



The Effect of Self-Efficacy on Knowledge Sharing Behaviour with Big Five Personality as a Mediator among Employees in a Service Company

Delyani Fatmawina Pulungan ^{*1}, Hasanuddin², Salamiah Sari Dewi³

^{1,2,3}Universitas Medan Area, Medan, Indonesia

Abstract. Knowledge sharing behavior is essential in-service organizations, where service quality heavily depends on employees' ability to exchange work experience, job-related information, and practical solutions. This study examines the effect of self-efficacy on knowledge sharing behavior and investigates the mediating role of the Big Five personality dimensions among contract employees at PT Prima Karya Sarana Sejahtera (PKSS) in Medan City. The Big Five personality traits were selected as mediators because personality characteristics influence how employees translate self-efficacy into workplace behaviors, such as knowledge sharing. Adopting an explanatory quantitative design, data were collected from 300 contract employees who had participated in job-related training; the data were subsequently analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM). The findings indicate that self-efficacy exerts a positive effect on knowledge sharing behavior. Furthermore, all five personality dimensions mediate the relationship between self-efficacy and knowledge sharing behavior, with conscientiousness emerging as the strongest pathway, followed by openness, extraversion, neuroticism, and agreeableness. The novelty of this study lies in the development of a comprehensive mediation model that simultaneously evaluates all Big Five personality dimensions as parallel mechanisms linking self-efficacy to knowledge sharing behavior. These findings contribute to knowledge management and organizational psychology by demonstrating that knowledge sharing is shaped not only by employee confidence but also by personality-driven behavioral mechanisms.

Keywords: Self-efficacy, knowledge sharing behaviour, Big Five personality, service employees, SEM-PLS.

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Correspondence Author: Delyani Fatmawina Pulungan, winapulungan87@gmail.com, Medan, Indonesia.



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Introduction

Knowledge sharing has emerged as a central priority in contemporary service organizations, as service quality, operational consistency, and organizational adaptability all depend on how effectively employees exchange experience-based knowledge. According to the knowledge-based view, organizations function as systems that integrate the specialized knowledge held by their members (Grant, 1996). In knowledge-intensive and service-oriented contexts, knowledge does not reside solely in formal systems as an organizational asset; rather, it is embedded in employees' daily routines, interpersonal interactions, problem-solving practices, and professional networks. This perspective aligns with the view that organizational knowledge arises from the ongoing interplay between tacit and explicit knowledge (Nonaka, 1994). Furthermore, knowledge transfer enables individuals or units to learn from the experiences of others, thereby constituting a foundational element of organizational capability and competitive advantage (Argote & Ingram, 2000). Recent research in knowledge-intensive business services indicates that knowledge sharing between managers and employees enhances information flow and supports innovativeness and market efficiency (Danko & Crhová, 2025). Similarly, studies on service-sector employees suggest that knowledge sharing serves as a strategic mechanism for improving organizational effectiveness and advancing sustainable development goals, as it allows employees to convert individual expertise into collective capability (Mahajan et al., 2024). This view is reinforced by earlier findings that knowledge sharing facilitates the transformation of individual knowledge into organizational knowledge, strengthens organizational learning, and contributes to overall effectiveness (Yang, 2007). In addition, knowledge sharing improves work-related outcomes, since employees' willingness to exchange knowledge can enhance both individual performance and service delivery (Henttonen et al., 2016; Khuong et al., 2025). Consequently, knowledge sharing should be regarded as a critical behavioural mechanism through which service organizations reinforce learning, improve service quality, and sustain their long-term effectiveness.

Current literature also emphasizes that knowledge sharing behaviour is multidimensional. It includes both tacit and explicit knowledge exchange, as well as active knowledge donation and knowledge collection. In service organizations, this multidimensionality is especially important because employees often rely on practical knowledge that is difficult to codify, such as handling client complaints, adapting to changing procedures, coordinating with co-workers, or interpreting informal work routines. (Mahajan et al., 2024) show that employees in the service sector differ in their knowledge-sharing patterns, indicating that organizations need more targeted strategies rather than assuming that all employees share knowledge in the same way. This argument is consistent with prior studies showing that knowledge sharing behaviour is influenced by diverse motivational, social-psychological, organizational, and technological factors (Bock et al., 2005; Riege, 2005; Yeboah, 2023). Therefore, organizations need to identify the specific barriers and drivers of knowledge sharing among different employee groups in order to design more effective knowledge management interventions.

Eni et al., (2025) further confirm that knowledge-sharing behaviour is shaped by psychological factors, including knowledge-sharing self-efficacy and intention, which

suggests that knowledge sharing should be understood not only as a managerial process but also as an individual behavioural process. This argument is consistent with prior studies showing that knowledge sharing self-efficacy influences intention to share knowledge and knowledge sharing behaviour (Chen et al., 2012; Mustika et al., 2022; Van Acker et al., 2014)). In addition, studies based on the Theory of Planned Behavior indicate that knowledge sharing is shaped by individual attitudes, intentions, perceived control, and social-psychological factors, further supporting the view that knowledge sharing is a behavioural process at the individual level (Afshar Jalili & Ghaleh, 2021).

Despite its importance, knowledge sharing behaviour does not occur automatically. Employees may hesitate to share knowledge because they doubt the usefulness of their experience, fear negative evaluation, feel insecure about their competence, or perceive knowledge as a source of personal advantage. These barriers are particularly relevant in-service companies where work is dynamic, client-facing, and dependent on rapid adaptation. Therefore, the main research problem is not merely whether knowledge sharing is important, but why some employees are more willing and psychologically prepared to share knowledge than others in the same organizational environment.

