The mediating role of transformational leadership and perceived use of artificial intelligence in the effect of happiness on innovative work behavior

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ABSTRACT

Innovative work behavior among medical personnel is a critical factor in improving the quality of hospital health services, as it contributes to work effectiveness and service excellence. This study aims to examine the effect of happiness on innovative work behavior, with transformational leadership and perceived use of artificial intelligence (AI) as mediating variables among medical staff. The research population comprises all medical personnel at RS Islam Purwokerto, with purposive sampling employed to obtain 184 respondents as the study sample. The study applies SEM-PLS analysis using SmartPLS 4.0 and adopts Social Exchange Theory as the theoretical framework for explaining the relationships among variables. The findings indicate that happiness has a positive and significant effect on innovative work behavior, both directly and indirectly through the mediation of perceived AI use. However, transformational leadership is not proven to mediate the effect of happiness on innovative work behavior. This study highlights the importance for hospitals to foster a work environment that supports the psychological well-being of medical personnel and to optimize positive perceptions of AI use through appropriate training and governance in order to effectively support innovation.

Keywords: *Happiness; Transformational Leadership; Innovative Work Behavior; Perceived Use of Artificial Intelligence*

INTRODUCTION

Hospitals are a form of service-oriented organization that offer intangible products, namely healthcare services, whose delivery is highly dependent on the role of human resources (Ferry et al., 2021). Societal demands for healthcare facilities require hospitals to remain prepared and capable of adapting to the dynamic number and characteristics of patients served (Ekawati & Andriani, 2022). Therefore, the enhancement of hospital operational activities and service delivery necessitates human resources with adequate capabilities, energy, and fresh, innovative ideas (Setianto et al., 2022). Hospitals and other healthcare facilities are currently required to keep pace with changes in technology, service delivery, and increasingly diverse patient needs (Hanna et al., 2024).

Interviews with the Human Resources department at RS Islam Purwokerto revealed gaps in training. There is a lack of sessions on the importance of medical personnel's happiness in performance and on fostering work innovation through technologies like artificial intelligence (AI). This lack of emphasis on psychological factors and technological literacy points to shortcomings in developing medical staff capacity. As a result, RS Islam Purwokerto faces challenges in innovative work behavior (IWB), transformational leadership, and perceptions of AI use. Medical personnel need strong innovation skills to meet workload demands, technological changes, and efficiency goals. However, differences in innovation levels, leadership quality, and views on technology show that these factors remain critical issues for study. There is a clear need to understand how IWB is formed and the roles of happiness, transformational leadership, and AI perceptions as its driving factors.

Innovative work behavior among medical personnel is an important strategy for organizational competitiveness (Elkholy et al., 2024). IWB refers to employees' attitudes in generating ideas, proposing concepts, and implementing innovative solutions at work (Setyowati & Etikariena, 2019). IWB reflects an individual's contribution to improving efficiency, productivity, and organizational progress by introducing or developing new ideas, processes, products, or services (Yusufa et al., 2023). In hospitals, IWB is especially important due to the complexity of healthcare services. Happiness (Hasanati et al., 2025), transformational leadership (Grošelj et al., 2020), and the use of artificial intelligence (Alagele et al., 2025) are all factors that can influence IWB.

Happiness, as a fundamental psychological factor, has the potential to influence transformational leadership. Happiness is understood as a positive self-evaluation of one's life (Torres et al., 2025) and can enhance well-being, creativity, and innovative behavior (Butt et al., 2020). Previous studies by Agaoglu et al. (2025), Canal Carrillo et al. (2023), Conesa et al. (2024), and Torres et al. (2025) confirm that happiness has a positive effect on transformational leadership. In addition, happiness can also influence perceptions of AI use. Stable and positive emotional conditions make medical personnel more open to change and more receptive to new technologies (Fadila et al., 2025). Agaoglu et al. (2025) demonstrated that happiness has a significant effect on perceptions of AI use. However, Suhartono et al. (2023) reported that happiness does not influence transformational leadership.

Moreover, happiness is a factor that influences IWB (Fadila et al., 2025). Torres et al. (2025) happiness is a global positive self-evaluation of life. Work happiness contributes to individual well-being and it affects job performance, creativity, innovation in organizations (Butt et al., 2020). Positive emotions derived from happiness can stimulate creative thinking processes, foster self-confidence in expressing ideas, and increase the likelihood of innovation in daily work activities (Fadila et al., 2025). Previous studies by Agaoglu et al. (2025), Fadila et al. (2025), and Hasanati et al. (2025) report that

happiness has a positive and significant effect on innovative work behavior. Happiness stimulates individuals to think more openly and divergently, which forms the primary foundation for innovation processes (Fadila et al., 2025). However, Al-Shami et al. (2023) found that happiness does not affect IWB.

Transformational leadership is subsequently positioned as an important factor influencing innovative work behavior. Innovation can be fostered by transformational leaders who can inspire, envision, and support creativity (Karimi et al., 2023). Empirical evidence from Agaoglu et al. (2025), Grošelj et al. (2020), Karimi et al. (2023), Lin (2023), and Messmann et al. (2022) confirms that transformational leadership has a positive and significant effect on innovative work behavior. However, Az Zahra & Etikariena (2024) reported that transformational leadership does not influence innovative work behavior.

In addition, perceptions of AI use are also considered to influence innovative work behavior. AI technologies that are perceived as useful can encourage medical personnel to develop new ideas to improve service quality (Elkholy et al., 2024). Studies by Agaoglu et al. (2025), Alagele et al. (2025), Atalla et al. (2024), Elkholy et al. (2024), dan Verma & Singh (2022) indicate that perceptions of AI use have a positive and significant effect on innovative work behavior.

According to Agaoglu et al. (2025), happiness does not have a completely direct impact on IWB, for it is mediated by transformational leadership that can help transfer positive employee emotions into innovative behaviors at the workplace. High subjective well-being people tend to possess greater self-leadership qualities, which in turn translate into more effective leadership behaviors (Torres et al., 2025). by making followers inspired and come up with innovative ideas, will push employees to seek new way of viewing their work (Karimi et al., 2023).

The perception of artificial intelligence use (Agaoglu et al., 2025) is also something that may moderate happiness in the impact on innovative behavior. In the realm of computer science, AI is defined as software systems with the ability to simulate or replicate human thinking and decisionmaking processes (Arnadi et al., 2024). AI systems are meant to accomplish general human-like intelligence including vision, speech recognition and synthesis, decision making and reasoning (Ramachandran & Kannan, 2021).

Evaluating the possible application of AI in medical service practices is crucial given the quick advancement of technology in the healthcare industry (Elkholy et al., 2024). Additionally, according to Agaoglu et al. (2025), perceptions of AI use can influence the beneficial and significant impact of happiness on IWB. Odugbesan et al. (2023) however, found contrasting results, suggesting that the impact of pleasure on creative work behavior is not mediated by views of AI use.

