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Work environment and personality traits as predictors of creativity among librarians in the Philippines

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ABSTRACT

Creativity is a crucial skill for librarians, enabling them to adapt to changes in the digital era and enhance the learning environment. This study examines the predictors of creativity among librarians in the Philippines, focusing on their work environment and personality traits. Using Amabile's KEYS scale of work environment and the Big Five Personality Traits, data from 106 licensed librarians were analysed through multiple regression. The findings reveal that specific personality traits and work environment factors significantly influence creativity. Results indicate that Openness to Experience and Work Group Support are significant positive predictors, while Neuroticism negatively predicts creativity. Notably, Organisational Encouragement and Sufficient Resources did not have a significant effect on creativity. These results highlight the importance of fostering supportive work groups and managing particular personality traits to nurture creativity among librarians. This study illuminates the unique cultural and organisational dynamics in the Philippines, providing recommendations for enhancing creative practices in libraries. By understanding the interplay between work conditions and personal attributes, this research contributes to the broader discourse on creativity in under-resourced environments and sets the stage for future investigations into harnessing creative potential in librarianship.

Keywords: Creativity; Librarian; Personality traits; Work environment.

INTRODUCTION

The digital era demands a radical transformation of libraries, driven by rapid technological, educational, and social changes. Globally, librarians are shifting from traditional gatekeepers of books to dynamic knowledge workers (Dul et al., 2011). However, this transition poses unique challenges in developing countries such as the Philippines, where libraries often experience significant budget cuts, inadequate facilities, and an urgent need for skills development (Ilesanmi, 2013; Sahabi & Otobo, 2022). Despite these constraints, Filipino librarians are expected to adopt new technologies and address complex issues such as copyright and information ethics (Saputri, 2022). To remain relevant and effective, libraries must innovate. Employee creativity is fundamental to organisational innovation (Gichohi, 2014; Biranvand et al., 2015). Although creativity is essential, the factors that drive it within the Philippine library context remain underexplored. Most existing literature focuses on Western contexts, leaving a gap in understanding how local environmental realities – such as resource scarcity – interact with the personality traits of Filipino librarians to influence

creative output. If library leaders can identify which environmental factors (e.g., supervisory support) and personality traits (e.g., openness) foster creativity, they can develop more effective professional development programmes and policy interventions. This study addresses this gap by applying the Componential Model of Creativity (Amabile, 1996) and the Big Five Personality Traits (John et al., 1991) to the local context. The primary objective is to determine how work environment factors and personality traits influence the creativity of librarians in the Philippines. Specifically, it examines the predictive relationship between environmental variables (Organisational Encouragement, Supervisory Encouragement, Work Group Support, Freedom, Sufficient Resources, Challenging Work) and personality traits (Big Five) on librarian creativity.

This study contributes to the literature by examining creativity in a resource-constrained context, where organisational conditions and available support differ from those in more resource-rich environments. By integrating environmental and personality factors, the study offers a more nuanced understanding of how creativity develops among Filipino librarians and highlights context-specific mechanisms that may not be captured in existing models. While previous studies emphasise multiple environmental dimensions, this study also considers the possibility that only certain aspects of the work environment and/or personality traits may influence creativity in resource-constrained contexts.

LITERATURE REVIEW

Creativity in the library setting

The digital age has brought a vast amount of information, placing increased demands on librarians' proficiency. Librarians must continually enhance their information management and data handling skills (Rifaudeen, 2015; Prince, 2023). However, their ability to meet dynamic users' needs is often hindered by resource constraints and the need for skills development (Granger, 2020; Ogunjimi, 2020; Ullah et al., 2023). Libraries, as information service providers, must commit to innovation and creativity to adapt effectively (Lu, 2024).

Several studies have explored creative and innovative services within library settings. Axelsson and Sardari (2011) defined creativity as outcomes driven by employees within organisations, aligning with the work of Amabile et al. (1996), and Oldham and Cummings (1996). Hourston (2006) suggested that librarians' creative acts involve connecting information, analysing patterns, and assisting users in navigating diverse sources within time constraints. To foster creativity in libraries, it is important to establish an infrastructure that supports digital knowledge discovery and management, and to encourage collaboration through library management systems (Chiu & Wong, 2023). Employee engagement, as emphasised by Gichohi (2014), also plays a pivotal role in this process. Librarians can harness creativity by acquiring skills and knowledge through formal education, attending training and workshops, and benefiting from leadership support and teamwork (Adiatama, 2021). Oguntoye et al. (2025) found that social and emotional personality traits drive knowledge creation and recommended that libraries cultivate supportive environments that encourage collaboration, continuous learning, and creative expression among librarians.

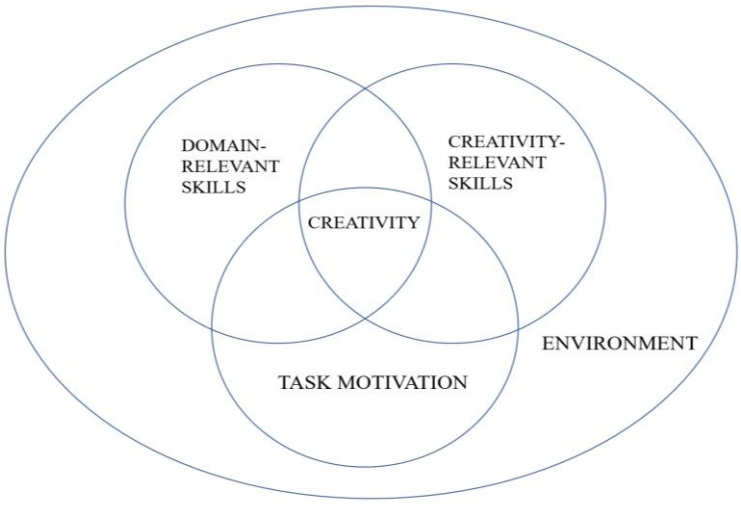
Creativity involves generating new ideas to solve problems (Burke, 1995), and these ideas contribute to problem-solving in a library context. Previous studies suggest that creativity is a prerequisite for innovation (Amabile et al., 1996; Paulus and Nijstad, 2003; Naz & Rafique, 2025). Ford (1996) concurs, emphasising that creative ideas are the initial steps in a complex process leading to innovation. Weber (2016) emphasises that creativity drives innovation in

libraries and encourages the development of new solutions to challenges. Employee creativity generally refers to the "development of new and useful ideas or solutions, including the process of generating ideas and actual ideas or solutions" (Amabile et al., 1996; Shalley, 1991; Oldham & Cummings, 1996; Shalley et al., 2004). This may involve methods to address challenges, creative solutions, or changes in workflow. This research is grounded in the Componential Model of Creativity (Amabile, 1983), which highlights the significance of both individual and environmental factors in the creative process.

The componential model of creativity

Componential Theory of Creativity (Amabile et al., 1996) posits that creativity is influenced by domain-relevant skills, creativity-relevant processes, and task motivation. Previous studies by Shalley et al. (2004) and Qahl & Sohaib (2023) provide a comprehensive summary of the Componential Model of Creativity. The model was first articulated by Amabile in 1983 (see Figure 1) and offers a framework for understanding creativity in the workplace. According to this model, there are three primary components of creativity, all of which occur within the individual: creativity-relevant skills, domain-relevant skills, and task motivation. Creativity-relevant skills include understanding complexities and the ability to think creatively during problem-solving. Domain-relevant skills refer to factual knowledge and expertise. Task motivation refers to individuals' attitudes towards tasks and their intrinsic or extrinsic motivation. The literature suggests that enhancing these components can increase employee creativity.

Amabile et al. (1996) and colleagues recognised that there are many potential external factors beyond the individual that can influence creativity, particularly the work environment (see Figure 1). The Componential Model of Creativity suggests that work environment factors can influence all aspects of individual creativity.



Note. Based on the Componential Model of Creativity (Amabile, 1996)

Figure 1: Componential model of creativity

Environmental factors KEYS: Assessing the climate for creativity

Using the componential theory of creativity as a foundation, Amabile et al. (1996) developed KEYS: Assessing the Climate for Creativity, a validated instrument designed to measure

employees' perceptions of work environments that stimulate or hinder creativity. KEYS is not an acronym; rather, it refers to the critical environmental "keys" that can unlock or obstruct creative performance (Amabile et al., 1996). The instrument assesses dimensions such as organisational encouragement, supervisory encouragement, work group support, freedom, sufficient resources, and challenging work, and has been widely applied across different organisational and cultural contexts.