This problem is relevant to PT Prima Karya Sarana Sejahtera (PKSS) in Medan City, an outsourcing service company whose employees are required to adjust to client needs, job rotation, service procedures, and job-related training. In this setting, knowledge obtained from training, client interaction, administrative practice, and senior employees may not always be formally documented. If employees do not actively share practical experience and new information, knowledge gaps may emerge across work units and reduce service consistency.

Self-efficacy offers one important psychological explanation for knowledge sharing behaviour. Self-efficacy reflects employees' belief that they are capable of performing work-related tasks and contributing meaningfully to others. Employees with stronger self-efficacy are more likely to communicate ideas, seek feedback, assist co-workers, and share work experience because they perceive their knowledge as useful and believe they can manage social or task-related risks (Albert Bandura, 1997; Eni et al., 2025; Khan et al., 2023). However, self-efficacy may not directly translate into knowledge sharing in the same way for all employees. Personality traits can shape how confidence is expressed in workplace behaviour. The Big Five Personality framework is particularly relevant because it explains stable tendencies in openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Prior studies show that personality traits influence knowledge sharing, information sharing, communication, cooperation, documentation, and participation in communities of practice (Lin et al., 2024; Matzler et al., 2011; Shaukat et al., 2023; Yin et al., 2023).

Although previous studies generally support the positive relationship between self-efficacy and knowledge sharing behaviour, findings remain inconsistent regarding the mechanisms through which self-efficacy promotes knowledge sharing. Some studies report a direct positive effect of self-efficacy on knowledge sharing behaviour (Eni et al., 2025; Khan et al., 2023), whereas others suggest that individual characteristics, particularly personality traits, may influence the strength of this relationship (Shaukat et al., 2023; Yin et

al., 2023). Moreover, previous studies have primarily examined personality traits as direct antecedents rather than as mediating mechanisms. Consequently, limited evidence exists on how self-efficacy is translated into knowledge sharing behaviour through different personality dimensions. This gap highlights the need for a more comprehensive model integrating self-efficacy and Big Five Personality within a single explanatory framework.

Preliminary observations at PT Prima Karya Sarana Sejahtera (PKSS) Medan indicated variations in employees' knowledge sharing behaviour despite similar training opportunities and job responsibilities. Informal discussions with supervisors revealed that while some employees actively exchanged work-related information and practical solutions, others tended to retain knowledge gained from experience. These conditions suggest that psychological factors may contribute to differences in knowledge sharing behaviour among employees.

Based on this gap, the present study aims to examine the effect of self-efficacy on knowledge sharing behaviour and to test the mediating role of the five Big Five Personality dimensions among employees of PT PKSS in Medan City. The novelty of this study lies in positioning Big Five Personality not only as a direct predictor but also as a set of parallel mediators that explain how self-efficacy is translated into knowledge sharing behaviour. The study is justified by the assumption that employees with stronger self-efficacy are more likely to display personality-related behavioural tendencies—such as openness, responsibility, sociability, cooperation, and emotional stability—that support knowledge donation and knowledge collection. The scope of the study is limited to contract employees who have participated in job-related training, making the findings particularly relevant for human resource development, training evaluation, and knowledge management strategies in service organizations.

Method

Research Design

This study employed a quantitative explanatory design to examine the causal relationship between self-efficacy, Big Five Personality, and knowledge sharing behaviour among employees of PT Prima Karya Sarana Sejahtera (PKSS) in Medan. The study specifically tested the mediating role of Big Five Personality in the relationship between self-efficacy and knowledge sharing behaviour using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach. Quantitative explanatory research was selected because it enables hypothesis testing and analysis of direct as well as indirect effects among latent variables. The research was conducted at PT Prima Karya Sarana Sejahtera (PKSS), Medan, North Sumatra, from December 2025 until the completion of data collection and analysis.

Participants

The population of this study consisted of 800 employees of PT PKSS Medan. The sampling technique used was purposive sampling, in which respondents were selected based on predetermined criteria. The inclusion criteria were: (1) employees with contract status and (2) employees who had participated in job-related training programs. Based on these criteria, 300 employees met the sampling requirements and were selected as respondents. The sample

size was considered adequate for SEM analysis because Hair et al. (2021) al Equation Modeling. In addition, the sample fulfilled the requirement of 5–10 respondents per indicator.

Participant Recruitment Procedure

The participant recruitment procedure was conducted systematically to ensure that the respondents involved matched the characteristics of the research population. The participant recruitment procedure was conducted systematically to ensure that the respondents involved matched the characteristics of the research population. The first stage involved identifying the target population, namely contract employees of PT Prima Karya Sarana Sejahtera (PKSS) Medan who had actively worked for at least six months and had participated in job-related training programs. Although PKSS provides outsourcing services to various sectors, including banking, insurance, financing, and customer service organizations, all respondents in this study were employees of PT PKSS Medan. These criteria were established to ensure that participants possessed adequate work experience related to knowledge-sharing activities within organizational settings.

The second stage involved preparing research permission letters and submitting a request for questionnaire distribution to PT PKSS Medan. After obtaining approval, the researcher approached potential participants through coordination with the Human Resource Department (HRD) or work-unit supervisors. At this stage, the researcher explained the objectives of the study, the significance of the research, the estimated time required to complete the questionnaire, and the confidentiality of participant data.

