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Effectiveness of Using Whatsapp Social Media as an Organizational Communication Media

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Abstract

Organizational communication is an important foundation for the sustainability and operational efficiency of an institution. This study analyzes the effectiveness of WhatsApp social media in organizational communication at the Galih Pakuan Center, a technical implementation unit for the Social Rehabilitation Assistance (ATENSI) program. This study analyzes the influence of individual characteristics on the effectiveness of organizational communication through the use of WhatsApp social media among Galih Pakuan Center employees. Using a descriptive quantitative method with a Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, this study involved 58 respondents selected through a purposive sampling technique. The results showed that individual characteristics did not significantly influence the use of WhatsApp social media (path coefficient -0.151 and p-value 0.568), but significantly influenced the effectiveness of organizational communication (path coefficient 0.229 and p-value 0.036). The use of WhatsApp social media was proven to have a significant effect on the effectiveness of organizational communication (path coefficient 0.706 and p-value 0.000). The results of the mediation test indicate that WhatsApp social media use does not mediate the influence of individual characteristics on the effectiveness of organizational communication with a low mediation effect value (0.0113). This study concludes that WhatsApp use directly increases the effectiveness of organizational communication, while individual characteristics directly influence the effectiveness of organizational communication without the intermediary of WhatsApp social media use.

Keywords: organizational communication, social media, communication effectiveness

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INTRODUCTION

Organizational communication is a crucial tool for ensuring the organization's survival and future operations. Organizations require a communication system to carry out internal and external functions and roles, which influence the organization's ability to manage its goals (Suryani, 2023). Structured and responsive communication is the right step for coordination, effective delegation of tasks, and teamwork efficiency. Without an effective organizational communication system, the risk of misinterpretation, work stagnation, or even internal conflict will arise. Organizations need a medium that can accommodate communication between members of the organization, thus facilitating coordination, information sharing, and building effective collaboration.

Optimizing the use of communication media within an organization is not only technical but also strategic in creating a collaborative, transparent, and results-oriented work environment. Selecting the right media is key to strengthening organizational culture through open interaction and overcoming geographical barriers, especially where organizational communication is undergoing transformation. While government agencies previously relied on conventional methods such as physical letters, face-to-face meetings, or bulletin boards, there is now a shift toward digital-based approaches to increase efficiency and responsiveness. Social media has emerged as a potential solution thanks to its ability to reach a wide audience in real time, enabling instant information exchange, and centralized document storage.

Digital platforms known as "social media" are various applications and websites that provide opportunities for users to actively create and share various types of content, as well as build connections in a wide social network (Ardiansah and Maharani, 2021). Social media allows users to socialize and interact, share information, and build partnerships (Rahman et al., 2023). Social media is not just about two-way communication; it has evolved into a resource for obtaining the latest information and news. It is also used in various aspects of life, from business to education to public services.

Social media is very easy to use and learn, and it can free its users to share and interact with each other (Feroza and Misnawati, 2020). The ease of using social media is certainly a factor in the increaseThe number of social media users each year according to APJII (2024) Indonesian Internet Service Providers Association, active social media users in 2024 experienced an increase of 1.4% from the use in 2023. The level of Indonesian internet users reached 79.5% or 221,563,479 people who have used the internet, this shows that the number of users continues to increase every year. The most widely used social media in Indonesia is WhatsApp as the first social media with the number of users reaching 90.9% of the total number of internet users in Indonesia, with the largest number of WhatsApp users being the most potential social media in supporting modern organizational communication. WhatsApp's dominance is not only seen from the number of users, but also from its penetration rate which covers various levels of society and sectors, including professional work environments and government institutions.

As a technical implementing unit for Social Rehabilitation Assistance (ATENSI), the Galih Pakuan Center requires a fast and efficient communication system to implement its program. The ATENSI program aims to assist communities experiencing social problems by providing social rehabilitation services aimed at meeting basic community needs, providing social care and family support, and improving the well-being of the community, including those with disabilities and the elderly. Implementing this program certainly requires effective coordination, especially in situations that require a rapid response. With the increasing development of information and communication technology, the Galih Pakuan Center has adopted social media platforms like WhatsApp as a solution to bridge the need to improve communication effectiveness. WhatsApp offers various features that support conversation documentation, digital file sharing, and the ability to form discussion groups, enabling more

structured coordination. This transformation not only changes the way employees communicate but also impacts the work efficiency of Galih Pakuan Center employees in implementing the ATENSI program.