Agaoglu et al. (2025) previously investigated the mediating roles of transformational leadership and views of AI use in the link between innovative work behavior and happiness. However, there are still few research looking at how transformational leadership and perceptions of AI use modulate the impact of happiness on creative work behavior (Agaoglu et al., 2025), which keeps this topic academically relevant. The novelty of this study lies in the different demographic context of the subjects, namely medical personnel at RS Islam Purwokerto, Indonesia, which has distinct organizational, cultural, and work dynamics compared to previous studies.

According to Karimi et al. (2023) there is still a dearth of empirical data about the promotion of innovative work practices in developing nations, especially when it comes to public sector companies. Thus, it is anticipated that this research will add to the body of knowledge, validate earlier conclusions, and offer useful insights into how transformational

leadership and artificial intelligence might facilitate the development of creative work practices in Indonesian hospitals.

LITERATURE REVIEW, RESEARCH FRAMEWORK, AND HYPOTHESES

Social Exchange Theory

Relationships between workers, leaders, and organizations are based on reciprocal exchanges involving social exchange, mutuality, and trust, according to Social Exchange Theory (SET) (Agaoglu et al., 2025). According to this theory, employees become more actively involved in their professional and organizational roles and return organizational support with useful and productive behaviors when they build psychological relationships with their organization (Liaquat & Mehmood, 2017; Rimatanti & Darmawan, 2023). In the context of this study, happiness is positioned as an independent variable capable of fostering positive psychological relationships between employees and their work environment, thereby encouraging greater engagement and ultimately supporting the emergence of innovative work behavior.

Transformational leadership plays a crucial role because it involves followers in social exchange processes grounded in a strong sense of togetherness and interpersonal trust (Lin, 2023), while simultaneously creating an ideal work environment through positive leader–employee relationships (Novitasari et al., 2025). Support from transformational leaders is seen by SET as a kind of social investment that motivates medical staff to return the favor by acting creatively at work (Fadila et al., 2025). According to Alagele et al. (2025), positive opinions of AI serve as a social exchange mechanism in which medical professionals respond by contributing creativity and inventive efforts, while the sorganization gives technology and work facilitation. Thus, within the SET framework, this study emphasizes that happiness, as a psychological capital of medical personnel, can influence innovative work behavior both directly and indirectly through the mediating roles of transformational leadership and perceptions of AI use.

Innovative Work Behavior

According to (Novitasari et al., 2025), innovative work behavior encompasses all individual behaviors targeted at adopting change, introducing and implementing new ideas, and procedures meant to enhance work performance at both the individual and group levels. Innovation can be viewed as both a process of introducing something new and a physical result or consequence in the form of new tools, processes, or ideas (Grošelj et al., 2020). According to (Yusufa dkk., 2023) creative work behavior explicitly refers to employees' actions in generating and developing new concepts, procedures, goods, or services that are innovative in character and promote organizational progress.

The Effect of Happiness on Transformational Leadership

By providing a complementary and reciprocal view of the relationship between leadership and well-being, understanding happiness as an independent variable and analyzing its impact on leadership practices offers an empirical contribution that builds upon earlier research and strengthens the theoretical foundation (Torres et al., 2025). Prior studies by Agaoglu et al. (2025), Carrillo et al. (2023), Conesa et al. (2024), and Torres et al. (2025) demonstrate that happiness has a positive and significant effect on transformational leadership. Higher levels of subjective well-being are associated with higher self-leadership abilities, which in turn lead to more successful leadership

behaviors. (Torres et al., 2025). Therefore, based on the theoretical arguments and empirical evidence discussed above, the following hypothesis is proposed.

H1 : Happiness has a positive and significant effect on transformational leadership among medical staff at RS Islam Purwokerto

The Effect of Happiness on Perceptions of AI Use

Happiness at work reflects a positive emotional condition experienced by employees when performing tasks and interacting within the organizational environment (Fadila et al., 2025). Employees who feel happy tend to display optimistic attitudes, greater openness to change, and a higher readiness to accept innovation, including the adoption of new technologies such as AI. With stable and positive emotional conditions, employees not only perceive AI as a supportive tool but also as an opportunity to enhance work effectiveness and service quality.

According to earlier research by Agaoglu et al. (2025) happiness as a component of nurses' well-being is positively correlated with their perceptions of AI utilization, suggesting that happiness has a positive and significant impact on perceptions of AI use. Thus, the following hypothesis is put out in light of these theoretical justifications and earlier empirical data.

H2 : Happiness has a positive and significant effect on perceptions of AI use among medical staff at RS Islam Purwokerto.

The Effect of Happiness on Innovative Work Behavior

Happiness can enhance creativity through higher-level cognitive processes, stronger motivation, and greater openness to new ideas (Hasanati et al., 2025). Positive emotions like happiness and hope inspire people to learn new things and develop their ability for creativity and invention (Al-Shami et al., 2023). Positive emotions also stimulate creative thinking processes, foster confidence in expressing ideas, and increase the likelihood of innovation in daily work activities (Fadila et al., 2025).

Previous studies by Agaoglu et al. (2025), Al-Shami et al. (2023), Fadila et al. (2025), and Hasanati et al. (2025) show that happiness has a positive and significant effect on IWB. Happiness stimulates individuals to think more openly and divergently, which forms the primary foundation for the innovation process (Fadila et al., 2025). Therefore, based on these theoretical arguments and empirical findings, the following hypothesis is formulated.

H3 : Happiness has a positive and significant effect on innovative work behavior among medical staff at RS Islam Purwokerto.

The Effect of Transformational Leadership on Innovative Work Behavior

Because transformational leadership offers a framework that is more favorable to inspiring workers to advance their abilities, it is thought to be a significant factor in determining innovative work behavior (Agaoglu et al., 2025). By inspiring followers and igniting creative ideas across the company, transformational leaders foster a flexible work environment. They also challenge employees' viewpoints and encourage them to pursue novel and creative ways in their job (Karimi et al., 2023).

Previous studies by Agaoglu et al. (2025), Grošelj et al. (2020), Karimi et al. (2023), Lin (2023), and Messmann et al. (2022) confirm that transformational leadership has a positive and significant effect on innovative work behavior. Leaders who show concern for employees' well-being, problems, and aspirations are able to foster employees'

capacity to engage in IWB (Karimi et al., 2023). Therefore, based on the theoretical rationale and empirical evidence discussed above, the following hypothesis is proposed.

H4 : Transformational leadership has a positive and significant effect on innovative work behavior among medical staff at RS Islam Purwokerto.

The Effect of Perceptions of AI Use on Innovative Work Behavior

Due to its significance in employing technology, keeping up with external advancements, and updating information, AI functions as an intermediary variable. It is also thought to play a major impact in influencing IWB (Alagele et al., 2025). In order to guarantee high-quality patient care, technologies like AI can solve certain issues like a lack of expertise or experience, streamline documentation procedures, and give professionals access to the most recent evidence-based practices. This will lessen professional frustration brought on by organizational burdens (Elkholy et al., 2024).

Previous research by Agaoglu et al. (2025), Alagele et al. (2025), Atalla et al. (2024), Elkholy et al. (2024), and Verma & Singh (2022) demonstrates that perceptions of AI use have a positive and significant effect on IWB. The implementation of AI in work activities can help identify innovative approaches, apply the best new ideas, and effectively plan and schedule their execution (Atalla et al., 2024). Therefore, based on the theoretical arguments and empirical findings discussed above, the following hypothesis is formulated.