The third stage consisted of distributing the research instruments online through Google Forms. The questionnaire link was shared with participants who met the inclusion criteria. Before completing the questionnaire, participants were required to read an informed consent form containing information regarding data confidentiality, participants' rights to withdraw from the study at any time, and voluntary agreement to participate in the research.

The fourth stage involved an initial data screening process to ensure that all respondents met the research criteria. Respondents who did not fulfill the requirements or submitted incomplete questionnaires were excluded from the data analysis process. Subsequently, data that met the eligibility criteria were processed for statistical analysis.

Research Instruments

The research instruments used psychological scales based on a Likert-type response format to measure three main constructs: knowledge sharing behaviour, self-efficacy, and Big Five Personality. The instruments were adapted from established theoretical and empirical sources and were adjusted to the organizational context of PT PKSS Medan. Knowledge Sharing Behaviour was measured using a scale adapted from (van den Hooff & de Ridder, 2004), consisting of two dimensions: knowledge donating and knowledge collecting. Self-Efficacy was measured using an instrument adapted from (Albert Bandura, 1997), covering the dimensions of magnitude, strength, and generality. Big Five Personality was measured using an instrument adapted from the Big Five Inventory developed by John and Srivastava (1999), which includes extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The final instrument consisted of 8 items for

Knowledge Sharing Behaviour, 20 items for Self-Efficacy, and 20 items for Big Five Personality. The adaptation procedure involved translation, language adjustment, expert review, and pilot readability checking before data collection.

The instruments were developed based on the dimensions or aspects of each variable, as presented in Table 1.

Table 1. Research Instrument

No.	Variable	Dimension/Aspect	Indicator
1	Knowledge Sharing Behaviour	Knowledge Donating	Sharing new knowledge; sharing new job-related information; showing concern for co-workers; sharing work-related stories or experiences.
		Knowledge Collecting	Collecting new knowledge; collecting new ideas; collecting new job-related information; obtaining new knowledge from co-workers' competencies.
2	Self-Efficacy	Magnitude	Belief in being able to perform well when facing difficult tasks; belief in having adequate ability to complete work tasks.
		Strength	Confidence in completing specific tasks; persistence in facing obstacles; ability to respond to various work activities.
		Generality	Confidence in dealing with various work situations; ability to overcome work-related challenges; ability to apply previous experience to different tasks.
3	Big Five Personality	Extraversion	Sociable; assertive; active in communication; showing positive emotions in work interactions.
		Agreeableness	Prioritizing others' interests; soft-hearted; cooperative; willing to help co-workers.
		Conscientiousness	Responsible; organized; disciplined; persistent in completing tasks.
		Neuroticism	Easily anxious; temperamental; sensitive to pressure; vulnerable to work-related stress.
		Openness to Experience	Creative; imaginative; broad-minded; open to new ideas and experiences.

Each scale was presented in the form of favorable and unfavorable statements. Responses were measured using a four-point Likert-type scale ranging from 1 to 4. Favorable items were scored from 1 to 4, while unfavorable items were reverse-scored

Data Analysis

Data analysis was conducted in two stages. The first stage involved descriptive statistics to describe respondents' demographic characteristics. The second stage employed Partial Least Squares-Structural Equation Modeling (PLS-SEM) using Smart PLS software. The measurement model was evaluated through convergent validity using outer loadings and Average Variance Extracted (AVE), construct reliability using Composite Reliability (CR) and Cronbach's Alpha, and discriminant validity using the Heterotrait-Monotrait Ratio (HTMT). The structural model was assessed using the coefficient of determination (R²), model fit, predictive relevance, effect size, path coefficients, t-statistics, p-values, and indirect effects. Model fit was evaluated using the Standardized Root Mean Square Residual (SRMR), predictive relevance was assessed using Q², and effect size was evaluated using f². The evaluation criteria for PLS-SEM followed (Hair, 2022), while discriminant validity using the HTMT criterion referred to (Henseler et al., 2015). A hypothesis was considered significant when the t-statistic exceeded 1.96 and the p-value was below 0.05.

Results

Respondent Characteristics

This study involved 300 respondents. Based on gender, the respondents were dominated by male employees, with 295 respondents (98.3%), while female employees accounted for 5 respondents (1.7%). Based on age, the largest group was employees aged 24–29 years, with 90 respondents (30.0%), followed by those aged above 35 years with 76 respondents (25.3%), those aged 18–23 years with 74 respondents (24.7%), and those aged 30–35 years with 60 respondents (20.0%). Based on education level, most respondents had completed senior high school or equivalent education, with 179 respondents (59.7%), followed by diploma graduates with 64 respondents (21.3%) and bachelor’s degree graduates with 57 respondents (19.0%). Based on length of service, the largest group consisted of employees with 11–15 years of service, with 87 respondents (29.0%), followed by those with 6–10 years of service with 75 respondents (25.0%), those with 1–5 years of service with 73 respondents (24.3%), and those with more than 15 years of service with 65 respondents (21.7%).