CommunicationAn organization must be effective because it is the main foundation for ensuring coordination, transparency, and work efficiency to achieve common goals. Without effective communication, the risk of misinterpretation, work stagnation, and internal conflict can disrupt organizational productivity and performance. Effective communication not only supports daily operations but is also key to organizational adaptation in facing the demands of change and the complexity of tasks in the digital era. An effective communication system should be viewed as a strategic step to ensure the sustainability and success of an organization amidst a dynamic work environment.

1.1 Individual Characteristics

The most important resource in an organization is human resources, the people who contribute their energy, talent, creativity, and effort to the organization so that it continues to exist. Every human being has individual characteristics that vary from one person to another (Desyinta et al., 2019). Demographic characteristics are a person's characteristics related to age, gender, marital status, education, and length of service (Masduki et al., 2021). Individual characteristics can also be seen from age, class, position, and length of service (Anggarini et al., 2021). The individual characteristics in this study used age, education level, class, or position, and length of service of an employee.

1.2 Use of WhatsApp Social Media

WhatsApp is one of the most popular social media platforms in Indonesia, boasting features that support effective digital communication. The use of any medium must be accompanied by knowledge of how to use it (Anjani et al., 2018). This application allows users to send text messages, audio messages, images, videos, documents, and make real-time voice and video calls. WhatsApp also features a group feature that enables multidirectional communication between multiple users. WhatsApp social media usage can be determined by the frequency of use (Atmaja et al., 2023), the features used (Ningrum and Pamonojati, 2019), and the effectiveness of message exchange can be seen from the intensity, communication, and satisfaction (Supriyanto and Trijayanto, 2021). This study used three indicators to reflect WhatsApp social media usage: frequency, intensity, and features used.

1.3 Effectiveness of Organizational Communication

Digital technology has had numerous positive impacts on communication within organizations. One of the most significant impacts is increased communication efficiency and effectiveness (Puspitasari and Aslan, 2024). The effectiveness of social media as an organizational communication channel lies in its ability to reach an audience, specifically all members of the organization, quickly while maintaining a personal aspect through two-way interactions. Social media such as WhatsApp allows organizations to convey messages visually, textually, and audiovisually at a relatively low cost compared to conventional media. This high level of effectiveness aligns with the success an organization seeks to achieve. WhatsApp's effectiveness as an organizational communication medium is measured by indicators such as the speed of information dissemination, message accuracy, and user satisfaction (Nurkumala, 2021).

RESEARCH METHODS

The research uses a descriptive quantitative method, a quantitative research method is a research approach rooted in the philosophy of positivism, which is applied in research on a

predetermined population or sample. This method uses research instruments as a data collection tool, where the data is then analyzed statistically or quantitatively. The main objective of this method is to test the previously formulated hypothesis (Sugiyono, 2013). This study measures the effectiveness of social media use in organizational communication among employees of Sentra Galih Pakuan located at Jl. H. Miing No. 71, Putat Nutug, Ciseeng District, Bogor Regency, West Java. The data collection period will be carried out from March to May 2025.

This research used two data collection methods: a questionnaire and a literature review to obtain comprehensive and accurate information. The collected data were then analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test causal relationships between variables. The population in this study was all employees of the Galih Pakuan Center, totaling 1,000.67 people. The determination of the number of respondents for this study used a non-probability sampling technique with a purposive sampling type or consideration sample, where the sample consideration was based on the criteria of permanent employees and WhatsApp users.

The number of respondents or samples for this study was determined based on calculations using the Slovin formula with a margin of error of 5%, resulting in 58 samples required as subjects for this study. The technique used to measure the questionnaire data was a Likert scale of 1-5, with five alternative response options provided for respondents. Each option has a rating, as shown in Table 1, to facilitate the research process using SmartPLS 4.0 software.