Several researchers have used the KEYS instrument to evaluate library environments that foster creativity (Coveney, 2008; Ibegbulam et al., 2017; Oraekwe, 2024). Coveney (2008) chose KEYS due to its perceived effectiveness in assessing the environment for creativity. Although some researchers raised concerns about overlapping factors, KEYS still provided a strong foundation for evaluating staff perceptions of a creative library environment (Coveney, 2008). KEYS also facilitates comparison with similar studies conducted by Amabile and others, using a common database as a reference. Ibegbulam et al. (2017) adapted Coveney's (2008) version of KEYS and simplified it further to fit the Nigerian context. Oraekwe (2024) also used the modified version from Coveney (2008) along with the Organizational Climate Questionnaire (OCQ) by Litwin and Stringer (1968).

In the Philippine context, Fajagutana and Guhao (2022) established a structural equation model confirming that the work environment significantly influences the creativity and innovation of library personnel in the Davao Region. Their findings reinforce the notion that specific environmental stimulants are critical for fostering creative output among Filipino librarians, supporting the need to further investigate these dynamics across a broader national sample.

To facilitate maximum participation from across the country, this study has adopted a modified version of the questionnaire (Ibegbulam, 2017) to ensure that the time required for completion does not exceed 10 minutes. The modified version, however, consists of 18 items. The questionnaire measures six conceptual categories: organisational encouragement, supervisory encouragement, work group support, freedom, sufficient resources, and challenging work. The original instrument and its modified versions have already been evaluated in several studies with a high Cronbach's alpha ($\alpha = 0.66$ to 0.91), indicating reliability.

Organizational encouragement

Organisational encouragement involves fostering a creative culture that supports employees in pursuing new ideas within a defined, goal-oriented framework (Amabile et al., 1996). Studies have shown that when organisations provide a conducive climate and physical work environment, and encourage idea exchange among employees, this stimulates creative thinking and enhances employees' creative abilities (Aldabbas et al., 2022; Çemberçi & Civelek, 2018). Gichochi (2014) emphasised the importance of leadership, culture, and work environment in fostering creativity and innovation among librarians. In today's rapidly evolving environment, libraries need to adopt leadership styles that promote creativity to adapt to changing needs and seize new opportunities (Ashiq et al., 2022). Library leaders play a key role in fostering and enhancing the creative abilities of librarians, ensuring that libraries meet the diverse needs and expectations of their communities (Ibegbulam et al., 2017). Library managers are responsible for establishing and maintaining an organisational culture that promotes creativity (Biranvand et al., 2015). Onuoha et al. (2015) noted that a major challenge to effectively implementing creativity in libraries is the lack of interest in library services from management.

Supervisory encouragement

Supervisory encouragement involves providing support, motivation, and positive feedback to employees to enhance productivity and work quality (Amabile et al., 1996). Several studies suggest that supervisory encouragement, in various forms, can predict and enhance

employee creativity. Thuan (2020) found that subordinate creativity is positively influenced by supervisors' knowledge-sharing behaviour. Coveney (2008) emphasised the importance of listening to employees' suggestions and implementing them to reinforce the value of their creative ideas. This demonstrates that employees' creative ideas are valued and recognised. Coveney (2008) also noted that when line managers show confidence in employees' work, employees become more creative and innovative. Biranvand et al. (2015) stated that support is one of the contextual conditions essential for creativity.

Work group support

Amabile et al. (1996) describe work group support as a team whose members possess a variety of abilities, communicate effectively, are receptive to novel solutions, provide constructive feedback, have mutual trust and support for one another, and are committed to their shared task. Lee et al. (2012) found that team-member exchange and co-worker support influence individual creativity. Omilion-Hodges and Ackerman (2017) found that peer informal mentoring plays a crucial role in fostering creativity. Coworker support increases individuals' creative self-efficacy and awareness of their creative role in the workplace (Tierney & Farmer, 2011; Dailey & Devlin, 2025). According to Coveney (2008), if library managers are committed to fostering creativity, they should create a conducive work environment that enables librarians to reach their creative potential. Ikonne and Onuoha (2015) found that librarians view an unconducive work environment as a barrier to using their creative skills effectively.

Freedom

Freedom is the ability to feel in control of one's job, including choosing what to accomplish and how to do it (Amabile et al., 1996). Amabile et al. (1996) further stated that allowing employees to determine how to achieve goals, rather than only which goals to pursue, increases their intrinsic motivation and creativity. Chang et al. (2012) emphasised that task autonomy can influence creative performance depending on prior experience and self-control levels. Kivrak et al. (2025) found that job autonomy directly promotes creativity and also has an indirect effect through perceived supervisory support. While freedom is essential for motivation and creativity, research suggests that its effects on creative output can vary according to individual differences and contextual factors. Some individuals may respond differently to freedom and constraints, indicating that the relationship between freedom and creativity is not universal (Jeong et al., 2017).

Sufficient resources

According to Amabile et al. (1996), resources are defined as all the assets available to an organisation to facilitate work, including sufficient time for task completion and access to training opportunities. Amabile et al. (1996) also stated that, beyond the practical limitation of having few resources, individuals' perceptions of resource sufficiency can influence their beliefs about the value of their projects. While resources promote creativity among library employees, many respondents highlight the challenge of inadequate resources, particularly due to decreasing budgets (Coveney, 2008). Insufficient resources may also lead to other challenges, including a lack of budget for technological facilities, an unconducive work environment, and employees' non-attendance at conferences, which results in a deficiency in ICT skills (Onuoha et al., 2015). However, on a positive note, Coveney (2008) observed that insufficient resources can prompt staff to cultivate their creativity to maximise the use of what they have, thereby forcing staff to be creative.

Challenging work

Challenging work refers to the experience of exerting effort on demanding tasks and assignments (Amabile et al., 1996). Amabile et al.(1996) also noted that employees are

motivated by challenging work when supported by a supervisor. Challenging work can significantly enhance creativity, particularly when it is perceived as a motivator (Carmeli et al., 2007; Pienaar, 1996; Meng & Liu, 2023; Sun et al., 2019; Alsakarneh et al., 2025). Challenge and workload pressure play crucial roles in influencing the relationship between creative potential and perceived opportunities to demonstrate creativity (Caniëls et al., 2015).

Conceptual model

The conceptual model aims to investigate and expand upon the Componential Model of Creativity and KEYS (Amabile, 1996) by examining whether the Big Five personality traits influence creativity within the library context (see Figure 2). Amabile (1983) asserts that creativity-relevant skills depend on personality traits such as self-discipline, the capacity to delay gratification, resilience in confronting challenges, autonomy, and a tendency to think independently rather than conforming or seeking social validation. The study focuses on KEYS: Assessing the Climate for Creativity (Amabile, 1996) for environmental factors and the Big Five Personality Traits Inventory (John et al., 1991) for individual factors. The Big Five Inventory (BFI) does not require permission for research use but requests that users complete a survey to contribute to a database of researchers.

Individual factors of Big Five personality

John and colleagues introduced the BFI in 1991. Numerous studies have found a connection between creativity and the Big Five personality traits. Traits such as Openness, Extraversion, Conscientiousness, and Agreeableness have been shown to influence creativity (Kaspi-Baruch, 2017; Shaw & Yu, 2023; Jirásek & Sudzina, 2020). Research indicates that the Big Five personality traits, especially extraversion and openness to experience, have a positive effect on creativity (Sung, 2009; Kaspi-Baruch, 2017). These traits are associated with a willingness to explore new ideas and take risks. The relationship between personality and creativity is complex, influenced by factors such as motivational goal orientation (Kaspi-Baruch, 2017). Additionally, the influence of personality traits on creativity can differ across various industries and decision-making contexts (Saihani et al., 2009).