H5 : Perceptions of AI use have a positive and significant effect on innovative work behavior among medical staff at RS Islam Purwokerto.

The Mediating Role of Transformational Leadership in the Effect of Happiness on Innovative Work Behavior

Transformational leadership is a leadership approach that inspires followers while creating a dynamic vision and lofty objectives (Lin, 2023). Through individualized support, intellectual stimulation, and encouragement of creative solutions, transformational leaders boost employees' perception of effectiveness, which eventually leads to an increase in creative work behavior (Agaoglu et al., 2025).

The impact of pleasure on creative work behavior can be mediated by transformational leadership, according to earlier research by Agaoglu et al. (2025). When psychological empowerment levels are higher, transformational leadership is significantly more successful at encouraging followers' creative work practices (Grošelj et al., 2020). Consequently, employees who receive personal attention and support from transformational leaders tend to work harder in generating, promoting, and implementing daily ideas to improve service quality (Lin, 2023). Therefore, based on these theoretical arguments and empirical findings, the following hypothesis is formulated.

H6 : Transformational leadership mediates the effect of happiness on innovative work behavior among medical staff at RS Islam Purwokerto

The Mediating Role of Perceptions of Artificial Intelligence Use in the Effect of Happiness on Innovative Work Behavior

AI is a branch of computer science focused on developing systems and software capable of mimicking or replicating human thinking and decision-making skills (Arnadi dkk., 2024). Based on this definition, perceptions of AI use can be understood as individuals' evaluations, beliefs, and views regarding the extent to which AI technology can assist,

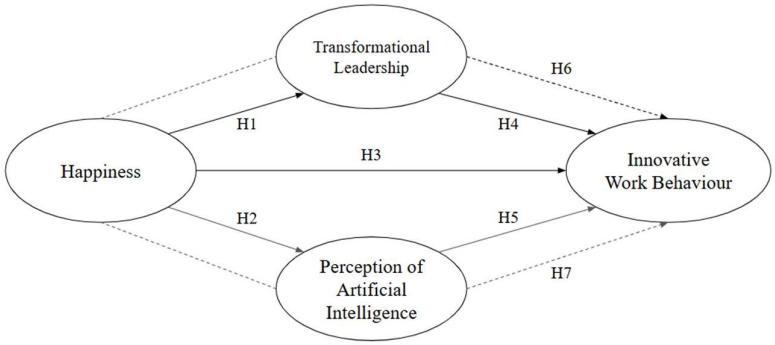
facilitate, or enhance the quality of their work, including levels of trust, acceptance, and readiness to utilize such technology in daily work activities.

AI can act as a catalyst for promoting creativity and innovation in the workplace and stimulating employees' innovative thinking processes (Agaoglu et al., 2025). Previous research by Agaoglu et al. (2025) demonstrates that perceptions of AI use can mediate the effect of happiness on IWB. The study reveals that employees who hold positive perceptions of AI use such as feeling supported, more efficient, or perceiving AI as facilitating their tasks tend to be more confident and motivated to try new approaches and engage in innovation. Therefore, based on these theoretical arguments and prior empirical findings, the following hypothesis is proposed.

H7 : Perceptions of AI use mediate the effect of happiness on innovative work behavior among medical staff at RS Islam Purwokerto

Research Framework

Figure 1 illustrates the research framework of this study, which depicts the relationships among happiness at work, transformational leadership, perceptions of AI use, and IWB among medical staff at RS Islam Purwokerto. The framework explains that happiness functions as an independent variable influencing innovative work behavior both directly and indirectly through the mediating roles of transformational leadership and perceptions of AI use. This conceptual model is developed by integrating Social Exchange Theory with relevant empirical findings from prior studies in the fields of leadership, employee well-being, and technological innovation.



Source : Developed by the authors based on Social Exchange Theory and prior empirical studies, 2025

Figure 1
Research Model

METHOD

A quantitative research design is used in this research. The 303 workers at Rumah Sakit Islam Purwokerto make up the study's population. Purposive sampling was used to pick 184 respondents in total, and the sample size was calculated using the Slovin formula with a 10% margin of error (Sugiyono, 2019). A method for choosing data sources according to particular criteria is called purposeful sampling (Sugiyono, 2019). Only medical professionals, including nurses, medical record officers, and pharmacists, participated in this study. Data were collected using a structured questionnaire with a Likert-scale format, which was distributed online through Google Forms to facilitate efficient and accessible data collection (Hair et al., 2017).

This study uses PLS-SEM for both statistical and descriptive data analysis. To characterize participant replies and spot response trends, descriptive analysis is used. The SmartPLS program is used to test the Structural Equation Modeling (SEM) framework. SEM analysis is selected because it can perform route analysis and give a clear depiction of the interactions between variables (Hair et al., 2017). Two steps make up the analytical process: the first assesses the measurement model by evaluating the outer model, and the second evaluates the structural model (inner model) in order to test the hypotheses and clarify the relationships between the variables. Factor loadings greater than 0.70 and Average Variance Extracted (AVE) values greater than 0.50 indicate convergent validity (Hair et al., 2017). While indicator reliability is verified by Cronbach's alpha and Composite Reliability values more than 0.70, discriminant validity is evaluated using cross-loadings and the Fornell–Larcker criterion (Hair et al., 2017).

The Shorted Happiness at Work (SHAW) scale, which was created by Feitor et al. (2023), and includes three variables like work satisfaction, engagement, and affective organizational commitment, is used in this study to assess happiness. Phanniphong & Na-Nan, (2025), created three dimensions to quantify IWB: idea generation, concept realization, and idea promotion. The AI Attitude Scale (AIAS), which comprises perceived advantages of use, possible social impact, adoption intention, perceived danger, and assessment of AI's impact on mankind, is used to gauge perceptions of AI use (Grassini, 2023). Lastly, the Bass Multifactor Leadership Questionnaire (MLQ), which was created by Den Hartog et al. (1997), and has four dimensions—charisma, inspiration, individualized concern, and intellectual stimulation—is used to evaluate transformational leadership.

RESULTS AND DISCUSSION

Respondent Demographic Analysis

Demographic analysis aims to provide additional information for readers or future researchers. The detailed profile of the respondents, including gender, age, work experience, educational background, professional category, and frequency of AI usage, is presented in Table 1. This table serves as a descriptive overview of the sample characteristics and provides contextual insight for interpreting the subsequent statistical analyses.