Table 1. Likert Scale Assessment

Variables	Indicator	Measurement Scale	Code
WhatsApp Social Media Usage (PMSWA)	Frequency (PMSWA1)	Metric	1= Never 2= Rarely 3= Neutral/Don't Know 4= Often 5= Always
	Intensity (PMSWA2)	Metric	1= Never 2= Rarely 3= Neutral/Don't Know 4= Often 5= Always
	Features Used (PMSWA3)	Metric	1= Never 2= Rarely 3= Neutral/Don't Know 4= Often 5= Always
Individual Characteristics (CI)	Age (KI1)	Ordinal	1= < 20 Years 2= 21-30 Years 3= 31-40 Years 4= 41-50 Years 5= >50 Years
	Space Group (KI4)	Ordinal	1= I 2= II 3= IX 4= III 5= IV
	Working Period (KI5)	Ordinal	1= < 1 Year 2= 1-3 Years 3= 3-5 Years 4=6-10 Years 5= > 10 Years
Organizational Communication Effectiveness (OCE)	Information Distribution Speed (EKO1)	Metric	1= Disagree 2= Less Agree 3= Neutral/Don't Know 4= Agree 5= Strongly Agree

Message Accuracy (EKO2)	Metric	1= Disagree 2= Less Agree 3= Neutral/Don't Know 4= Agree 5= Strongly Agree
User Satisfaction (EKO3)	Metric	1= Disagree 2= Less Agree 3= Neutral/Don't Know 4= Agree 5= Strongly Agree

RESULTS AND DISCUSSION

3.1 Model Measurement Test

1. Convergent Validity

Based on data from the questionnaire that has gone through the coding process, Individual Characteristics (KI) with 4 statement items, WhatsApp Usage Variable (PMSWA) with 3 items or statement indicators and Organizational Communication Effectiveness (EKO) with 3 Indicators can be said to be valid if they have met the loading factor criteria > 0.708 (Hair et al., 2019). The validity of the indicator is determined by the loading factor ≥ 0.708, which in the context of this study is reflected in EKO3 as the dominant indicator of communication effectiveness.

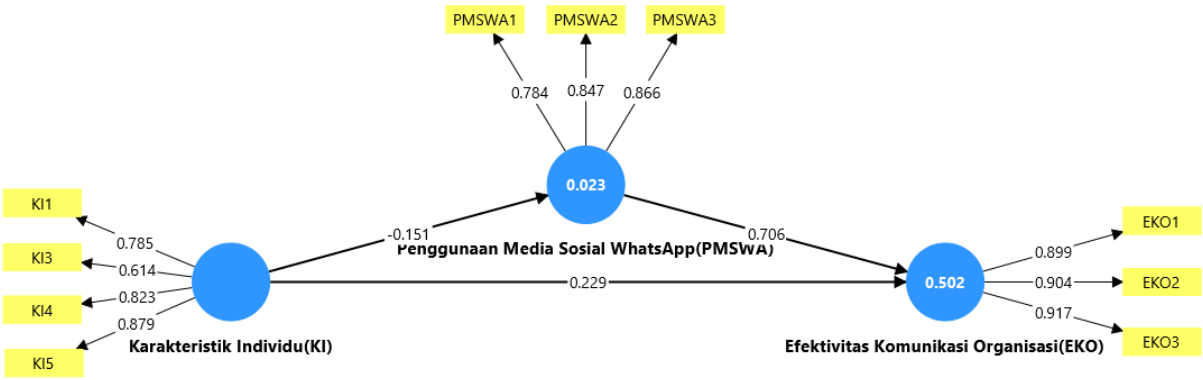

Figure 1. *Loading Factor*

Table 2 shows that all indicators reflect their respective variables. The EKO3 indicator has the highest outer loading value, namely 0.917, which means that every change in the organizational communication effectiveness variable will be reflected in EKO3 of (0.917 x 0.917 = 84%). The smallest outer loading value is KI3 with a value of 0.614, although below the value of 0.708, but the individual characteristics variable has an AVE value above 0.5 as stated in Table 3, so the KI3 indicator can be maintained. Overall, each questionnaire indicator can be declared valid in reflecting its variables. These results indicate that user satisfaction is the most representative indicator of the perception of organizational communication effectiveness.