Table 2. Respondent Characteristics

Characteristic	Category	Frequency	Percentage
Gender	Female	5	1.7%
	Male	295	98.3%
Age	18–23 years	74	24.7%
	24–29 years	90	30.0%
	30–35 years	60	20.0%
	> 35 years	76	25.3%
Education	Senior High School/Equivalent	179	59.7%
	Diploma	64	21.3%
	Bachelor’s Degree	57	19.0%
Length of Service	1–5 years	73	24.3%
	6–10 years	75	25.0%
	11–15 years	87	29.0%
	> 15 years	65	21.7%

These characteristics indicate that the respondents were predominantly male employees, were within productive age groups, had operational educational backgrounds, and had relatively substantial work experience. This profile is relevant to the research context because knowledge sharing behaviour in service organizations is influenced by work experience, employee interaction, and understanding of service procedures.

Measurement Model Evaluation

The measurement model was evaluated through outer loadings, convergent validity, and construct reliability. Convergent validity was assessed using outer loading values and Average Variance Extracted (AVE), while reliability was evaluated using Cronbach’s Alpha and Composite Reliability (CR).

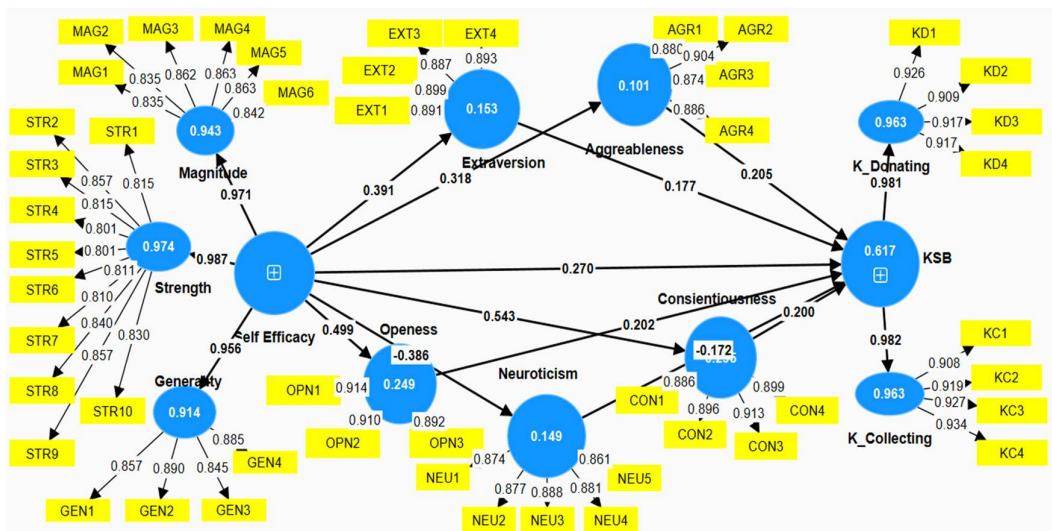


Figure 1. Outer Model

Figure 1 presents the outer loading values of all indicators. Most indicators exceeded the recommended threshold of 0.70. Indicators with loading values slightly below 0.70 were retained because the AVE and Composite Reliability values met the recommended criteria. Therefore, the measurement model demonstrated satisfactory indicator reliability. Overall, the results of the measurement model evaluation indicate that all constructs satisfied the requirements for convergent validity and construct reliability and were therefore suitable for structural model analysis.

A construct is considered to have met convergent validity when it has an AVE value of ≥ 0.50 . The AVE values for each construct in this study are presented in Table 3.

Table 3. AVE Value

Construct	AVE
Agreeableness	0.785
Conscientiousness	0.807
Extraversion	0.797
Generality	0.755
Knowledge Sharing Behavior (KSB)	0.815
Knowledge Collecting	0.850
Knowledge Donating	0.841
Magnitude	0.722
Neuroticism	0.768
Openness to Experience	0.820
Self-Efficacy	0.673
Strength	0.679

As shown in Table 3, all AVE values exceeded the recommended threshold of 0.50, ranging from 0.673 to 0.850. These results indicate satisfactory convergent validity, suggesting that the constructs explained more than 50% of the variance of their indicators.

The reliability test in this study was conducted using Cronbach’s Alpha and Composite Reliability (CR) values.

Table 4. Cronbach's Alpha and Composite Reliability Values

Construct	Cronbach's alpha	Composite reliability (rho c)	Average variance extracted (AVE)
Agreeableness	0.909	0.936	0.785
Conscientiousness	0.921	0.944	0.807
Extraversion	0.915	0.94	0.797
Generality	0.892	0.925	0.755
KSB	0.967	0.972	0.815
K Collecting	0.941	0.958	0.85
K Donating	0.937	0.955	0.841
Magnitude	0.923	0.94	0.722
Neuroticism	0.924	0.943	0.768
Openness	0.89	0.932	0.82
Self-Efficacy	0.974	0.976	0.673
Strength	0.947	0.955	0.679

Table 4 shows that all constructs achieved Cronbach’s Alpha and Composite Reliability values above the recommended threshold of 0.70. Cronbach’s Alpha values ranged from 0.890 to 0.974, while Composite Reliability values ranged from 0.925 to 0.976. These findings confirm that all constructs possess satisfactory internal consistency and reliability.

Discriminant Validity

Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT). The HTMT analysis was conducted among the main latent constructs in the structural model, namely self-efficacy, knowledge sharing behaviour, agreeableness, conscientiousness, extraversion, neuroticism, and openness to experience. The lower-order dimensions of self-efficacy, namely magnitude, strength, and generality, as well as the lower-order dimensions of knowledge sharing behaviour, namely knowledge donating and knowledge collecting, were not included in the HTMT interpretation because they represent dimensions of their respective higher-order constructs rather than separate competing constructs in the structural model.