Table 1
Respondent Profile

Category	Frequency	%
Gender		
Male	59	32,1
Female	125	67,9
Age		
≤ 20	2	1,1
21 – 30	108	58,7
31 – 40	50	27,2
41 – 50	23	12,5
> 50	1	0,5
Work Experience (year)		
< 1	6	3,3
1 – 5	109	59,2
6 – 10	30	16,3
11 – 15	22	12,0
> 15	17	9,2

Types of Healthcare Personnel		
Nurse	118	64,1
Medical Records Officer	6	3,3
Medical Laboratory Technologist	8	4,3
Midwife	17	9,2
Health Analyst	8	4,3
Pharmacist	6	3,3
Environmental Health Officer	2	1,1
Radiographer	7	3,8
Electromedical Technician	1	0,5
Optometrist (Refractionist)	1	0,5
Nutritionist	2	1,1
Anesthesia Technician	4	2,2
Physiotherapist	2	1,1
Dental Nurse	1	0,5
Medical Physicist	1	0,5
Education Level		
Diploma (D3)	159	86,4
Applied Bachelor (D4)	6	3,3
Bachelor's Degree (S1)	4	2,2
Professional Degree	14	7,6
Others	1	0,5
How often do you use AI?		
Ever	33	17,9
Occasionally	45	24,5
Quite Often	56	30,4
Frequently	50	27,2

The demographic analysis of respondents in this study shows that the majority of respondents are female (67.9%), with the dominant age group ranging from 21 to 30 years (58.7%). Most respondents also have work experience between 1 and 5 years (59.2%). In addition, the results indicate that the sample is dominated by respondents who frequently use AI (57.6%). These findings suggest that the intensity of AI usage among medical personnel is relatively high, thereby offering substantial opportunities for this technology to support innovative work behavior.

Measurement Model Analysis (*Outer Model*)

As one of the conditions for convergent validity, the loading factors were examined in the first step of the measurement model analysis. Each construct's loading factor and AVE values are shown in Table 2. Convergent validity is attained when the loading factor values surpass 0.70 and the AVE values surpass 0.50 (Hair et al., 2017).

Table 2
Convergent Validity and Reliability

Items	Loading Factor	CA	CR	AVE
Innovative Work Behaviour		0.958	0.963	0.684
(IWB1) I seek information related to my tasks from work guidelines, supervisors, experts, or other relevant sources.	0.803			
(IWB2) I make efforts to seek new ideas to change or improve my responsibilities.	0.823			
(IWB3) When facing problems at work, I try to think of ways to solve them.	0.780			
	0.814			

Items	Loading Factor	CA	CR	AVE
(IWB4) I strive to find ways to improve task implementation processes.	0.878			
(IWB5) I propose ideas or work methods to colleagues or supervisors.	0.809			
(IWB6) When there are differences of opinion regarding the ideas I propose, I try to explain them so they can be accepted.	0.846			
(IWB7) I make efforts to convince colleagues or supervisors to support the ideas I propose.	0.855			
(IWB8) After proposing ideas, I receive sufficient support in terms of time, materials, or equipment.	0.847			
(IWB9) I transform my ideas into methods that can be practically implemented.	0.818			
(IWB10) I encourage the implementation of ideas and methods in task execution.	0.822			
(IWB11) If there are obstacles in the methods I propose, I strive to resolve them until successful.	0.824			
(IWB12) I share (through discussions, presentations, or the preparation of guidelines) methods that have been successfully implemented so that these ideas are known to colleagues or supervisors.				
(Phanniphong & Na-Nan, 2025)				
Happiness		0.964	0.969	0.776
(H1) In my job, I feel strong and full of energy.	0.874			
(H2) I am enthusiastic about the work that I do.	0.889			
(H3) I am so involved in my work that I forget about everything else around me.	0.900			
(H4) I am satisfied with the distribution of tasks that I am responsible for.	0.883			
(H5) I am satisfied with the compensation I receive from this job.	0.876			
(H6) I am satisfied with the opportunities available in this organization for growth or promotion.	0.881			
(H7) I would be very happy if I could spend the rest of my career in this organization.	0.882			
(H8) I feel emotionally attached to the organization where I work.	0.864			
(H9) I feel a sense of belonging to my organization.	0.877			
(Feitor et al., 2022)				
Transformational Leadership		0.967	0.970	0.731
(TL1) My leader makes others feel happy to be around them.	0.830			
(TL2) My leader often uses motivating words and provides clear direction.	0.833			
(TL3) My leader encourages me to think creatively and seek innovative solutions when solving problems.	0.857			
(TL4) My leader actively provides guidance and advice tailored to my potential and career goals.	0.843			
(TL5) I have full trust in my leader.	0.888			
(TL6) My leader is able to motivate me and make me feel enthusiastic about my work.	0.904			
(TL7) My leader provides new ways of looking at problems at work.	0.871			
(TL8) My leader tells employees how they should perform their work.	0.815			
(TL9) I feel proud of my leader.	0.846			
(TL10) My leader helps me find meaning in my work.	0.851			
	0.841			

Items	Loading Factor	CA	CR	AVE
(TL11) My leader always opens space for discussion to analyze problems from various perspectives in order to make the best decisions.	0.874			
(TL12) My leader understands my professional needs. *(Dhingra et al., 2024)*				
Perceptions of Artificial Intelligence Use		0.908	0.932	0.733
(AI1) I believe that artificial intelligence will improve my quality of life.	0.800			
(AI2) I believe that artificial intelligence will enhance my work performance.	0.855			
(AI3) I think that I will use artificial intelligence technology in the future.	0.883			
(AI4) I think that artificial intelligence technology poses a threat to humanity.	0.845			
(AI5) I think that artificial intelligence technology has a positive impact on humankind. *(Grassini, 2023)*	0.893			

Based on the loading factor output, all indicators for each variable exceeded 0.70, thereby fulfilling the criteria for convergent validity. This indicates that each indicator adequately represents the construct being measured and has a strong association with its corresponding latent variable. In addition, all Composite Reliability (CR) and Cronbach's alpha (CA) values were above 0.70, demonstrating good reliability. Therefore, the measurement model is considered reliable and suitable for further analysis in testing the relationships among the research variables.

The evaluation of discriminant validity comes next in the measurement model evaluation process, following the establishment of convergent validity and reliability based on the data shown in Table 2. To make sure each construct is empirically unique and captures occurrences not reflected by other constructs in the model, discriminant validity is investigated. Table 3 displays the findings of the discriminant validity evaluation using the Fornell-Larcker criterion.

Table 3
Discriminant Validity: Fornell-Larcker

Variables	PAI	H	IWB	TL
Perceptions of AI Use	**0.856**			
Happiness	0.320	**0.881**		
Innovative Work Behavior	0.458	0.357	**0.827**	
Transformational Leadership	0.274	0.171	0.324	**0.855**

Source: Data Analyzed, 2025

Additionally, Table 3 shows that the square root of the AVE values on the diagonal is greater than the corresponding inter-construct correlations for each variable, indicating that the Fornell–Larcker criterion has been satisfactorily satisfied. Consequently, it may be said that the measurement model's discriminant validity has been sufficiently established.

Structural Model Analysis (*Inner Model*)

Analyzing the links between constructs, determining the R-square values of the research model, and evaluating the significance levels are the objectives of the structural model

evaluation. Assessing the model fit is the first step in the inner model assessment process. The results of the model fit evaluation are presented in Table 4.

Table 4
Model Fit

Model	Saturated Model	Estimated Model
SRMR	0.068	0.082
NFI	0.634	0.634

Source: Data Analyzed, 2025

The structural model shows an adequate fit when the Standardized Root Mean Square Residual (SRMR) value is less than 0.10. In the meantime, the Normal Fit Index (NFI), which ranges from 0 to 1, represents the degree of model fit; values nearer 1 denote a better and more suitable model fit.