Extraversion

Extraversion is characterised by traits such as talkativeness, assertiveness, and high energy levels (John et al., 1991). Numerous studies have explored the positive correlation between extraversion and creativity (Batey & Hughes, 2017; Chiang et al., 2017; Karwowski & Lebuda, 2016; Nam & Nga, 2024). Individuals with high levels of extraversion frequently share work-related information with colleagues, thereby boosting creativity (Gao et al., 2020). Fink and Neubauer (2008) found that extraverted people often produce highly original ideas when engaging in tasks. Moreover, extraversion has been shown to positively affect creative performance (Sung & Choi, 2009).

Agreeableness

People with an agreeable personality are described as good-natured, cooperative, and trusting (John et al., 1991). Studies on the link between agreeableness and creativity have yielded mixed results. Gu et al. (2013) and King et al. (1996) identified a positive association between agreeableness and creativity, with Gu et al. (2013) indicating that job satisfaction and a proactive personality contribute to this relationship. A study by Pérez-Luño et al. (2023) found that agreeableness, along with traits such as extraversion and conscientiousness, enhances creativity in university students. Additionally, agreeableness has been shown to predict higher creative performance when individuals are less driven by external rewards or pressures (Sung & Choi, 2009).

Conscientiousness

This personality trait is associated with orderliness, responsibility, and dependability (John et al., 1991). Xu and colleagues (2018) identified a positive relationship between conscientiousness and employee creativity, especially when employees experience medium levels of time pressure and high trust in their leader. Silvia et al. (2014) added that as conscientiousness increased, people were more likely to engage in creative activities.

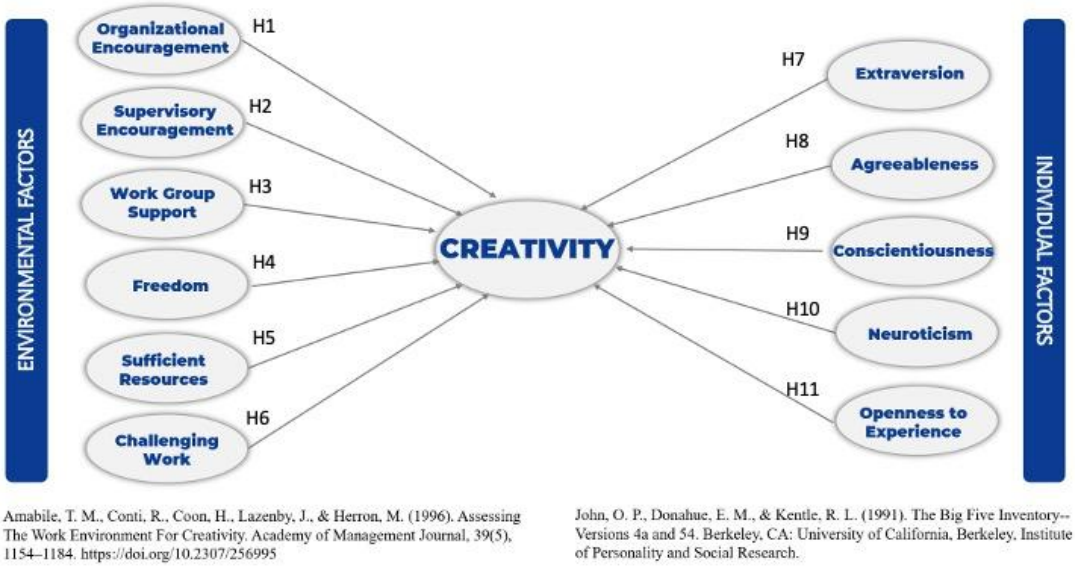
Neuroticism

Neuroticism is typically associated with upsetability and is the direct opposite of emotional stability (John et al., 1991). Leung et al. (2014) proposed that trait-consistent emotions, such as worry in individuals with high neuroticism, can enhance creativity. They further noted that individuals higher in neuroticism tend to recall worrisome events, which can facilitate creative performance in cognitively demanding tasks. Xu and Brucks (2011) found that higher levels of neuroticism are linked to greater creative achievement. Higher neuroticism levels correlate with enhanced creativity, particularly in intellectual creativity and creative problem-solving (Pickering et al., 2016). However, other research indicates that neuroticism is negatively associated with "Creative Self-Efficacy," or the belief in one's own ability to solve problems innovatively (Fino & Sun, 2022). In daily diary studies, researchers found that low neuroticism, combined with high conscientiousness, predicts higher levels of creative activity (Smith et al., 2022).

Openness to experience

This personality trait is characterised by originality, curiosity, and ingenuity (John et al., 1991). Openness to experience consistently predicts creativity across various settings (Awawdeh & Lian, 2023). It significantly influences creativity in employees and entrepreneurs (Petrou et al., 2023; Lee et al., 2022; Sung & Choi, 2009; Zhang et al., 2020). For employees, openness to experience positively correlates with both radical and incremental creativity (Peljko & Antončič, 2022).

Most studies on librarians' creativity have focused on either organisational or individual factors. Studies exploring the work environment and Big Five personality traits as combined predictors of creativity are scarce. This study aims to address this gap by examining how the work environment and Big Five personality traits influence employee creativity, using a conceptual model guided by the KEYS assessment of the work environment and the BFI (see Figure 2). Specifically, this study seeks to explore the work environment and personalities among librarians to identify patterns and provide nuanced explanations.



Note. Combined KEYS (Amabile, 1996) and Big Five Inventory (John, 1991)

Figure 2: Conceptual model

The conceptual model (see Figure 2) illustrates the hypothesised relationships between environmental factors and personality traits as predictors of creativity among librarians. These factors are modelled as independent variables, each with a direct path to creativity as the dependent variable. These relationships are indicated by directional arrows labelled H1–H11.

Hypotheses development

Grounded in the Componential Model of Creativity, the work environment influences creativity by shaping intrinsic motivation and providing contextual support for idea generation (Amabile et al., 1996). Personality traits affect how individuals engage in creative processes, with the Big Five framework widely used to explain creativity (Awawdeh & Lian, 2023), as shown in Table 1 and 2.

Table 1: Hypotheses development for environmental factors and creativity

Environmental factors vs creativity

Prior research indicates that supportive organisational climates, leadership behaviours, and collaborative environments enhance employee creativity (Aldabbas et al., 2022; Ashiq et al., 2022).

Variables	**Hypothesis**	**Justification**
Organizational encouragement → creativity	H1: Organisational encouragement has a positive relationship with librarians' creativity.	Organisational encouragement fosters a culture that supports idea sharing and innovation, enhancing creative performance (Amabile et al., 1996; Aldabbas et al., 2022)
Supervisory encouragement → creativity	H2: Supervisory encouragement has a positive relationship with librarians' creativity	Supervisory support, including feedback and recognition, enhances employee motivation and creativity (Amabile et al., 1996; Thuan, 2020).
Work group support → creativity	H3: Work group support has a positive relationship with librarians' creativity.	Collaborative work environments facilitate knowledge exchange and enhance creative self-efficacy (Tierney & Farmer, 2011)
Freedom → creativity	H4: Freedom in the workplace has a positive relationship with librarians' creativity.	Autonomy allows individuals to explore novel approaches and supports intrinsic motivation (Amabile et al., 1996; Chang et al., 2012)
Sufficient resources → creativity	H5: Availability of sufficient resources has a positive relationship with librarians' creativity.	Adequate resources support the development of creative ideas, although their impact may vary depending on individual perception (Amabile et al., 1996; Coveney, 2008)
Challenging work → creativity	H6: Challenging work assignments have a positive relationship with librarians' creativity	Challenging tasks enhance engagement and problem-solving, which can stimulate creativity (Meng & Liu, 2023)

Table 2: Hypotheses development for individual factors and creativity

Individual factors vs creativity Personality traits influence how individuals engage in creative processes, with the Big Five framework widely used to explain creativity (Awawdeh & Lian, 2023).		
Variables	**Hypothesis**	**Justification**
Extraversion → creativity	H7: Extraversion is positively associated with creativity among librarians	Extraverted individuals tend to engage more in communication and knowledge sharing, which supports idea generation (Gao et al., 2020)
Agreeableness → creativity	H8: Agreeableness is positively associated with creativity among librarians	Agreeableness enhances creativity among university students (Pérez-Luño et al., 2023)
Conscientiousness → creativity	H9: Conscientiousness is positively associated with creativity among librarians	Conscientious individuals contribute to creativity when they experience moderate levels of pressure and trust their leaders (Xu et al., 2018)
Neuroticism - → creativity	H10: Neuroticism is negatively associated with creativity among librarians	Research indicates that neuroticism is negatively associated with "Creative Self-Efficacy", or the belief in one's own ability to solve problems innovatively (Fino & Sun, 2022)
Openness to experience → creativity	H11: Openness to experience is positively associated with creativity among librarians	Openness to experience is consistently identified as a strong predictor of creativity (Petrou et al., 2023; Awawdeh & Lian, 2023)

METHOD

The main aim of this study is to determine how work environment factors and personality traits influence the creativity of librarians in the Philippines. To achieve this, the study addressed the following specific objectives:

1. To investigate how environmental factors – including organisational encouragement, supervisory support, work group dynamics, workplace freedom, resource availability, and task characteristics – shape librarians' creativity.
2. To examine how personal factors, specifically personality traits such as extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience, influence librarians' creativity.
3. To analyse the predictive relationship between these environmental and personality variables and librarian creativity through multiple regression analysis.