Table 2. Outer Loading

Indicator	*Outer loadings*
KI5 ← Individual Characteristics (KI)	0.879
KI4 ← Individual Characteristics (KI)	0.823
KI3 ← Individual Characteristics (KI)	0.614
KI1 ←Individual Characteristics (KI)	0.785
PMSWA3 ← WhatsApp Social Media Usage (PMSWA)	0.866
PMSWA2 ← WhatsApp Social Media Usage (PMSWA)	0.847
PMSWA1 ← WhatsApp Social Media Usage (PMSWA)	0.784
EKO3 ← Organizational Communication Effectiveness (EKO)	0.917
EKO2 ← Organizational Communication Effectiveness (EKO)	0.904
EKO1 ← Organizational Communication Effectiveness (EKO)	0.899

2. Reliability Test

The results of the reliability test for the research instrument showed a good level of consistency and reliability in the three variables tested, namely EKO, PMSWA, and KI. Based on the data presented in Table 3, it can be explained that all constructs have an adequate level of reliability. The EKO variable shows a very good reliability value with a Cronbach's alpha of 0.892, Composite reliability (rho_a) of 0.893 and Composite reliability (rho_c) reaching 0.933, indicating that the measurement items in the EKO construct are very reliable and correlate very well with each other to form the construct. The Average variance extracted (AVE) value of 0.822 indicates that the EKO latent variable is able to explain more than 82% of the variance of its indicators, far above the minimum standard of 0.5 which indicates very good convergent validity.

The KI variable, Cronbach's alpha value of 0.794 indicates a fairly good level of internal consistency although slightly lower than EKO. The rho_a value is 0.881 and rho_c is 0.861. The AVE value of 0.611 indicates that the KI construct is able to explain approximately 61% of the variance of its indicators, which is still above the minimum standard and indicates good convergent validity of the items that make up the construct. The PMSWA variable has a Cronbach's alpha value of 0.785 which is still above the minimum acceptance limit of 0.7 for research. The rho_a value of 0.828 and rho_c of 0.872 indicates that the PMSWA construct has good reliability. The AVE value of 0.694 indicates that the PMSWA construct is able to explain almost 70% of the variance of its indicators, which indicates good convergent validity.

Table 3. Reliability Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
ECO	0.892	0.893	0.933	0.822
KI	0.794	0.881	0.861	0.611
PMSWA	0.785	0.828	0.872	

Overall, the results of the reliability testing show that the three constructs have an adequate level of reliability for use in further analysis.

3. Discriminant Validity

The results of the discriminant validity test in this study indicate the extent to which the three analyzed constructs, namely EKO, KI, and PMSWA, differ conceptually and empirically. Table 4 shows that the relationship between KI and EKO has a correlation value of 0.156. The relationship between KI and PMSWA also shows a low correlation value of 0.173. This confirms that KI is two different constructs that do not overlap conceptually and measure different constructs.

The correlation between PMSWA and EKO shows a fairly high correlation value of 0.768. This value indicates a strong relationship between the two constructs, although it is still within acceptable limits for discriminant validity. This suggests that WhatsApp social media usage is related to organizational communication effectiveness, but remains two distinct constructs.

Table 4. Heterotrait-monotrait

	Organizational Communication Effectiveness (OCE)	Individual Characteristics (CI)	WhatsApp Social Media Usage (PMSWA)
ECO			
KI	0.156		
PMSWA	0.768		

3.2 Structural Test of the Model

Structural model testing involves three stages, but prior to testing, multicollinearity between variables must be assessed using the Inner Variance Inflation Factor (VIF) statistic. A VIF value of <5 indicates a low level of multicollinearity between variables. The Inner VIF test

results in Table 6 show that all indicators in the structural model have VIF values ranging from 1,362 to 2,825, well below the critical limit of 5. This indicates the absence of high multicollinearity between variables and is considered valid for further structural model testing.

Table 6. Inner VIF

Indicator	VIF
EKO1	2,450
EKO2	2,690
EKO3	2,825
KI1	1,741
KI3	1,362
KI4	2,448
KI5	1,842
PMSWA1	1,647
PMSWA2	1,887
PMSWA3	1,537

1. Path coefficient

Path coefficients indicate the strength of the relationship between exogenous and endogenous constructs, as well as the direction of their influence. In this analysis, there are three main relationships between constructs: the influence of KI on PMSWA, the influence of PMSWA on EKO, and the influence of KI on EKO.