After confirming that the structural model demonstrates an acceptable level of fit, the next step in the inner model evaluation involves assessing the explanatory power of the model. This is examined through the coefficient of determination (adjusted R-square) for each endogenous construct, as presented in Table 5.

Table 5
R-Square Adjusted

Model	R-Square Adjusted
Innovative Work Behavior	0.283
Transformational Leadership	0.024
Perceptions of AI Use	0.097

Source: Data Analyzed, 2025

Table 5's R-square evaluation yields results that are satisfactory. Innovative work behavior's adjusted R-square value of 0.283 shows that the independent variables in the model account for 28.3% of the variance in this variable, with other factors not covered in this study influencing the remaining variance.

After evaluating the explanatory power of the model through the adjusted R-square values, the next step in the SEM-PLS analysis involves examining the structural relationships among constructs through hypothesis testing. The results of this hypothesis testing are presented in Table 6.

Table 6
Hypothesis Testing

Hypothesis		**Path Coefficients (β)**	**T Statistic**	***P* Values**	**Conclusion**
H → TL	H1	0.171	2.229	0.010	Accepted
H → AI	H2	0.320	4.336	0.000	Accepted
H → IWB	H3	0.216	3.012	0.001	Accepted
TL → IWB	H4	0.196	2.337	0.013	Accepted
AI → IWB	H5	0.336	4.590	0.000	Accepted
H → TL → IWB	H6	0.033	1.610	0.054	Rejected
H → AI → IWB	H7	0.107	3.142	0.001	Accepted

Source: Data Analyzed, 2025

Hypothesis testing is the last phase of the SEM-PLS analysis. When the T-statistic value is greater than 1.960 and the P-value is less than 0.05, suggesting a significant impact of the independent factors on the dependent variables, the hypothesis is deemed supported. Table 6 displays the results of the hypothesis test, demonstrating that all variable associations have positive path coefficients (β). However, because Hypothesis 6's T-statistic and P-value do not satisfy the necessary significance requirements, it is rejected.

The Effect of Happiness on Transformational Leadership

The results indicate that happiness has a positive and significant effect on transformational leadership among medical staff at RS Islam Purwokerto; therefore, H1 is accepted. This finding suggests that medical personnel who feel happy at work tend to demonstrate transformational leadership behaviors, such as providing inspiration, encouragement, and individualized consideration to colleagues. This confirms that positive emotional conditions not only affect personal well-being but also enhance the ability of medical staff to influence and motivate others to contribute more effectively to hospital services.

These findings are consistent with previous studies by Agaoglu et al. (2025), Carrillo et al. (2023), Conesa et al. (2024), and Torres et al. (2025), which emphasize that leaders' positive emotions play an important role in shaping a more transformational leadership style. In the healthcare context, higher levels of happiness are associated with an increased capacity to provide motivation, direction, and emotional support to fellow health professionals.

When viewed through the lens of Social Exchange Theory, this relationship can be explained by reciprocal mechanisms in workplace social interactions (Torres et al., 2025). Happy medical staff are more likely to exhibit positive attitudes, empathy, and concern for colleagues, which in turn foster trust, commitment, and stronger teamwork. These positive interactions create a mutually beneficial cycle of social exchange, in which happiness serves as a catalyst for the emergence of transformational leadership behaviors among medical staff.

Descriptive analysis further reveals that although happiness enhances the tendency toward transformational leadership, open and participative discussion practices have not yet been optimally implemented within the hospital environment. This finding suggests that happiness alone is insufficient to fully stimulate all dimensions of transformational leadership, highlighting the need for leadership capacity development and more structured dialogic spaces to facilitate collaboration and effective idea sharing.

The Effect of Happiness on Perceptions of AI Use

The findings demonstrate that happiness has a positive and significant effect on perceptions of AI use among medical staff at RS Islam Purwokerto; thus, H2 is accepted. This indicates that happier medical personnel are more open to technological developments and view AI implementation more positively as part of hospital work systems. Stable and positive emotional states enhance confidence in adapting to change, including the utilization of AI to support diagnosis, administrative efficiency, and service quality. Hence, happiness not only reflects psychological well-being but also shapes how medical staff accept and internalize new technologies in daily practice.

From a Social Exchange Theory perspective, the provision of AI technology by the hospital is perceived as organizational support aimed at improving performance (Fadila

et al., 2025). In reciprocity, happy medical staff respond with openness, learning willingness, and readiness to adopt AI in clinical activities. This reciprocal process reflects a mutually beneficial relationship between staff and organization, with happiness acting as a catalyst for trust and technological acceptance.

These results align with Agaoglu et al. (2025), who found that happier medical staff are more receptive to new technologies due to higher motivation and confidence. Positive feelings among healthcare workers promote positive views of AI as a tool for improving service quality, according to other studies (Grošelj et al., 2020).

The Effect of Happiness on Innovative Work Behavior

The result indicate that H3 is acceptable since the study's findings show that among medical personnel at RS Islam Purwokerto, happiness has a favorable and significant impact on innovative work behavior. These results imply that medical personnel are more likely to exhibit innovative job behaviors, such as coming up with fresh concepts, coming up with original solutions, and taking the initiative to enhance healthcare service operations, when they are happier. Positive emotional conditions make medical staff more enthusiastic, more open to change, and more intrinsically motivated to enhance the quality of hospital services. Thus, happiness functions not only as an indicator of psychological well-being but also as a key driving factor in the emergence of innovative work behavior among medical staff.

Within the framework of Social Exchange Theory, happiness can be understood as a form of positive emotional experience that encourages medical staff to reciprocate the support and attention they receive from the organization (Al-Shami et al., 2023). When hospitals are able to create a work environment that supports psychological well-being, medical staff feel valued and develop strong emotional attachment to the organization. As a form of reciprocity, they express this sense of satisfaction through innovative work behaviors, such as proposing new ideas, adopting more efficient work approaches, and taking initiative to improve the quality of patient care. In this regard, happiness serves as a fundamental factor that strengthens positive social relationships between medical staff and the organization.

This study is consistent with the findings of Al-Shami et al. (2023), Fadila et al. (2025), and Hasanati et al. (2025), which demonstrate that happiness contributes to increased creativity and innovation among healthcare professionals. Similar results were also reported by Agaoglu et al. (2025), who found that medical staff with higher levels of happiness tend to be more proactive and innovative in addressing work-related challenges, thereby directly contributing to improvements in hospital service quality. In the context of RS Islam Purwokerto, these findings reinforce the notion that happiness represents an important psychological resource that encourages medical staff to engage in continuous innovation to enhance the effectiveness and quality of healthcare services.

The Effect of Transformational Leadership on Innovative Work Behavior

The result indicate that H4 is approved as the study's findings show that transformational leadership significantly and favorably influences the medical staff at RS Islam Purwokerto's creative work practices. According to this research, it has been demonstrated that leaders who can inspire medical staff to come up with new ideas, improve workflows, and raise the standard of healthcare services can do so by offering a clear vision, personalized attention, and support for creative thinking. When it comes to resolving service issues, resource limitations, and the constant need for continual quality improvement, hospital executives with a transformational leadership style are essential

in encouraging creative behavior among medical personnel. These findings are consistent with prior studies by Agaoglu et al. (2025), Grošelj et al. (2020), Karimi et al. (2023), Lin (2023), and Messmann et al. (2022), which assert that transformational leadership promotes higher levels of IWB.