This study employed a quantitative correlational research design. The participants were licensed librarians currently employed in various public and private libraries in the Philippines. Data were collected via an online questionnaire distributed through official Facebook group chats of the Philippine Librarians Association, Inc. over a period of three weeks (18 April to 9 May 2024). Convenience sampling was used to reach a broad demographic across the archipelago, given the logistical constraints of conducting a nationwide study.

A total of 106 valid responses were received. Based on an estimated population of approximately 7,000 licensed librarians in the Philippines, this represents a response rate of about 1.5%. While this sample size is limited relative to the total population of librarians in the Philippines, it is sufficient for an exploratory regression analysis to identify preliminary trends and relationships (Green, 1991). Prior to distribution, pre-testing was conducted with 10 librarians. Feedback from this pre-test led to minor adjustments in the Google Form structure to ensure clarity. To ensure data privacy, no identifying information was collected.

The survey instrument consisted of three parts (Appendix 1):

i. Work Environment: This study used the modified KEYS (Amabile et al., 1996) scale as applied by Ibegbulam et al. (2017) and Coveney (2008). These adaptations were tailored for library contexts, enhancing contextual relevance while preserving construct validity. Permission to use the modified KEYS instrument was obtained from Amabile. In line with the structural adaptations made by Coveney (2008) for library settings, the constructs of Freedom (FR), Sufficient Resources (SR), and Challenging Work (CW) were measured using single-item indicators. Although single-item measures have limitations, they were retained to ensure methodological consistency with previous library-specific studies and to reduce respondent burden. Multi-item scales were used for Organizational Encouragement (OE), Supervisory Encouragement (SE), and Work Group Support (WGS)
ii. Personality Traits: The Big Five Inventory (BFI) by John et al. (1991) was used to measure Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness
iii. Creativity: Librarians' creativity was assessed using the 7-item scale developed by Horng et al. (2014). While the authors were contacted regarding the use of the scale, no reply was received. Participants responded to items such as "I search out new technologies, processes, techniques, and/or product ideas." The Cronbach's α for this scale was 0.91.

These variables were examined individually to determine their relative contribution to creativity.

Data analysis

The 2.3.28 solid desktop version of Jamovi, an open-source tool, was used for data entry, reliability testing, and analysis. Multiple linear regression analysis was conducted to test the proposed hypotheses. Before analysis, the following assumption tests were performed to ensure the validity of the model:

- Independence: The Durbin-Watson statistic was 2.06, within the acceptable range of 1.50 to 2.50, indicating no autocorrelation among residuals
- Homoscedasticity: Visual inspection of the residuals plots showed no clear pattern (e.g., cone shape), suggesting the assumption of homoscedasticity was met (see Figure 3)
- Normality: The Q-Q plot indicated that the residuals aligned closely with the straight line, satisfying the normality assumption (see Figure 4)
- Collinearity: The Variance Inflation Factor (VIF) for each predictor was well below the threshold of 5 (see Table 4), indicating no strong multicollinearity between predictors.
- Influential Observations: Cook's distance values were all less than 1, indicating no influential outliers

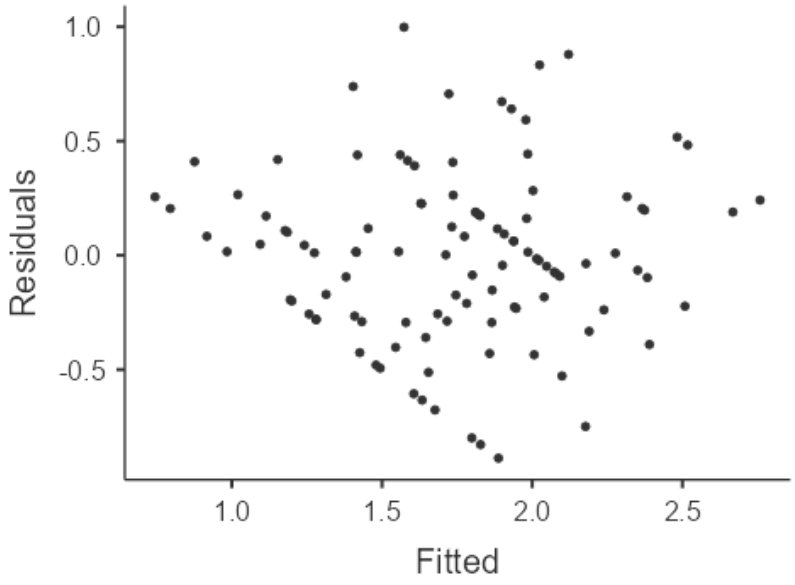


Figure 3: Residuals plot

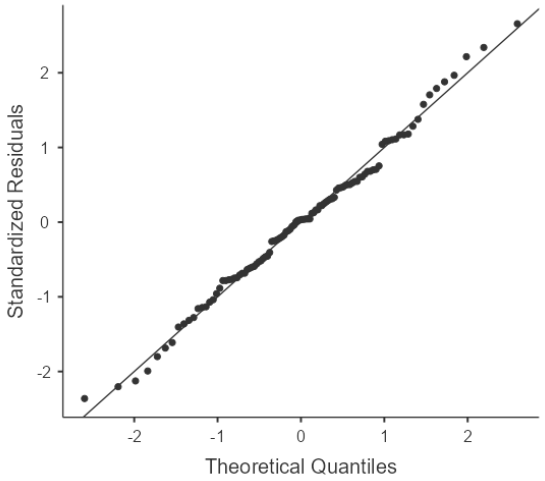


Figure 4: Q-Q Plot

As data were collected using a single self-report survey, there is a potential risk of Common Method Bias (CMB), which arises when measurement error is introduced by relying on a single data source and method, potentially inflating relationships among variables. To address this, several procedural remedies were implemented. First, respondent anonymity was ensured by not collecting identifying information, reducing social desirability bias. Second, the questionnaire was divided into separate sections, with work environment variables in the first section and personality and creativity measures in subsequent sections, creating psychological separation between predictor and criterion variables. These steps are consistent with recommended approaches for reducing common method bias in survey research (Podsakoff et al., 2003).

Reliability of instruments

To ensure the internal consistency of the instruments used, Cronbach's α coefficients were calculated. As shown in Table 3, the instruments demonstrated acceptable to excellent reliability.

Table 3: Reliability statistical test

Variable	Items	Cronbach's Alpha (α)	Interpretation
Environmental Factors			
Organizational Encouragement	4	0.90	Excellent
Supervisory Encouragement	5	0.93	Excellent
Work Group Support	6	0.95	Excellent
Personal Factors (Big Five)			
Extraversion	8	0.79	Acceptable
Agreeableness	9	0.76	Acceptable
Conscientiousness	9	0.85	Good
Neuroticism	8	0.83	Good
Openness to Experience	10	0.75	Acceptable
Creativity	7	0.91	Excellent

Note: Freedom, Sufficient Resources, and Challenging Work were measured using single-item indicators

Descriptive statistics

Table 4 presents the means and standard deviations for the study variables. The results indicate that librarians generally perceive their work environment positively, while personality traits vary within the sample.