Table 7. Path Coefficient

Variables	Original sample(O)	Sample mean(M)	2.5%	97.5%	P Value
Individual Characteristics (CI) →Organizational Communication Effectiveness (EOE)	0.229	0.203	-0.056	0.376	0.036
Use of WhatsApp Social Media (PMSWA) →Organizational Communication Effectiveness (EKO)	0.706	0.689	0.511	0.842	0.000
Individual Characteristics (KI) → WhatsApp Social Media Usage (PMSWA)	-0.151	-0.105	-0.517	0.405	0.568

The results of the path coefficient analysis show the dynamics of the relationships between constructs in the model. The path from the KI variable to the EKO variable has a path coefficient of 0.229 with a p-value of 0.036. This indicates that individual characteristics have a positive influence on the effectiveness of organizational communication, although the strength of the influence is relatively weak. The confidence interval for this coefficient ranges from -0.056 to 0.376, indicating that although there is an overall positive influence, there is variability in the estimates. The relationship between the PMSWA variable and the EKO variable shows a very strong path coefficient of 0.706 with a p-value of 0.000. This value indicates that PMSWA has a strong positive influence on EKO. The confidence interval for this coefficient ranges from 0.511 to 0.842, all of which are positive and indicate consistency in the direction of influence. These findings indicate that the use of WhatsApp social media is a dominant factor in increasing the effectiveness of organizational communication. The relationship between the KI construct and PMSWA has a path coefficient of -0.151 with a p-value of 0.568. The wide confidence interval, from -0.517 to 0.405, encompasses the zero value, confirming the absence of an effect of KI on PMSWA. The negative sign on the coefficient indicates a negative trend in the relationship, although this cannot be confirmed due to its statistical insignificance.

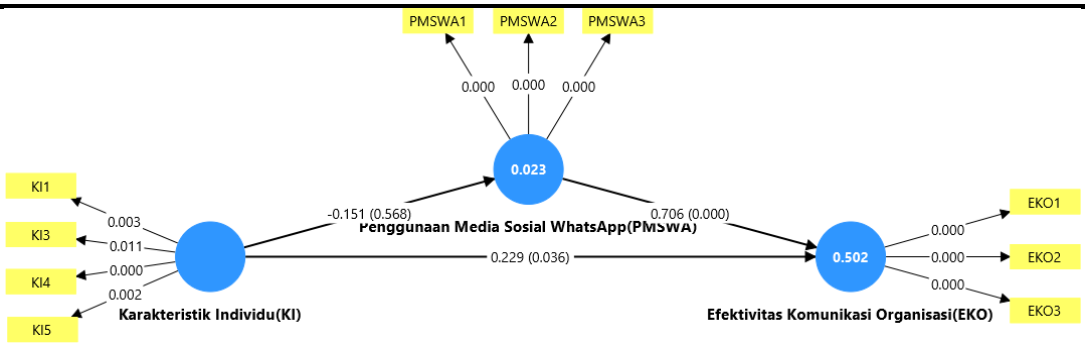

Figure 2. Path Coefficient

Overall, the results of this path coefficient analysis provide an overview that the use of WhatsApp social media has a very important role in increasing the effectiveness of organizational communication.

2. Coefficient of determination

The coefficient of determination analysis in structural model evaluation shows how much of the variation in endogenous variables can be explained by the exogenous variables in the model. The coefficient of determination, or R-square, provides an overview of the model's overall predictive power, while the adjusted R-square provides a value that has been adjusted for model complexity and sample size, thus providing a more accurate estimate, especially for complex models.

Table 8. Coefficient of Determination

Variables	*R-square*	*R-square adjusted*
Organizational Communication Effectiveness (OCE)	0.502	0.484
Use of WhatsApp Social Media (PMSWA)	0.023	0.005

The results of the coefficient of determination analysis indicate a significant difference in the model's ability to explain the two endogenous variables. For the EKO variable, the R-square value of 0.502 indicates that 50.2% of the variation in organizational communication effectiveness can be explained by the exogenous variables in the model, namely KI and PMSWA. The R-square value for EKO, which reached 0.502, is classified as moderate to substantial according to the criteria commonly used in SEM-PLS research, where an R-square value of 0.25 is considered weak, 0.50 is considered moderate, and 0.75 is considered substantial (Aburumman, 2022). The analysis results for the PMSWA variable show a very low R-square value of only 0.023, meaning that only 2.3% of the variation in PMSWA can be explained by KI. This result is consistent with previous findings in the path coefficient analysis which showed that the relationship between KI and PMSWA was not statistically significant.