These findings can be interpreted within the framework of Social Exchange Theory, by medical staff's opinion that transformational leadership reflects their leaders' fairness, attention, and support at work (Agaoglu et al., 2025). Such positive social relationships foster emotional attachment and a sense of moral obligation among medical staff to reciprocate through improved and IWB. Consequently, transformational leadership acts as a catalyst that strengthens positive reciprocal relationships between leaders and medical staff, whereby the support and inspiration provided encourage contributions in the form of creativity, new ideas, and innovation in patient care services.

These results, however, contradict those of Az Zahra & Etikariena (2024), Sudibjo & Prameswari (2021), and Wahyuningtias & Nugroho (2023), who discovered that transformational leadership has little effect on creative work practices. Different organizational contexts could be the cause of this disparity. Strong interpersonal ties and a high degree of religion among the medical personnel at RS Islam Purwokerto may support the beneficial benefits of transformational leadership in encouraging creative activity.

The Effect of Perceived AI Use on Innovative Work Behavior

The results of this study indicate that perceived AI use has a positive and significant effect on IWB among medical staff at RS Islam Purwokerto; therefore, H5 is accepted. This finding suggests that medical staff who hold positive perceptions of AI tend to be more open to change and more enthusiastic about leveraging technology to enhance the quality of healthcare services. When AI is perceived as a supportive tool that simplifies tasks, improves diagnostic accuracy, and accelerates service processes, medical staff are encouraged to develop new ways of working, create creative solutions, and actively participate in continuous improvement initiatives. In the hospital context, this indicates that positive perceptions of digital technology can serve as a key driver for the emergence of innovation in medical service delivery.

According to Social Exchange Theory, findings can be explained by the medical staff's belief that the hospital's use of AI technology is an organizational investment and support meant to increase productivity and quality of work (Alagele et al., 2025). As a form of reciprocity, medical staff respond to this support by enhancing their innovative work behavior, either through the development of new ideas or the implementation of more effective and adaptive work approaches. Thus, positive perceptions of AI not only influence attitudes toward technology acceptance but also strengthen medical staff's commitment to making innovative contributions to hospital advancement.

This study is consistent with the findings of Alagele et al. (2025), Atalla et al. (2024), Elkholy et al. (2024), and Verma & Singh (2022), which demonstrate that positive perceptions of digital technology directly contribute to increased innovative behavior in the healthcare sector. These results are further supported by Agaoglu et al. (2025), who argue that medical staff with strong beliefs in the benefits of AI are more motivated to engage in innovation within clinical practice. In the context of RS Islam Purwokerto, these findings emphasize that the adoption of AI-based technologies not only enhances work effectiveness but also serves as a stimulus for the development of IWB among medical staff.

The Mediating Role of Transformational Leadership in the Relationship between Work Happiness and Innovative Work Behavior

The results of this study indicate that transformational leadership does not act as a mediator in the relationship between work happiness and IWB among medical staff at RS Islam Purwokerto; therefore, H6 is rejected. In other words, the happiness of medical staff exerts a stronger direct influence on innovative behavior without being channeled through the formation of transformational leadership. This finding suggests that, within the hospital context, happiness functions more as an individual psychological drive rather than as a social factor that fosters the emergence of transformational leadership among medical staff.

These findings suggest that favorable reciprocal connections resulting from medical staff satisfaction may not always develop into transformational leadership when viewed through the prism of Social Exchange Theory (Alagele et al., 2025). Although happy medical staff tend to experience positive emotions and high motivation, these conditions are not always accompanied by a tendency to lead in an inspirational manner or to exert transformational influence on colleagues. This may be attributed to the nature of medical work, which is more oriented toward individual clinical responsibilities than toward team leadership roles. In addition, the hierarchical organizational structure and work systems commonly found in hospitals may limit opportunities for medical staff to optimally express transformational leadership styles in day-to-day operational contexts.

These results contrast with those of Agaoglu et al. (2025), who found that the emergence of transformational leadership, which in turn promotes the innovative behavior of subordinates, is influenced by leaders' happiness. This disparity implies that, in the setting of RS Islam Purwokerto, other elements such as heavy workloads, scarce resources, and the medical staff's intense concentration on the technical aspects of patient care have a greater influence on the relationship between happiness and creative behavior. As a result, transformational leadership has not yet been successful in acting as a mediator between contentment and creative work practices in this institution.

The Mediating Role of Perceived Use of Artificial Intelligence in the Relationship between Work Happiness and Innovative Work Behavior

The results of this study indicate that the perceived use of AI mediates the effect of happiness on IWB among medical staff at RS Islam Purwokerto; therefore, H7 is accepted. This finding suggests that medical staff who feel happy are not only directly encouraged to exhibit innovative work behavior, but also tend to develop positive perceptions of AI as a supportive work tool. These positive perceptions strengthen the relationship between happiness and innovative behavior, as happy medical staff are more receptive to new technologies, recognize the benefits of AI in improving efficiency and accuracy, and utilize it to identify new ways to enhance the quality of healthcare services. Thus, happiness acts as a psychological trigger that fosters openness to technological innovation, which ultimately reinforces innovative work behavior among medical staff.

According to Social Exchange Theory, these findings suggest that medical personnel's good emotional experiences promote reciprocal reactions to organizational support in the form of AI-based facilities and technologies (Agaoglu et al., 2025). Happy medical staff perceive the presence of AI as a manifestation of the hospital's attention and commitment to facilitating their work. In response to this support, medical staff express satisfaction and trust toward the organization through increased innovative work behavior, such as implementing new ideas and optimizing the use of technology in clinical activities. Accordingly, happiness not only strengthens medical staff's intrinsic

motivation but also serves as an emotional foundation that facilitates the acceptance and utilization of technology to support innovation in hospital services.

This study is consistent with the findings of Agaoglu et al. (2025), who reported that employee happiness enhances the acceptance of new technologies, which in turn strengthens IWB. The results are also supported by the perspectives of Alagele et al. (2025) and Atalla et al. (2024), which emphasize that psychological well-being plays a crucial role in building individual readiness to adapt to developments in digital technology. In the context of RS Islam Purwokerto, these findings demonstrate that medical staff happiness and organizational support for AI implementation constitute a strategic combination that can strengthen an innovation-oriented culture and improve the effectiveness of healthcare services within the hospital.

CONCLUSION AND SUGGESTION

The findings of this study conclude that happiness has a positive and significant effect on transformational leadership, perceived use of AI, and innovative work behavior among medical staff at RS Islam Purwokerto. In addition, happiness is also proven to have an indirect effect on innovative work behavior through the mediation of perceived use of AI, but not through transformational leadership. These findings indicate that psychological factors such as happiness play a major role in encouraging innovation, while the significant mediating pathway is more evident through technological factors rather than transformational leadership.