Table 4: Descriptive Statistics (N=106)

Variables	Sub Variable	Mean (*M*)	Std. Deviation (*SD*)
Environmental Factors	Organizational Encouragement	1.54	0.62
	Supervisory Encouragement	1.67	0.74
	Work Group Support	1.58	0.67
	Freedom	1.75	0.82
	Sufficient Resources	2.03	0.92
	Challenging Work	1.63	0.71
Personal Factors (Big Five)	Extraversion	2.29	0.60
	Agreeableness	1.82	0.53
	Conscientiousness	1.84	0.58
	Neuroticism	3.66	0.74
	Openness to Experience	2.15	0.48
Creativity	Creativity	1.74	0.56

RESULTS

i. Environmental factors influencing creativity

Among the environmental variables, only Work Group Support significantly predicted creativity (B = 0.20, p = .043), indicating that for every unit increase in work group support, creativity increases by 0.20 units, supporting H3. This highlights the importance of a collaborative and supportive team environment in fostering creative behaviour.

In contrast, Organisational Encouragement (B = -0.01, p = .912), Supervisory Encouragement (B = 0.01, p = .866), Freedom (B = 0.05, p = .465), Sufficient Resources (B = -0.04, p = .476), and Challenging Work (B = 0.02, p = .789) did not significantly predict creativity; therefore, H1, H2, H4, H5, and H6 were not supported. These findings suggest that structural and resource-based factors may not uniformly influence creativity across different contexts. While traditional frameworks emphasise the importance of organisational support, the present findings indicate that such factors may be less influential in resource-constrained environments, where interpersonal dynamics and intrinsic motivation play a more central role in shaping creative outcomes. This may also reflect a form of adaptive creativity, where individuals continue to generate innovative ideas despite limited access to formal support systems and resources.

ii. Personality traits influencing creativity

This objective examined how personality traits affect creativity among librarians. The results indicate that Openness to Experience is the strongest positive predictor of creativity (B = 0.69, p < .001), suggesting that individuals who are more curious, imaginative, and open to new ideas are more likely to engage in creative behaviours. Conversely, Neuroticism showed a significant negative relationship with creativity (B = -0.25, p < .001), supporting H10. This finding suggests that emotional instability may hinder creative engagement, consistent with studies indicating that anxiety and stress can limit risk-taking and idea generation.

However, Extraversion (B = 0.01, p = .945), Agreeableness (B = -0.17, p = .066), and Conscientiousness (B = -0.02, p = .856) did not significantly predict creativity; therefore, H7, H8, and H9 were not supported. These findings support studies suggesting that these traits may have more context-dependent relationships with creative performance and highlight that not all personality traits contribute equally to creativity.

iii. Predictive relationship of environmental and personality variables on creativity

The findings address the third objective by demonstrating the predictive relationship between environmental and personality variables and librarian creativity. The multiple regression analysis revealed that not all variables contributed equally to the model. Among the environmental factors, only Work Group Support significantly predicted creativity, while Openness to Experience and Neuroticism emerged as significant personality predictors. These results suggest that creativity among librarians is influenced more strongly by interpersonal and individual factors than by formal organisational or resource-related conditions. In resource-constrained settings, this combination of supportive peer relationships and adaptive individual traits may help sustain creative performance despite institutional limitations.

The regression analysis supports these findings. The overall model was statistically significant and explained a substantial proportion of the variance in creativity (R^2 = .553), indicating that the combined set of environmental and personality variables meaningfully

predicts creative outcomes. Consistent with the first research objective, Work Group Support was the only significant environmental predictor. In line with the second research objective, Openness to Experience was the strongest positive predictor, while Neuroticism showed a significant negative relationship with creativity. Taken together, these findings address the third objective by showing how environmental and personality factors jointly influence creativity.

Table 5 presents the results of the multiple linear regression analysis. The regression model was statistically significant ($F(11, 94) = 10.57, p < .001$), explaining approximately 55.3% of the variance in creativity ($R^2 = .553$).

Table 5: Regression analysis of environmental and personality factors on creativity

Predictor	B	SE	t	p-value	VIF
(Constant)	1.13	0.34	3.31	.001	—
Environmental Factors					
Organizational Encouragement	-0.01	0.10	-0.11	.912	2.54
Supervisory Encouragement	0.01	0.09	0.17	.866	2.77
Work Group Support	0.20	0.10	2.05	.043*	2.85
Freedom	0.05	0.07	0.73	.465	1.91
Sufficient Resources	-0.04	0.05	-0.72	.476	1.64
Challenging Work	0.02	0.08	0.27	.789	2.10
Personal Factors (Big Five)					
Extraversion	0.01	0.09	0.07	.945	1.73
Agreeableness	-0.17	0.09	-1.86	.066	1.61
Conscientiousness	-0.02	0.09	-0.18	.856	1.84
Neuroticism	-0.25	0.06	-4.23	<.001*	1.24
Openness to Experience	0.69	0.10	6.86	<.001*	1.58

*Note: Dependent Variable = Creativity. *R*^2 = .553. *Significant at p < .05.*
VIF values ranged from 1.24 to 2.85, indicating no multicollinearity concerns.

DISCUSSION

This study offers insights into the relative influence of environmental and personality factors on creativity among librarians in the Philippines. Rather than merely confirming expected relationships, the findings reveal a notable pattern in which interpersonal dynamics and individual dispositions play a more significant role than formal organisational structures. Work Group Support emerged as the only significant environmental predictor of creativity, highlighting the importance of collaboration, trust, and open communication in fostering creativity. This finding aligns with studies emphasising team interaction and knowledge exchange in enhancing creativity (Pérez-Luño et al., 2023). In libraries, where work is inherently collaborative, peer support may serve as a more immediate driver of creativity than formal organisational policies.

Conversely, the non-significant effects of Organisational Encouragement, Supervisory Encouragement, Freedom, Sufficient Resources, and Challenging Work suggest that structural and resource-based factors may not uniformly influence creativity. While traditional frameworks emphasise organisational support, these findings indicate that such factors may be less influential in resource-constrained environments. This may encourage adaptive creativity, where individuals generate innovative ideas despite limited resources. Regarding personality traits, Openness to Experience emerged as the strongest positive predictor of creativity, reinforcing its well-established role in creativity research (Awawdeh

& Lian, 2023; Petrou et al., 2023). Individuals high in openness tend to display greater cognitive flexibility and a willingness to explore novel ideas. In contrast, Neuroticism showed a significant negative relationship with creativity, indicating that emotional instability may hinder creative behaviour. This supports research suggesting that anxiety and stress can limit risk-taking and idea generation, although this may vary depending on context.
Extraversion, Agreeableness, and Conscientiousness did not significantly predict creativity, supporting studies suggesting these traits have more context-dependent relationships with creative performance. This demonstrates that not all personality traits contribute equally to creativity, with openness remaining the most consistent predictor. These findings suggest that creativity among librarians is shaped by both individual dispositions and environmental conditions, although not all environmental factors exert equal influence. While personality traits, particularly Openness to Experience, play a dominant role, the significance of Work Group Support highlights the importance of relational aspects of the work environment. These results reflect a nuanced form of dual influence, where creativity is driven by a combination of internal traits and selected social environmental factors rather than formal organisational structures alone.

CONCLUSIONS

This study highlights the dual influence of environment and personality on the creativity of Filipino librarians. The findings reveal that Openness to Experience and Work Group Support are significant drivers of creativity, while Neuroticism acts as a barrier. Notably, the lack of significance for Sufficient Resources suggests that Filipino librarians may be resilient, finding ways to be creative despite the resource constraints typical of the local setting (Coveney, 2008). Theoretically, this study validates the applicability of Amabile's Componential Model in the Philippine context. Practically, library administrators should focus on cultivating "soft" environmental supports, such as encouraging new ideas and fostering supportive supervision, which are cost-effective ways to boost innovation even when financial resources are scarce.

