job fit was related with higher levels of life satisfaction of adults (Handley et al., 2012). In summary, past research has illustrated that a fit between an individual and the job protects people from suicidal risk factors, thoughts, behaviors, and attempts.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study suggest that there was a significant and strong relationship between Person job fit and satisfaction with life. The relationship between person job fit and SWL were significant and negative, with affectively and normatively committed participants being more likely to satisfy with their life

In addition, the findings indicated that although gender has relationship with life satisfaction. The result further showed that female nurses reported higher life satisfaction while male nurses reported lower life satisfaction

This result of this study also shows that demographic variables jointly accounted for only 23.4% variance to changes observed in satisfaction with life among nursing staff in UCH Ibadan. Further, the results showed that only marital status, and educational qualifications had significant independent influence on life satisfaction among nurses

The overall findings of the study contribute valuable knowledge by shedding new light on how the emotional labour and person job fit levels of individuals employed in the university college hospital relate to satisfaction with life. The new insights derived from the findings may help to broaden the perspective on the ways in which individuals' life satisfaction potentially influence their career decisions.

Although this work adds significantly to the body of knowledge, it is constrained by a single major problem. The findings are predicated on a hospital setting at a university. Whether the study's conclusions will apply to other occupations and organizations is a crucial factor to take into account in this regard. In this regard, further study is required to examine the connections between workers' job outcomes and emotional labor. Only the staff of Ibadan's university college hospitals were the subject of the study. Studying with people from a different organizational class or field (i.e., workers of various professions) is thought to provide distinct outcomes. However, researching how other businesses compare in terms of emotional labor might be beneficial.

REFERENCES

- Ahmed, S., Khalil, M. I., Chowdhury, B., Haque, R., bin S Senathirajah, A. R., and bin Omar Din, F. M. 2022. Motivators and barriers of artificial intelligent (AI) based teaching. *Eurasian Journal of Educational Research*, Vol. 100, pp. 74-89.
- Dinçel, S. 2019. *Business Management and Logistics*. Istanbul: Togan Publishing House
- Dinçel, S. 2023. An Analysis, of the Thesis, in the Field of Logistics that Found at the YÖK Thesis Center and an Elaboration of the Logistics Field Within the Scope of the Department. *Euroasia Journal of Social Sciences & Humanities*, Vol. 10 No. 31, pp. 20-31.
- Gansser, O. A., and Reich, C. S. 2021. A new acceptance model for artificial intelligence with extensions to UTAUT2: An empirical study in three segments of application. *Technology in Society*, Vol. 65, pp. 101-535.
- Giray, L. 2024. Ten myths about artificial intelligence in education. *Higher Learning Research Communications*, Vol. 14 No. 2, pp. 1-12.

- Gish, J. J., Guedes, M. J., Silva, B., and Patel, P. 2022. Latent profiles of personality, temperament, and eudaimonic well-being: Comparing life satisfaction and health outcomes among entrepreneurs and employees. *Journal of Business Venturing Insights*, Vol. 17, e00293.
- Hmoud, M., Swaity, H., Hamad, N., Karram, O., and Daher, W. 2024. Higher Education Students' Task Motivation in the Generative Artificial Intelligence Context: The Case of ChatGPT. *Information*, Vol. 15 No. 1, 1-18.
- Jennings, J., and Brush, M. 2014. "Work-Family Interface Experiences and Coping Strategies: Implications for Entrepreneurship Research and Practice." *The Academy of Management Review* Vol. 32 No. 3, pp. 747-760.
- Naqvi, A. 2020. *Artificial intelligence for audit, forensic accounting, and valuation: A strategic perspective*. Wiley.
- Nwangwu, I. O. 2006. *Fundamentals of entrepreneurship in educational management*. Enugu: Cheston Agency Ltd.
- Odjegba, E. 2005. "Building Nigeria's entrepreneurship: What stakeholders say about essential ingredients". *Sunday Vanguard*. July 3.
- Onah, J. 2004. *Empowering small and medium scale enterprises in Nigeria* Enugu ECCIMA/MANAMARK Association Ltd.
- Streb, C., and Gupta, V. K. 2021. Methodology of entrepreneurship research in a radical subjectivist paradigm. In *Entrepreneurship, growth and economic development: Frontiers in European entrepreneurship research* (pp. 262-288). Edward Elgar.
- Suleiman, A.S. 2006. *The business entrepreneur: Entrepreneurial development, Small and medium enterprises*. 2nd edition Kaduna: Entrepreneurship Academy publishing.
- Torres, P., and Godinho, P. 2022. Levels of necessity of entrepreneurial ecosystems elements. *Small Business Economics*, Vol. 59, pp. 29-45
- Wiklund, J., Davidsson, P., Audretsch, D. B., and Karlsson, C. 2011. The Future of Entrepreneurship Research. *Entrepreneurship Theory and Practice*, Vol. 35 No. 1, 1-9.
- Wurth, B., Stam, E., & Spigel, B. 2022. Toward an entrepreneurial ecosystem research program. *Entrepreneurship Theory and Practice*, Vol. 46(3), pp. 729-778.
- Yu J, Tang YM, Chau KY, Nazar R, Ali S, and Iqbal, W. 2021. Role of solar-based renewable energy in mitigating CO2 emissions: evidence from quantile-on-quantile estimation. *Renew Energy* Vol. 182, pp. 216-226.
- Yurt, E. & Kasarci, I. (2024). A Questionnaire of Artificial Intelligence Use Motives: A contribution to investigating the connection between AI and motivation. *International Journal of Technology in Education (IJTE)*, 7(2), 308-325. <https://doi.org/10.46328/ijte.725>.