Specifically, happiness is shown to encourage medical staff to be more open, creative, and proactive in generating new ideas that support improvements in healthcare services. However, when linked to transformational leadership, happiness does not enhance innovative behavior through this pathway. The implication of this finding is that hospitals still need to pay attention to the psychological well-being of medical staff and to develop transformational leadership styles; however, in promoting innovation, this factor alone is not sufficiently strong as a mediating mechanism in the relationship between happiness and IWB. Based on the descriptive analysis, the weakest aspect of transformational leadership lies in leaders' openness to creating discussion spaces to analyze problems from multiple perspectives. Therefore, hospitals need to strengthen participative leadership practices that provide medical staff with opportunities to express opinions, exchange ideas, and actively engage in decision-making processes.

On the other hand, the results indicate that perceived use of AI is able to mediate the relationship between happiness and IWB. This means that happy medical staff tend to develop positive perceptions of technology, which subsequently encourages them to be more innovative in their daily work practices. The practical implication of this finding is that hospitals need to optimize AI utilization strategies through training, mentoring, and appropriate governance, so that positive perceptions of AI among medical staff can truly become a catalyst for the emergence of innovative work behavior. In addition, perceptions regarding the benefits of AI for humanity emerge as an important point of attention; therefore, it is necessary to enhance medical staff's understanding of the ethical and social contributions of AI through digital literacy programs grounded in human-centered values.

Furthermore, the descriptive results also show that the weakest aspect of IWB is the initiative of medical staff in seeking information from work guidelines, supervisors, or expert sources. This indicates the need to strengthen a continuous learning culture so that medical staff become more proactive in seeking, filtering, and applying new knowledge in their work practices. Meanwhile, from the perspective of happiness, the lowest aspect is reflected in medical staff's feelings of not being sufficiently strong and energized at work.

This condition underscores the importance of hospital policies that focus on employee well-being, such as work–life balance programs, performance recognition, and a supportive work environment to maintain the enthusiasm and vitality of medical staff in the long term.

This study also has several limitations. The R-square values are relatively low, indicating that many other variables outside the scope of this study may explain innovative work behavior and could be explored in future research. In addition, the sample is limited to a single hospital, which restricts the generalizability of the findings. Future studies are therefore recommended to expand the research setting to other hospitals with different types and locations, including comparative studies between public and private hospitals.

REFERENCES

Agaoglu, F. O., Bas, M., Tarsuslu, S., & Ekinci, L. O. (2025). Serial Mediating Role of Transformational Leadership and Perception of Artificial Intelligence Use in The Effect of employee Happiness on Innovative Work Behaviour in Nurses. *BMC Nursing*, *24*(137). https://doi.org/10.1186/s12912-025-02776-9

Al-Shami, S. A., Al Mamun, A., Rashid, N., & Cheong, C. B. (2023). Happiness at Workplace on Innovative Work behaviour and Organisation Citizenship Behaviour through Moderating Effect of Innovative Behaviour. *Heliyon*, *9*(5). https://doi.org/10.1016/j.heliyon.2023.e15614

Alagele, H. K. H., Neama, N. H., Alkaseer, N. ahmed, Al Dulaimi, H. A., & Abd, S. E. (2025). The Mediating Role of Artificial Intelligence on the Relationship between Organizational Climate and Employee Creativity Behavior: A Field Study. *Journal of Ecohumanism*, *4*(2), 38–46. https://doi.org/10.62754/joe.v4i2.5736

Arnadi, A., Aslan, A., & Vandika, A. Y. (2024). Penggunaan *Artificial intelligence* Untuk Personalisasi Pengalaman Belajar. *Jurnal Ilmu Pendidikan Dan Kearifan Lokal*, *4*(5), 369–380.

Atalla, A. D. G., El-Ashry, A. M., & Mohamed, S. M. S. (2024). The Moderating Role of Ethical Awareness in The Relationship between Nurses' Artificial Intelligence Perceptions, Attitudes, and Innovative Work Behavior: A Cross-Sectional Study. *BMC Nursing*, *23*, 1–11. https://doi.org/10.1186/s12912-024-02143-0

Az Zahra, A. C., & Etikariena, A. (2024). The Role of Transformational Leadership on Innovative Work Behavior: A Moderated-Mediation Study. *Jurnal Psikologi*, *23*(1), 81–96. https://doi.org/10.14710/jp.23.1.81-96

Butt, R. S., Wen, X., & Hussain, R. Y. (2020). Mediated effect of employee job satisfaction on employees' happiness at work and analysis of motivational factors: Evidence from telecommunication sector. *Asian Business Research Journal*, *5*, 19–27.

Canal, C. A. I., Ovalles-Toledo, L. V., Sandoval, B. L. A., & Valdez, P.O. (2023). Liderazgo Transformacional y su relación con la felicidad en el trabajo : Empresas sinaloenses del sector agroindustrial. *Revista de Ciencias Sociales*, *XXIX*(1), 79–94. https://doi.org/10.31876/rcs.v29i1.39736

Den Hartog, D. N., Van Muijen, J. J., & Koopman, P. L. (1997). Transactional versus Transformational Leadership: An Analysis of The MLQ. *Journal of Occupational and Organizational Psychology*, *70*(1), 19–34. https://doi.org/10.1111/j.2044-8325.1997.tb00628.x

Ekawati, S. S., & Andriani, H. (2022). Marketing Mix Strategy for Health Services at Yadika Pondok Bambu Hospital during The Covid-19 Pandemic. *Jurnal Medika Hutama*, *3*(2), 2073–2083.

Elkholy, S. M., Ageiz, M. H., & Ahmed, H. (2024). Artificial Intelligence and Its Relation to Nurses' Innovative Behavior: Moderating Role of Job Control. *Assiut Scientific Nursing Journal*, *12*(43), 53–63. https://doi.org/10.21608/asnj.2024.268620.1785

Fadila, Rosita, S., & Hendriyaldi. (2025). Workplace Happiness dan Employee Engagement Terhadap Produktivitas Karyawan Melalui Inovatif Kerja. *Advances in Management & Financial Reporting*, *3*(2), 160–179. https://doi.org/10.60079/amfr.v3i2.517

Feitor, S., Martins, T., & Borges, E. (2023). Shorted Happiness at Work Scale: Psychometric Proprieties of the Portuguese Version in a Sample of Nurses. *International Journal of Environmental Research and Public Health*, *20*(658). https://doi.org/10.3390/ijerph20010658

Ferry, A. B., Sidin, I., & Wahyu, A. (2021). An Analysis of the Effects of Human Resources Management on Healthcare Innovation in Hospital: A Scoping Review. *Journal of Asian Multicultural Research for Medical and Health Science Study*, *2*(2), 70–83. https://doi.org/10.47616/jamrmhss.v2i2.141

Grassini, S. (2023). Development and Validation of The AI Attitude Scale (AIAS-4): A Brief Measure of General Attitude toward Artificial Intelligence. *Frontiers in Psychology*, *14*, 1–12. https://doi.org/10.3389/fpsyg.2023.1191628

Grošelj, M., Černe, M., Penger, S., & Grah, B. (2020). Authentic and Transformational Leadership and Innovative Work Behaviour: The Moderating Role of Psychological Empowerment. *European Journal of Innovation Management*, *24*(3), 677–706. https://doi.org/10.1108/EJIM-10-2019-0294

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (2nd ed.)*. SAGE Publications.