Table 5. Discriminant Validity Based on the HTMT Criterion

	Agree- ableness	Conscien- tiousness	Extra- version	Neuro- ticism	Open- ness	Self- Efficacy	KSB
Agreeableness	-						
Conscientiousness	0.152	-					
Extraversion	0.113	0.196	-				
Neuroticism	0.126	0.251	0.254	-			
Openness	0.165	0.351	0.222	0.251	-		
Self-Efficacy	0.333	0.572	0.412	0.404	0.536	-	
KSB	0.412	0.541	0.447	0.458	0.544	0,701	-

As shown in Table 5, all HTMT values among the main latent constructs were below the recommended threshold of 0.85. The highest HTMT value was found between self-efficacy and knowledge sharing behaviour at 0.701, which remains within the acceptable range. These findings indicate that each construct in the model is empirically distinct from the others. Therefore, the measurement model demonstrates adequate discriminant validity and is suitable for further structural model evaluation.

Structural Model Evaluation

The structural model was evaluated by examining the coefficient of determination (R^2), model fit, predictive relevance, effect size, direct effects, and indirect effects. This evaluation was conducted after the measurement model had met the requirements for validity and reliability.

Coefficient of Determination (R^2)

The analysis showed that the R^2 value for knowledge sharing behaviour was 0.617. This means that self-efficacy and the five dimensions of Big Five Personality explained 61.7% of the variance in knowledge sharing behaviour, while the remaining 38.3% was explained by variables outside the research model. This value indicates that the model has moderate explanatory power. The R^2 values for the mediating constructs varied, with conscientiousness at 0.295, openness to experience at 0.249, extraversion at 0.153, neuroticism at 0.149, and agreeableness at 0.101.

Table 6. Coefficient of Determination (R^2)

Construct	R^2	Category
Knowledge Sharing Behaviour	0.617	Moderate
Conscientiousness	0.295	Low
Openness to Experience	0.249	Low
Extraversion	0.153	Low
Neuroticism	0.149	Low
Agreeableness	0.101	Low

Model Fit, Predictive Relevance, and Effect Size

The structural model was further evaluated using model fit, predictive relevance, and effect size. Model fit was assessed using the Standardized Root Mean Square Residual (SRMR). Predictive relevance was evaluated using the Q^2 value, while the effect size of each exogenous construct was assessed using f^2 . These analyses were conducted to provide a more comprehensive evaluation of the quality of the PLS-SEM model.

Table 7. Model Fit and Predictive Relevance

Indicator	Value	Recommended Criteria	Decision
SRMR Saturated Model	0.043	< 0.08	Good fit
SRMR Estimated Model	0.044	< 0.08	Good fit
Q^2 Knowledge Sharing Behaviour	0.497	> 0	Predictive relevance established
Q^2 Agreeableness	0.076	> 0	Predictive relevance established
Q^2 Conscientiousness	0.235	> 0	Predictive relevance established
Q^2 Extraversion	0.119	> 0	Predictive relevance established
Q^2 Neuroticism	0.111	> 0	Predictive relevance established
Q^2 Openness	0.202	> 0	Predictive relevance established

As shown in Table 7, the SRMR value of the estimated model was 0.044, which is below the recommended threshold of 0.08. This indicates that the model has a good level of fit. In addition, the Q^2 values for the endogenous constructs were greater than zero. The Q^2 value for knowledge sharing behaviour was 0.497, indicating that the model has strong predictive relevance for the main endogenous construct. The Q^2 values for agreeableness, conscientiousness, extraversion, neuroticism, and openness were also greater than zero, suggesting that the model has predictive relevance for the mediating constructs.

Table 8. Effect Size f^2

Relationship	f^2	Effect Size Category
Self-Efficacy → Knowledge Sharing Behaviour	0.089	Small
Agreeableness → Knowledge Sharing Behaviour	0.099	Small
Conscientiousness → Knowledge Sharing Behaviour	0.073	Small
Extraversion → Knowledge Sharing Behaviour	0.068	Small
Neuroticism → Knowledge Sharing Behaviour	0.065	Small
Openness → Knowledge Sharing Behaviour	0.079	Small
Self-Efficacy → Agreeableness	0.112	Small
Self-Efficacy → Conscientiousness	0.418	Large
Self-Efficacy → Extraversion	0.180	Medium
Self-Efficacy → Neuroticism	0.175	Medium
Self-Efficacy → Openness	0.332	Medium

The f^2 results indicate that the predictors contributed differently to the endogenous constructs. The effect of self-efficacy on knowledge sharing behaviour was categorized as small, indicating that self-efficacy provides a meaningful but not dominant direct contribution to knowledge sharing behaviour. The effects of agreeableness, conscientiousness, extraversion, neuroticism, and openness on knowledge sharing behaviour were also categorized as small. These results suggest that each personality dimension contributes to knowledge sharing behaviour, although the contribution of each dimension is relatively modest when examined separately.

The strongest effect size was found in the relationship between self-efficacy and conscientiousness, which was categorized as large. This indicates that employees with higher self-efficacy are more likely to demonstrate responsible, disciplined, and task-oriented personality tendencies. The effects of self-efficacy on extraversion, neuroticism, and openness were categorized as medium, while its effect on agreeableness was categorized as small. These findings support the mediating role of Big Five Personality by showing that self-efficacy contributes not only directly to knowledge sharing behaviour but also indirectly through personality-related behavioural mechanisms.