Several limitations should be noted. First, the use of convenience sampling and a modest sample size (N = 106) limits the generalisability of the findings to the broader population of Philippine librarians. As participation was voluntary and non-random, the sample may not fully represent the diversity of librarians across institutional types and geographic regions. However, this approach was considered appropriate for an exploratory study aimed at identifying preliminary relationships among the variables. Secondly, following the precedent of Coveney (2008) and Ibegbulam et al. (2017), this study used single-item measures for Freedom, Resources, and Challenging Work. Although single-item measures may reduce the depth and reliability of construct measurement compared to multi-item scales, they were adopted to maintain consistency with prior library-focused studies and to minimise respondent fatigue in a lengthy survey instrument. Future studies should employ multi-item scales to strengthen construct validity and improve measurement precision. The study relied on quantitative survey data, which may not fully capture the contextual and experiential dimensions of creativity among librarians. Future research could adopt qualitative approaches to gain deeper insights into how Filipino librarians navigate resource constraints and sustain creative practices within their institutional environments.

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CONFLICT OF INTEREST

The author has no relevant competing interests to declare.

ETHICAL APPROVAL AND INFORMED CONSENT STATEMENTS

This study involved minimal-risk survey procedures. Participation was voluntary, and informed consent was obtained from all respondents before data collection. Measures were taken to ensure confidentiality and anonymity, including the exclusion of identifying information and secure handling of data, in accordance with relevant ethical guidelines, respondents were required to complete an informed consent form before proceeding with the survey questionnaire.

REFERENCES

Adiatama, P. (2021). Librarian Creativity to Improve Library Services and Librarian Performance. *Record and Library Journal*, *7*(2), 333–341. https://doi.org/10.20473/rlj.v7i2.195.

Aldabbas, H., Pinnington, A., & Lahrech, A. (2022). Encouraging more creativity in organizations: The importance of employees' intrinsic motivation and work engagement. *International Journal of Organizational Analysis*, *31*(6), 2337–2358. https://doi.org/10.1108/ijoa-11-2021-3038.

Alsakarneh, A., Allozi, A., Albdour, A. W. M., Ebbini, M. M. M., Alzoubi, H. M., Sakarneh, B., & Eneizan, B. (2025). An assessment of the influence of job demands on employee creativity and affective states. *Heritage and Sustainable Development, 7*(1), 491–506. https://doi.org/10.37868/hsd.v7i1.1083.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, *45*(2), 357–376. https://doi.org/10.1037/0022-3514.45.2.357.

Amabile, T. M. (1995). KEYS: Assessing the climate for creativity. Greensboro, NC: Center for Creative Leadership.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, *39*(5), 1154–1184. https://doi.org/10.5465/256995.

Ashiq, M., Jabeen, F., & Mahmood, K. (2022). Workplace creativity and job satisfaction of academic librarians: A perspective of distributed leadership theory. *Information Development*, *39*(3), 500–511. https://doi.org/10.1177/02666669221136864.

Awawdeh, M. N., & Lim, H. L. (2023). The relationship of creativity domains with Big Five personality traits: A structural equation modelling analysis. *International Journal of Education, Psychology and Counseling, 8*(50), 68–80. https://gaexcellence.com/ijepc/article/download/3625/3292/12857.

Axelsson, P., & Sardari, N. (2011). *A framework to assess organizational creative climate* (Report No. E 2011:022) [Master's thesis, Chalmers University of Technology]. Chalmers Publication Library. https://publications.lib.chalmers.se/records/fulltext/143951.pdf.

Batey, M., & Hughes, D. J. (2017). Individual difference correlates of Self-Perceptions of creativity. *The Cambridge handbook of creativity* (pp. 185–218). https://doi.org/10.1016/b978-0-12-809790-8.00011-x.

Biranvand, A., Soheili, F., & Khasseh, A. A. (2015). Creativity of librarians in public libraries: case study of public libraries of Fars Province (Iran). *Library Philosophy and Practice*, 1. https://scholarworks.sjsu.edu/cgi/viewcontent.cgi?article3505&context=libphilprac

Burke, W. W. (1995). Organization change. *Journal of Management Inquiry*, *4*(2), 158–171. https://doi.org/10.1177/105649269542006.

Caniëls, M. C. J., Chini, B., & Ooms, W. (2015). Haal het meest uit creatief potentieel: De rol van werkdruk en uitdaging in organisaties. *Gedrag & Organisatie, 28*(2), 98–117. https://doi.org/10.5117/2015.028.002.003.

Carmeli, A., Cohen-Meitar, R., & Elizur, D. (2007). The role of job challenge and organizational identification in enhancing creative behavior among employees in the workplace. *Social Science Research Network.* https://doi.org/10.2139/ssrn.1649140.

Çemberçi, M., & Civelek, M. E. (2018). *The effects of organizational support in team working on creativity and personal initiative of employees.* Social Science Research Network. http://acikerisim.ticaret.edu.tr/xmlui/handle/11467/1923.

Chang, J. W., Huang, D. W., & Choi, J. N. (2012). Is task autonomy beneficial for creativity? Prior task experience and Self-Control as boundary conditions. Social Behavior and Personality, 40(5), 705–724. https://doi.org/10.2224/sbp.2012.40.5.705.

Chiang, Y., Hsu, C., & Shih, H. (2017). Extroversion personality, domain knowledge, and the creativity of new product development engineers. *Creativity Research Journal*, *29*(4), 387–396. https://doi.org/10.1080/10400419.2017.1376501.

Chiu, D. K. W., & Wong, S. W. S. (2023). Reevaluating Remote Library Storage in the Digital Age: A Comparative Study. *Portal: Libraries and the Academy*, *23*(1), 89–109. https://doi.org/10.1353/pla.2023.0009.

Coveney, B. C. H. (2008). Assessing the organisational climate for creativity in a UK public library service: A case study. *Library and Information Research*, *32*(102), 38–56. https://doi.org/10.29173/lirg83.

Oldham, G. R., & Cummings, A. (1996). EMPLOYEE CREATIVITY: PERSONAL AND CONTEXTUAL FACTORS AT WORK. *Academy of Management Journal*, *39*(3), 607–634. https://doi.org/10.2307/256657.

Dailey, S. L., & Devlin, M. B. (2025). Got Creatives? The role of identity and workplace environment in retaining creative professionals. *International Journal of Business Communication*. https://doi.org/10.1177/23294884251350274.

Dul, J., Ceylan, C., & Jaspers, F. (2011). Knowledge workers' creativity and the role of the physical work environment. *Human Resource Management*, *50*(6), 715–734. https://doi.org/10.1002/hrm.20454.

Fajagutana, A. B., & Guhao, E. S., Jr. (2022). Structural equation model on creativity and innovation of library personnel in Davao Region. *The International Journal of Business Management and Technology, 6*(2), 139–176. https://doi.org/10.21203/rs.3.rs-1390599/v.

Fink, A., & Neubauer, A. C. (2008). Eysenck meets Martindale: The relationship between extraversion and originality from the neuroscientific perspective. *Personality and Individual Differences*, 44(1), 299–310. https://doi.org/10.1016/j.paid.2007.08.010.

Fino, E., & Sun, S. (2022). "Let us create!": The mediating role of creative self-efficacy between personality and mental well-Being in university students. *Personality and Individual Differences*, 188, 111444. https://doi.org/10.1016/j.paid.2021.111444.

Ford, C. M. (1996). A Theory of Individual Creative Action in Multiple Social Domains. The Academy of Management Review, 21(4), 1112. https://doi.org/10.2307/259166.

Gao, Y., Zhang, D., Ma, H., & Du, X. (2020). Exploring creative entrepreneurs' IEO: extraversion, neuroticism and creativity. *Frontiers in Psychology*, *11*, 2170. https://doi.org/10.3389/fpsyg.2020.02170.

Gichohi, P.M. (2014). The role of employee engagement in revitalizing creativity and innovation at the workplace: A survey of selected libraries in Meru County,Kenya. *Library Philosophy and Practice*, 1. https://scholarworks.sjsu.edu/libphilprac/1171/.

Granger, S. (2020). How research reproducibility challenges librarians' skill sets. A French librarian's perspective. *Journal for Reproducibility in Neuroscience*, *2*. https://doi.org/10.31885/jrn.2.2021.1450.

Green, S. B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research, 26*(3), 499–510. https://doi.org/10.1207/s15327906mbr2603_7.

Gu, Q. X., Yu, M. C., & Guan, Y. (2013). Linking personality traits and job satisfaction to creativity. In *Proceedings of the 2013 International Conference on Advanced Computer Science and Electronics Information (ICACSEI 2013)*. https://doi.org/10.2991/icacsei.2013.118.