Hanna, F. A., Tamengkel, L. F., & Rumawas, W. (2024). Pengaruh Budaya Organisasi dan Knowladge Sharing Terhadap Perilaku Kerja Inovatif pada RS. Sentra Medika Minahasa Utara. *Productivity*, *5*(3), 957–965. https://doi.org/10.35797/ejp.v5i3.55710

Hasanati, N., Karima, A. K., & Surahman. (2025). Is the Influence of Quality of Work Life on Innovative Work Behavior Mediated by Happiness at Work in Teachers. *Jurnal Ilmiah Psikologi Terapan*, *13*(1), 41–47. https://doi.org/10.22219/jipt.v13i1.38021

Jony, S. S., Rivai, Y., & Ilyas. (2024). Model untuk Meningkatkan Kinerja dan Kepuasan Kerja Karyawan Melalui Motivasi dan Perilaku Kerja Inovatif. *LUCRUM: Jurnal Bisnis Terapan*, *4*(1), 115–129.

Karimi, S., Malek, F. A., Farani, A. Y., & Liobikienė, G. (2023). The Role of Transformational Leadership in Developing Innovative Work Behaviors: The Mediating Role of Employees' Psychological Capital. *Sustainability*, *15*(2). https://doi.org/10.3390/su15021267

Liaquat, M., & Mehmood, K. K. (2017). Organization Citizenship Behavior: Notion of Social Exchange Theory. *Journal of Business and Social Review in Emerging Economies*, *3*(2), 209–216. https://doi.org/10.26710/jbsee.v3i2.137

Lin, Q. (2023). Transformational Leadership and Innovative Work Behavior: The Role of Identification, Voice and Innovation Climate. *International Journal of Hospitality Management*, *113*. https://doi.org/10.1016/j.ijhm.2023.103521

Martínez-Conesa, I., Iglesias-Sánchez, P. P., Jambrino-Maldonado, C., & Fernández-Díaz, E. (2024). Do happy leaders have a different leadership style? *8 International Academic and Professional Congress on Happiness*. https://doi.org/10.31876/rcs.v29i1.39736

Messmann, G., Evers, A., & Kreijns, K. (2022). The Role of Basic Psychological Needs Satisfaction in The Relationship between Transformational Leadership and Innovative Work Behavior. *Human Resource Development Quarterly*, *33*(1), 29–45. https://doi.org/10.1002/hrdq.21451

Novitasari, D., Siswanto, E., Purwanto, A., & Fahmi, K. (2025). Authentic Leadership and Innovation: What is the Role of Psychological Capital? *International Journal of Social and Management Studies*, *1*(1), 1–21. https://doi.org/10.5555/ijosmas.v1i1.1

Odugbesan, J. A., Aghazadeh, S., Al Qaralleh, R. E., & Sogeke, O. S. (2023). Green talent management and employees' innovative work behavior: the roles of artificial intelligence and transformational leadership. *Journal of Knowledge Management*, *27*(3), 696–716.

Phanniphong, K., & Na-Nan, K. (2025). Development and Validation of a Factor Analysis-Validated Comprehensive Scale for Measuring Innovative Work Behavior. *Sustainable Futures*, *9*, 1–8. https://doi.org/10.1016/j.sftr.2025.100704

Rahmadianti, Y., Lukman, S., & Semiarty, R. (2020). Analisis Pengaruh Kepemimpinan dan Motivasi Kerja Terhadap Turnover Intention Karyawan dengan Komitmen Organisasi Sebagai variabel Mediasi di Rumah Sakit Islam Siti Rahmah. *Jurnal Kesehatan Andalas*, *9*(1), 18–25. https://doi.org/10.25077/jka.v9i1.1218

Ramachandran, G., & Kannan, S. (2021). Artificial intelligence and deep learning applications: a review. *Journal of Artificial Intelligence, Machine Learning and Neural Network*, *12*, 10–13.

Rimatanti, N. F., & Darmawan, A. (2023). Influence of Quality of Work Life (QWL), Organizational Commitment (OC) and Transformational Leadership on Organizational Citizenship Behavior (OCB). *Journal of Economics, Social, and Humanities*, *1*(1), 12–26. https://doi.org/10.30595/jesh.v1i1.76

Setianto, C. I., Hadi, S. P., & Seno, A. H. D. (2022). Pengaruh Beban Kerja dan Motivasi Kerja Terhadap Turnover Intention Karyawan Rumah Sakit Panti Wilasa Citarum Semarang. *Jurnal Ilmu Administrasi Bisnis*, *10*(3), 1238–1246. https://doi.org/10.14710/jiab.2021.31959

Setyowati, S., & Etikariena, A. (2019). Peran Gaya Pemecahan Masalah dalam Hubungan Kepemimpinan Transformasional dengan Perilaku Kerja Inovatif. *Jurnal Diversita*, *5*(2), 115–125.

Sudibjo, N., & Prameswari, R. K. (2021). The effects of knowledge sharing and person–organization fit on the relationship between transformational leadership on innovative work behavior. *Heliyon*, *7*(6), e07334. https://doi.org/10.1016/j.heliyon.2021.e07334

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Suhartono, Sulastiningsih, Chasanah, U., Widiastuti, N., & Purwanto, W. (2023). The Relationship of Leadership, Discipline, Satisfaction, and Performance: A Case Study of Steel Manufacture in Indonesia. *International Journal of Professional Business Review*, *8*(2). https://doi.org/10.26668/businessreview/2023.v8i2.1146

Verma, S., & Singh, V. (2022). Impact of Artificial Intelligence-Enabled Job Characteristics and Perceived Substitution Crisis on Innovative Work Behavior of Employees from High-Tech Firms. *Computers in Human Behavior*, *131*.

https://doi.org/10.1016/j.chb.2022.107215

Wahyuningtias, A. H., & Nugroho, S. H. (2023). The Influence Of Transformational Leadership And Person-Organizational Fit On Innovative Work Behavior Through Knowledge Sharing Behavior In Formal Education Units. *Jurnal Pamator : Jurnal Ilmiah Universitas Trunojoyo*, *16*(1), 189–206. https://doi.org/10.21107/pamator.v16i1.19024

Yusufa, J., Ferrosnita, K., Pribadi Kornarius, Y., Caroline, A., & Gunawan, A. (2023). Pengaruh Gaya Kepemimpinan Transformasional Terhadap Innovative Work Behaviour Karyawan di Salah Satu Rumah Sakit di Kota Cilegon. *Journal of Economics and Business UBS*, *12*(6), 3615–3624. https://doi.org/10.52644/joeb.v2i6.854

Zárate-Torres, R., Rey-Sarmiento, C. F., & Acosta-Prado, J. C. (2025). Social Impact of Happiness on Transformational Leadership in Students from Colombian Universities. *Frontiers in Psychology*, *16*. https://doi.org/10.3389/fpsyg.2025.1571572