Direct Effect Testing

The direct path analysis showed that self-efficacy had a positive and significant effect on knowledge sharing behaviour ($\beta = 0.270$; $t = 5.361$; $p < 0.001$). This indicates that the higher the employees' belief in their own abilities, the greater their tendency to engage in knowledge sharing behaviour.

The dimensions of Big Five Personality also showed significant effects on knowledge sharing behaviour. Agreeableness had a positive effect on knowledge sharing behaviour ($\beta = 0.205$; $t = 5.250$; $p < 0.001$), conscientiousness had a positive effect ($\beta = 0.200$; $t = 5.075$; $p < 0.001$), extraversion had a positive effect ($\beta = 0.177$; $t = 4.256$; $p < 0.001$), and openness had a positive effect ($\beta = 0.202$; $t = 4.986$; $p < 0.001$). Conversely, neuroticism had a negative effect on knowledge sharing behaviour ($\beta = -0.172$; $t = 4.457$; $p < 0.001$). These results indicate that cooperative, disciplined, open, and communicative personality traits encourage knowledge sharing behaviour, while emotional instability tends to inhibit it.

In addition, self-efficacy had a significant effect on all dimensions of Big Five Personality. The strongest effect was on conscientiousness ($\beta = 0.543$; $t = 11.790$; $p < 0.001$), followed by openness ($\beta = 0.499$; $t = 11.949$; $p < 0.001$), extraversion ($\beta = 0.391$; $t = 7.894$; $p < 0.001$), and agreeableness ($\beta = 0.318$; $t = 6.297$; $p < 0.001$). Meanwhile, self-efficacy had

a negative effect on neuroticism ($\beta = -0.386$; $t = 8.049$; $p < 0.001$), indicating that employees with higher self-efficacy tend to have lower levels of anxiety and emotional instability.

Table 9. Direct Effect Testing

Relationship	β	t-statistic	p-value	Result
Self-Efficacy → Knowledge Sharing Behaviour	0.270	5.361	0.000	Significant
Agreeableness → Knowledge Sharing Behaviour	0.205	5.250	0.000	Significant
Conscientiousness → Knowledge Sharing Behaviour	0.200	5.075	0.000	Significant
Extraversion → Knowledge Sharing Behaviour	0.177	4.256	0.000	Significant
Openness → Knowledge Sharing Behaviour	0.202	4.986	0.000	Significant
Neuroticism → Knowledge Sharing Behaviour	-0.172	4.457	0.000	Significant
Self-Efficacy → Agreeableness	0.318	6.297	0.000	Significant
Self-Efficacy → Conscientiousness	0.543	11.790	0.000	Significant
Self-Efficacy → Extraversion	0.391	7.894	0.000	Significant
Self-Efficacy → Openness	0.499	11.949	0.000	Significant
Self-Efficacy → Neuroticism	-0.386	8.049	0.000	Significant

Mediation Testing

Mediation testing was conducted to determine whether the dimensions of Big Five Personality mediated the effect of self-efficacy on knowledge sharing behaviour. The results showed that all mediation paths were significant. The strongest mediation path was self-efficacy → conscientiousness → knowledge sharing behaviour, with an indirect effect of 0.107 ($t = 4.520$; $p < 0.001$). This result indicates that the effect of self-efficacy on knowledge sharing behaviour is most strongly transmitted through discipline, responsibility, orderliness, and achievement orientation.

The next strongest mediation path was self-efficacy → openness → knowledge sharing behaviour, with an indirect effect of 0.099 ($t = 4.602$; $p < 0.001$). This result indicates that confident employees tend to be more open to new ideas and more active in sharing information. The extraversion mediation path had an indirect effect of 0.068 ($t = 3.702$; $p < 0.001$), indicating that social interaction is an important mechanism in strengthening knowledge sharing. The neuroticism mediation path had an indirect effect of 0.065 ($t = 4.154$; $p < 0.001$). This path was significant because self-efficacy reduced neuroticism, which in turn increased the tendency to share knowledge. The agreeableness mediation path had an indirect effect of 0.064 ($t = 4.075$; $p < 0.001$), indicating that cooperative and empathic attitudes also function as relevant mediation mechanisms.

Table 10. Indirect Effect Testing

Mediation Path	Indirect Effect	t-statistic	p-value
Self-Efficacy → Agreeableness → Knowledge Sharing Behaviour	0.064	4.075	0.000
Self-Efficacy → Conscientiousness → Knowledge Sharing Behaviour	0.107	4.520	0.000
Self-Efficacy → Extraversion → Knowledge Sharing Behaviour	0.068	3.702	0.000
Self-Efficacy → Openness → Knowledge Sharing Behaviour	0.099	4.602	0.000
Self-Efficacy → Neuroticism → Knowledge Sharing Behaviour	0.065	4.154	0.000

These findings show that Big Five Personality mediates the relationship between self-efficacy and knowledge sharing behaviour. Therefore, the effect of self-efficacy on knowledge sharing behaviour is not only direct but also operates through personality characteristics that shape how employees think, interact, and respond to organizational demands.

Discussion

The Effect of Self-Efficacy on Knowledge Sharing Behaviour

The results show that self-efficacy has a positive and significant effect on knowledge sharing behaviour. This finding supports (Albert Bandura, 1997) view that individuals' belief in their own abilities influences behavioural choices, willingness to face challenges, and persistence in performing certain behaviours. In the context of PKSS, employees who believe in their abilities tend to be more willing to share work-related knowledge, communicate experience, ask co-workers for information, and participate in knowledge exchange.