Horng, J., Tsai, C., Liu, C., & Chung, D. Y. (2014). Measuring Employee's Creativity: A new theoretical model and Empirical Study for tourism industry. *Asia Pacific Journal of Tourism Research*, *20*(12), 1353–1373. https://doi.org/10.1080/10941665.2014.977927.

Hourston, S. (2006). Creativity and the resilient health librarian. *Journal of the Canadian Health Libraries Association / Journal De L Association De Bilbiothèques De La Santé Du Canada*, *27*(2), 35. https://doi.org/10.5596/c06-014.

Ibegbulam, I. J., Eze, J. U., & Akpom, C. C. (2017). Investigating the Organizational Climate for Creativity/Innovation among Librarians in Academic Libraries in South East Nigeria. *Libri*, 67(1). https://doi.org/10.1515/libri-2016-0101.

Ikonne, C. N., & Onuoha, U. D. (2015). Factors influencing job satisfaction of librarian in federal and state university libraries in Southern Nigeria. *OALib*, *02*(02), 1–9. https://doi.org/10.4236/oalib.1101337.

Ilesanmi, T. C. (2013). Roles of the librarian in a research library in the digital era: Challenges and the way forward. *New Review of Academic Librarianship, 19*(1), 5–14. https://doi.org/10.1080/13614533.2012.740437.

Jeong, S., McLean, G. N., McLean, L. D., Yoo, S., & Bartlett, K. (2017). The moderating role of non-controlling supervision and organizational learning culture on employee creativity. *European Journal of Training and Development*, *41*(7), 647–666. https://doi.org/10.1108/ejtd-03-2017-0025.

Jirásek, M., & Sudzina, F. (2020). Big Five Personality Traits and Creativity. *Quality Innovation Prosperity*, *24*(3), 90-105. https://www.qip-journal.eu/index.php/QIP/article/view/1509/1226.

John, O. P., Donahue, E. M. & Kentle, R. L. (1991). *The Big Five Inventory--Versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.

Karwowski, M., & Lebuda, I. (2016). The big five, the huge two, and creative self-beliefs: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, *10*(2), 214–232. https://doi.org/10.1037/aca0000035.

Kaspi-Baruch, O. (2017). Big Five Personality and Creativity: The moderating effect of motivational goal orientation. *The Journal of Creative Behavior*, *53*(3), 325–338. https://doi.org/10.1002/jocb.183.

King, L. A., Walker, L. M., & Broyles, S. J. (1996). Creativity and the Five-Factor model. *Journal of Research in Personality*, *30*(2), 189–203. https://doi.org/10.1006/jrpe.1996.0013.

Kivrak, F. H., Arslan, M., & Adarves-Yorno, I. (2025). The impact of job autonomy on employee creativity: examining perceived supervisor support as a mediator and job difficulty as a moderator. *Global Business Review*. https://doi.org/10.1177/09721509251313909.

Lee, D. S., Lee, K. C., & Jo, N. Y. (2012). The influence of Team-Member exchange on self-reported creativity in the Korean information and communication technology (ICT) industry. In *Lecture notes in computer science* (pp. 47–54). https://doi.org/10.1007/978-3-642-28493-9_6.

Lee, S., Kwon, E., & Lee, J. (2022). The effect of openness to experience and perceived organizational support for creativity on creative performance: *Korean Journal of Industrial and Organizational Psychology*, *35*(3), 675–699. https://doi.org/10.24230/kjiop.v35i3.675-699.

Leung, A. K., Liou, S., Qiu, L., Kwan, L. Y., Chiu, C., & Yong, J. C. (2014). The role of instrumental emotion regulation in the emotions–creativity link: How worries render individuals with high neuroticism more creative. *Emotion*, *14*(5), 846–856. https://doi.org/10.1037/a0036965.

Litwin, G. H., & Stringer, R. A. (1969). Motivation and organizational climate. the American *Journal of Psychology/American Journal of Psychology*, *82*(4), 554. https://doi.org/10.2307/1420456.

Lu, J. (2024). Research on the innovation of management and service models of university libraries in the Information Age. *Humanities and Social Science Research*, *7*(3), 80. https://doi.org/10.30560/hssr.v7n3p80.

Meng, J., & Liu, Z. (2023). Examining the effect of challenging and threatening work stress on employees' innovative behavior. *Social Behavior and Personality*, *51*(4), 1–12. https://doi.org/10.2224/sbp.12144.

Nam, N. K., & Nga, N. T. H. (2024). Influence of personality traits on creativity and innovative work behavior of employees. *Problems and Perspectives in Management*, 22(2), 389–398. https://doi.org/10.21511/ppm.22(2).2024.30.

Naz, F., & Rafique, G. M. (2025). Effect of digital literacy skills on work performance and creativity: A case of college librarians in Punjab, Pakistan. *Journal of Information Management and Practices,* *5*(2). https://journals.iub.edu.pk/index.php/jimp/article/view/4130.

Nijstad, B., Calic, G., De Faria, P., Grimpe, C., & Kauppila, O. (2025). Connecting creativity and innovation research: Building bridges to cross divides. *Research Policy*, *55*(2), 105391. https://doi.org/10.1016/j.respol.2025.105391.

Ogunjimi, A. O. (2020). Innovative thinking skills for 21st century librarians. In *Advances in library and information science (ALIS) book series*. https://doi.org/10.4018/978-1-7998-1116-9.ch011.

Oguntoye, F. B., Oyeniran, S. A., & Ajibare, O. O. (2025). Influence of personality traits on knowledge creation among librarians in university libraries in Ogun State, Nigeria. *Journal of Library Services and Technologies,* *7*(4), 1–14. https://doi.org/10.47524/jlst.v7i4.15.

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, *39*(3), 607–634. https://doi.org/10.2307/256657.

Omilion-Hodges, L. M., & Ackerman, C. D. (2017). From the Technical Know-How to the free flow of Ideas: Exploring the effects of leader, peer, and team communication on

employee creativity. *Communication Quarterly*, *66*(1), 38–57. https://doi.org/10.1080/01463373.2017.1325385.

Onuoha, C.O., Anyanwu, E.U., Ossai-Onah, O.V. & Amaechi, N.M. (2015). Challenges of promoting innovation and creativity among library and information science professionals in Nigeria: The experience of selected libraries in Imo State, Nigeria. *Journal of Emerging Trends in Computing and Information Sciences*, 6(1): 25 – 30.

Oraekwe, I. N. (2024). Organizational climate factors in job creativity of university librarians in Anambra State. *Information Impact: Journal of Information and Knowledge Management, 14*(2), 34–45. https://doi.org/10.4314/iijikm.v14i2.3.

Paulus, P. B., & Nijstad, B. A. (2003). Group Creativity. In *Oxford University Press eBooks*. https://doi.org/10.1093/acprof:oso/9780195147308.001.0001.

Peljko, Ž., & Antončič, J. A. (2022). Impacts of entrepreneurial openness and creativity on company growth. *Frontiers in Psychology*, 13. https://doi.org/10.3389/fpsyg.2022.860382.

Pérez-Luño, A., Aguilar-Caro, R., & Muñoz-Doyague, M. F. (2023). The influence of personality and team-member exchange on creativity: a gendered approach. *Gender in Management an International Journal*, *39*(1), 145–164. https://doi.org/10.1108/gm-01-2022-0023.

Petrou, P., Van Der Linden, D., & Bakker, A. B. (2023). Effects of openness on incremental versus radical creativity and the moderating role of leader behaviors. *Journal of Individual Differences*, *44*(3), 190–204. https://doi.org/10.1027/1614-0001/a000393.

Pienaar, H., & Boshoff, A. B. (1996). Relationship between creativity and innovation in university libraries and the organizational climate. *South African Journal of Library & Information Science,* 64(2), 67-75

Pickering, A. D., Smillie, L. D., & DeYoung, C. G. (2015). Neurotic Individuals are not Creative Thinkers. *Trends in Cognitive Sciences*, *20*(1), 1–2. https://doi.org/10.1016/j.tics.2015.10.001.