This finding is relevant to the nature of service organizations, which rely heavily on knowledge flow among individuals. In service companies, service quality is often determined by employees' ability to understand updated information, apply procedures, and adapt work experience to different service situations. Employees with high self-efficacy are more likely to believe that their knowledge is valuable to others and are therefore more active in knowledge donating. At the same time, they are also more confident in asking questions and seeking knowledge from co-workers, which supports knowledge collecting.

This result is consistent with (Shaukat et al., 2023), who found that individual psychological characteristics contribute to knowledge sharing behaviour. The study by (Khan et al., 2023) also demonstrated that creative self-efficacy is related to individuals' ability to contribute to innovative behaviour through knowledge sharing. Therefore, self-efficacy can be understood as a psychological resource that facilitates knowledge sharing behaviour, especially in work environments that require continuous adaptation and learning.

The R^2 value of 0.617 for knowledge sharing behaviour indicates that the model has a relatively strong explanatory power. This means that self-efficacy and Big Five Personality explain a substantial proportion of variance in knowledge sharing behaviour. This finding suggests that organizational interventions to enhance knowledge sharing should not rely solely on formal rules or technological systems but should also address employees' psychological factors. Training that builds confidence in expressing opinions, gradual mastery experiences, positive feedback from supervisors, and mentoring can strengthen employees' self-efficacy.

The Mediating Role of Big Five Personality

The results show that all dimensions of Big Five Personality mediate the relationship between self-efficacy and knowledge sharing behaviour. This finding indicates that self-belief does not operate independently but is transmitted through personality characteristics that influence how employees behave in the workplace. Self-efficacy provides internal psychological encouragement for action and persistence (Albert Bandura, 1997), while personality traits shape how employees communicate, cooperate, and participate in knowledge exchange (Matzler et al., 2011; Shaukat et al., 2023; Yin et al., 2023). Therefore, understanding employees' self-efficacy and personality characteristics is essential for developing positive, collaborative, and knowledge-sharing-oriented work behaviour.

Conscientiousness was the strongest mediator. Employees with high self-efficacy tend to be more disciplined, responsible, organized, and achievement-oriented. These

characteristics encourage employees to view knowledge sharing as part of professional responsibility rather than merely an additional activity. In service organizations such as PKSS, conscientiousness is important because service work requires accuracy, procedural compliance, and shared work standards.

Openness also emerged as a strong mediation path. Employees with high self-efficacy tend to be more open to new experiences, more prepared to accept system updates, and more willing to explore new work methods. This openness encourages them to share new experiences and ideas with co-workers. In the PKSS context, openness is important because employees frequently face procedural changes, service updates, and diverse client needs. Individuals with high openness tend to be more exploratory, receptive to new ideas, and willing to engage in information exchange. Meanwhile, conscientiousness reflects responsibility, discipline, and commitment to task completion, which can encourage employees to treat knowledge sharing as part of their professional responsibility. These interpretations are consistent with previous studies showing that Big Five Personality traits, particularly openness and conscientiousness, are associated with employees' knowledge sharing, information sharing, documentation of knowledge, and cooperative work behavior (Lin et al., 2024; Matzler et al., 2011; Shaukat et al., 2023; Yin et al., 2023).

Extraversion also mediated the relationship between self-efficacy and knowledge sharing behaviour. Confident employees with extroverted tendencies are more likely to interact, initiate communication, and build social networks. However, the mediation effect of extraversion was lower than those of conscientiousness and openness. This suggests that, in the PKSS context, knowledge sharing is not determined only by communication confidence but also by responsibility and openness to new information. Therefore, employees who are not highly extroverted can still contribute to knowledge sharing when they possess strong conscientiousness and openness. This explanation is consistent with previous research showing that extraversion supports interpersonal communication, social interaction, and knowledge exchange (Akbar et al., 2023; de Vries et al., 2006; Lotfi et al., 2016; Shaukat et al., 2023).

However, the effect was lower than conscientiousness and openness, indicating that knowledge sharing in PKSS is driven not only by communication but also by responsibility and openness to new information.

Agreeableness also functioned as a significant mediator. Employees who are cooperative, empathic, and willing to help others are more likely to engage in knowledge exchange. These characteristics support a trusting work atmosphere and reduce social barriers to sharing information. In service companies, agreeableness strengthens teamwork, especially when employees need to assist each other in handling service problems or client needs. This is consistent with studies showing that cooperative personality traits promote interpersonal support and knowledge sharing (Cabrera et al., 2006; Matzler et al., 2011; Yin et al., 2023)

Neuroticism showed a different pattern. Directly, neuroticism had a negative effect on knowledge sharing behaviour. However, the mediation path through neuroticism remained significant because self-efficacy negatively affected neuroticism. This means that higher self-efficacy may reduce anxiety and emotional instability, which in turn reduces psychological

barriers to knowledge sharing. In the workplace, employees who are anxious, insecure, or afraid of being judged may be reluctant to share information, ask questions, or communicate work-related experiences. Strengthening self-efficacy can therefore help employees manage emotional barriers and become more confident in participating in knowledge exchange. This interpretation is supported by previous studies showing that personality traits, emotional stability, and psychological resources are related to knowledge sharing, positive work behaviour, and work-related outcomes across organizational contexts (Abou-Shouk et al., 2022; Agyemang et al., 2016; Wang & Noe, 2010).

Novelty of the Research

This study offers novelty by developing an integrative mediation model that positions the five dimensions of Big Five Personality as psychological mechanisms linking self-efficacy to knowledge sharing behaviour. Unlike previous studies that mostly examined self-efficacy and personality traits as separate direct predictors, this study tests how employees' confidence is translated into knowledge donating and knowledge collecting through openness, conscientiousness, extraversion, agreeableness, and neuroticism. The study also contributes by examining all five personality dimensions simultaneously as parallel mediators within one structural model. This enables the identification of the most dominant psychological pathway in explaining the relationship between self-efficacy and knowledge sharing behaviour. Contextually, this research focuses on employees of PT Prima Karya Sarana Sejahtera (PKSS), an outsourcing service company in Medan City. This setting is characterized by job mobility, client-based work demands, operational pressure, and the need to rapidly transfer knowledge obtained from training and work experience. Therefore, the study provides empirical evidence from an Indonesian service-company context that remains underrepresented in knowledge sharing research. Practically, the findings may support more targeted human resource development strategies, including self-efficacy training, mentoring, documentation culture, communication forums, and personality-based employee development.

Implications and Contributions

Theoretically, this study strengthens social cognitive theory by demonstrating that self-efficacy functions as an initial psychological factor that encourages positive work behaviour. However, this study also extends this understanding by incorporating Big Five Personality as a mediating mechanism. The findings show that the effect of self-efficacy on knowledge sharing behaviour becomes more comprehensive when explained through personality characteristics. The main contribution of this study lies in testing the five dimensions of Big Five Personality simultaneously as mediators. Previous studies have more often positioned personality as a direct predictor or moderator. This study shows that personality can also function as a psychological pathway that transmits self-belief into knowledge sharing behaviour. Thus, this research contributes to the literature on industrial and organizational psychology, particularly in understanding knowledge sharing behaviour in service organizations.

Practically, the findings provide useful implications for PKSS management and other service organizations. First, companies need to develop programs to strengthen employees' self-efficacy through experience-based training, mentoring, positive feedback, and gradual task mastery. Employees who feel capable are more confident in sharing knowledge and seeking input from co-workers. Second, companies need to consider personality profiles in human resource development strategies. Because conscientiousness was the strongest mediation path, organizations can strengthen a culture of documentation, work accuracy, professional responsibility, and recognition for knowledge contribution. Disciplined and responsible employees can be encouraged to become key drivers of knowledge sharing practices. Third, because openness also played an important role, organizations need to create a work climate that supports new ideas, learning from experience, and cross-unit discussion. Best-practice sharing forums, work reflection sessions, and micro-learning activities can be used to promote openness to new knowledge. Fourth, organizations need to reduce psychological barriers associated with neuroticism. A work environment that excessively punishes mistakes may discourage employees from sharing knowledge. Therefore, companies need to build a psychologically safe climate, promote constructive feedback, and avoid a blame culture. In such an environment, employees are more willing to share experiences, including failures that can become learning resources for the team.

Research Limitations

This study has several limitations. First, the research was conducted only at PT Prima Karya Sarana Sejahtera, limiting the generalizability of the findings to other organizational contexts. Second, the respondents were predominantly male, which may not fully represent gender differences in self-efficacy, personality traits, and knowledge sharing behaviour. Third, the cross-sectional design only captured relationships among variables at a single point in time. Fourth, data were collected through self-report questionnaires, which may be influenced by individual perception and common method bias. Finally, this study examined only self-efficacy and Big Five Personality as predictors of knowledge sharing behaviour, without considering other organizational factors such as leadership, organizational culture, psychological safety, reward systems, and technology support. Future studies are recommended to involve broader samples, different organizational settings, and additional organizational variables to provide a more comprehensive understanding of knowledge sharing behaviour.

Conclusion

This study concludes that self-efficacy has a positive and significant effect on knowledge sharing behaviour among employees of PT Prima Karya Sarana Sejahtera in Medan City. Employees with higher confidence in their abilities tend to be more active in sharing knowledge, seeking information from co-workers, and participating in work-related knowledge exchange. Big Five Personality was proven to mediate the relationship between self-efficacy and knowledge sharing behaviour. All personality dimensions, namely agreeableness, conscientiousness, extraversion, openness, and neuroticism, showed significant mediation paths. Conscientiousness was the most dominant mediator, indicating

that discipline, responsibility, orderliness, and goal orientation are the main mechanisms through which self-efficacy influences knowledge sharing behaviour. These findings confirm that knowledge sharing behaviour is not determined only by self-belief but also by personality characteristics that shape how individuals manage tasks, interact with others, and respond to work pressure. Therefore, service organizations need to integrate self-efficacy enhancement and personality-based human resource development into their strategies for strengthening knowledge sharing.

Author Contributions

Author 1 served as the main author and was responsible for conceptualizing the study, developing the research background, collecting data, conducting the initial data analysis, interpreting the research findings, and preparing the first draft of the manuscript. Author 2 contributed to the refinement of the research concept, theoretical framework, methodological direction, interpretation of findings, and critical revision of the manuscript. Author 3 contributed to strengthening the research design, reviewing the measurement instruments, providing methodological and analytical feedback, and improving the academic quality of the manuscript. All authors reviewed, revised, and approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The authors declare that there are no conflicts of interest related to the research, authorship, and publication of this manuscript. The study was conducted for academic purposes as part of a master's thesis, and no financial, institutional, or personal relationships influenced the research process, data analysis, interpretation of findings, or manuscript preparation.

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