Prince, N. (2023). Continuing education and data training initiatives are needed to positively impact academic librarians providing data services. *Evidence Based Library and Information Practice, 18*(3), 81–83. https://doi.org/10.18438/eblip30382.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879.

Qahl, M., & Sohaib, O. (2023). Key factors for a creative environment in Saudi Arabian higher education institutions. *Journal of Information Technology Education: Innovations in Practice, 22*, 1–48. https://doi.org/10.28945/5105.

Rifaudeen, M. M. (2015). *Information management in libraries and its impact on sustainable library and information services with special reference to university libraries of Sri Lanka*. http://ir.lib.seu.ac.lk/xmlui/handle/123456789/1287.

Sahabi, M. K., & Otobo, E. E. (2022). Academic library and challenges of service delivery in Nigerian universities in the digital era. *Information Impact: Journal of Information and Knowledge Management, 12*(2), 51–61. https://doi.org/10.4314/iijikm.v12i2.4.

Saihani, S. B., Alam, S. S., Abdul, A. J., & Sarbini, S. (n.d.). The effect of big five personality in creative decision making. In *Creativity, Innovation and Management Abstracts of the 10th International Conference 2009 Sousse, Tunisia, 25–28 November*. https://www.fm-kp.si/zalozba/isbn/978-961-266-047-5/abstracts/MIC4271.pdf.

Saputri, N. (2022). Library organization issues in the digital era (Case Study: Copyright and Plagiarism in The Library Environment). *JPUA: Jurnal Perpustakaan Universitas Airlangga: Media Informasi Dan Komunikasi Kepustakawanan*, *12*(1), 26–38. https://doi.org/10.20473/jpua.v12i1.2022.26-38.

Shalley, C. E. (1991). Effects of productivity goals, creativity goals, and personal discretion on individual creativity. *Journal of Applied Psychology*, *76*(2), 179–185. https://doi.org/10.1037/0021-9010.76.2.179.

Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The Effects of Personal and Contextual Characteristics on Creativity: Where Should We Go from Here? *Journal of Management*, *30*(6), 933–958. https://doi.org/10.1016/j.jm.2004.06.007.

Shaw, A., & Yu, Q. (2023). Different personality factors drive work and non-work creativity. Frontiers in Psychology, 14, 1078874. https://doi.org/10.3389/fpsyg.2023.1078874.

Silvia, P. J., Kaufman, J. C., Reiter-Palmon, R., & Wigert, B. (2011). Cantankerous creativity: Honesty–Humility, Agreeableness, and the HEXACO structure of creative achievement. *Personality and Individual Differences*, *51*(5), 687–689. https://doi.org/10.1016/j.paid.2011.06.011.

Smith, K., Pickering, A., & Bhattacharya, J. (2022). The creative llife: a daily diary study of creativity, affect, and well-Being in creative individuals. *Creativity Research Journal, 34*(4), 460–479. https://doi.org/10.1080/10400419.2022.2122371.

Sun, Y., Hu, X., & Ding, Y. (2019). Learning or Relaxing: How do challenge stressors stimulate employee creativity? *Sustainability*, *11*(6), 1779. https://doi.org/10.3390/su11061779.

Sung, S. Y., & Choi, J. N. (2009). Do big five personality factors affect individual creativity? The moderating role of extrinsic motivation. *Social Behavior and Personality*, *37*(7), 941–956. https://doi.org/10.2224/sbp.2009.37.7.941.

Tierney, P., & Farmer, S. M. (2011). Creative self-efficacy development and creative performance over time. *Journal of Applied Psychology*, *96*(2), 277–293. https://doi.org/10.1037/a0020952.

Thuan, L. C. (2020). The role of supervisor knowledge sharing behavior in stimulating subordinate creativity. *VINE Journal of Information and Knowledge Management Systems*, *50*(4), 597–613. https://doi.org/10.1108/vjikms-08-2019-0124.

Ullah, A., Usman, M., & Khan, M. K. (2023). Challenges in delivering modern library services in the 21st century. *International Journal of Social Science Exceptional Research, 2*(6), 146–151. https://doi.org/10.54660/ijsser.2023.2.6.146-151.

Weber, M. B. (2016). Editorial: Creativity and innovation. *Library Resources & Technical Services*, *60*(3), 138–139. https://doi.org/10.5860/lrts.60n3.138.

Xu, H., & Brucks, M. (2011). Are neurotics really more creative? Neuroticism's interaction with mortality salience in determining creative interest. *Basic and Applied Social Psychology, 33*(1), 88–99. https://doi.org/10.1080/01973533.2010.539962.

Xu, S., Jiang, X., Li, J., & Tong, X. (2018). How does Conscientiousness Relate to Employee Creativity? A Study on Chinese Technical Workers. *Academy of Management Proceedings*, *2018*(1), 10714. https://doi.org/10.5465/ambpp.2018.10714abstract.

Zhang, W., Xu, F., & Sun, B. (2020). Openness to experience, job characteristics, and employee creativity: An interactionist perspective. *Social Behavior and Personality, 48(*4), 1–12. https://doi.org/10.2224/sbp.9047.

Appendix 1: The research variables and survey items

Environmental Factors	Number of Items	Item
Organization Encouragement	4	▪ Creative work is valued and recognised in my organisation ▪ We are encouraged to initiate and develop new ideas ▪ We know what our organisation aims to achieve ▪ People receive fair and constructive feedback on their new ideas
Supervisory Encouragement	5	▪ My immediate supervisor serves as a good role model ▪ My immediate supervisor shows confidence in my ability ▪ My immediate supervisor sets targets appropriately ▪ I can relate freely and openly with my immediate supervisor ▪ My immediate supervisor encourages me to take risks, and accepts failure
Work Group Support	6	▪ We get along well and treat each other fairly ▪ Our different backgrounds enable us to develop new ideas ▪ We constructively challenge each other's ideas ▪ We respect everyone's contributions ▪ We share a commitment to making our project a success ▪ We consult each other for a variety of opinions to resolve problems
Freedom	1	▪ I have the freedom to decide how I will carry out my work
Sufficient Resources	1	▪ Generally, I can access the resources I need for my work
Challenging Work	1	▪ My work provides stimulating challenges
Personality Traits		
Extraversion	8	I see myself as someone who: ▪ Is sociable ▪ Has an assertive personality ▪ Is full of energy ▪ Generates a lot of enthusiasm ▪ Likes communicating with others ▪ Tends to be quiet ▪ Is reserved ▪ Is sometimes shy

Agreeableness	9	I see myself as someone who: ▪ Is generally trusting ▪ Is helpful and unselfish with others ▪ Has a forgiving nature ▪ Likes to cooperate with others ▪ Is considerate and kind to almost everyone ▪ Starts arguments with others ▪ Can be cold and aloof ▪ Is sometimes rude to others ▪ Tends to find faults with others
Conscientiousness	9	I see myself as someone who: ▪ Makes plans and follows through with them ▪ Is a reliable worker ▪ Does things efficiently ▪ Does a thorough job ▪ Continues until the task is finished ▪ Tends to be disorganised ▪ Tends to be lazy ▪ Can be somewhat careless ▪ Is easily distracted
Neuroticism	8	I see myself as someone who: ▪ Is relaxed and handles stress well ▪ Is emotionally stable ▪ Remains calm in tense situations ▪ Worries a lot ▪ Is depressed ▪ Can be tense ▪ Gets nervous easily ▪ Can be moody ▪
Openness to Experience	10	I see myself as someone who: ▪ Is original, comes up with new ideas ▪ Likes to reflect with ideas ▪ Is inventive ▪ Is sophisticated in art, music, and/or literature ▪ Is a deep thinker ▪ Is curious about many different things ▪ Has an active imagination ▪ Values artistic, aesthetic experiences ▪ Prefers work that is routine ▪ Has few artistic interests
Creativity	7	▪ I come up with new and practical ideas to improve performance ▪ I search out new technologies, processes, techniques, and/or product ideas ▪ I suggest new ways to increase quality ▪ I am a good source of creative ideas ▪ I am not afraid to take risks

- I develop adequate plans and schedules for implementing new ideas
- I often have a fresh approach to problems

Note: The overall mean for each variable was used for measurement. Items marked with an asterisk (*) were reverse coded