3. Effect size

Based on Table 9, there are several important findings related to the effect size in the model. The endogenous variable EKO, KI, has an f^2 value of 0.103. Referring to the guidelines proposed by Hair et al. (2021), where an f^2 of 0.02 is considered small, 0.15 is considered medium, and 0.35 is considered large, the effect size of KI on EKO is categorized as small approaching medium. The endogenous variable PMSWA, KI, shows a very small effect size with an f^2 value of only 0.023. This value is slightly above the 0.02 threshold for the small effect category. The PMSWA construct shows a very substantial effect size on EKO with an f^2 value of 0.977.

Table 9. Effect Size

	Organizational Communication Effectiveness (OCE)	WhatsApp Social Media Usage (PMSWA)
ECO		
KI	0.103	0.023
PMSWA	0.977	

3.3 Hypothesis Testing and Mediation

Based on the theoretical framework developed, this study proposes several interrelated hypotheses to test the relationship patterns among the variables KI, PMSWA, and EKO. These hypotheses examine not only the direct influence between the variables but also the possible mediating mechanisms. These hypotheses are tested in Table 10 below.

Table 10. Hypothesis testing

Hypothesis	**Path Coefficient**	**P-Value**	**95% Path Coefficient Confidence Interval**		f^2
			Lower Limit	Upper Limit	
H1. KI→PMSWA	-0.151	0.568	-0.517	0.405	0.023
H2. PMSWA→EKO	0.706	0.000	0.511	0.842	0.977
H3. KI→EKO	0.229	0.036	-0.056	0.376	0.103

Based on the results of the hypothesis test above, it is stated as follows:

1. The first hypothesis (H1) was rejected. Individual characteristics did not significantly influence WhatsApp social media usage, with a path coefficient of -0.151 and a p-value of 0.568 (>0.05). Age, education, position, and length of service were not significant factors in determining WhatsApp usage as an organizational communication medium.
2. The second hypothesis (H2) is accepted, WhatsApp social media usage has a significant effect on organizational communication effectiveness, with a path coefficient of 0.706 and a p-value of 0.000 (<0.05). WhatsApp frequency, intensity, and features are important factors that determine the speed of information distribution, message accuracy, and user satisfaction in organizational communication.
3. The third hypothesis (H3) is accepted, Individual Characteristics have a significant effect on the Effectiveness of Organizational Communication, with a path coefficient of 0.229 and a p-value of 0.036 (<0.05). Age, education, position, and length of service factors determine information distribution, message accuracy, and user satisfaction in organizational communication.

Table 11. Mediation Test

	Original sample (O)	***Sample mean (M)***	***Standard deviation (STDEV)***	***T statistics (|O/STDEV|)***	***P values***
H4. KI→PMSWA→EKO	-0.106	-0.083	0.183	0.581	0.561

Table 12. Mediation Effect Test

Hypothesis	**Upsilon Statistics (V)**	**Information**
H4. KI→PMSWA→EKO	(-0.151)2 x (0.706)2 = 0.0113	Low Influence

The results of the mediation test stated that there was no mediation on the WhatsApp social media usage variable and to determine this mediation effect, upsilon (v) was used. Interpretation of the statistical value of the upsilon (v) mediation effect was based on Cohen's recommendations in Ogbeibu et al. (2020) namely 0.175 high effect, 0.075 medium effect and 0.01 low effect. This calculation was carried out by squaring the direct effect 1 multiplied by the squaring of the direct effect 2. The result of the calculation was 0.0113 or the mediation effect at the structural level was classified as low.

CONCLUSION

Based on the analysis, the use of WhatsApp as an organizational communication medium by employees of the Galih Pakuan Center was deemed quite effective. Satisfaction was

the primary determinant of perceived communication effectiveness, followed by message comprehension and engagement. The group feature available on WhatsApp facilitates the rapid and efficient delivery of information and coordination between departments. Therefore, the optimization of WhatsApp's use as an internal communication tool needs to be continuously improved, for example through digital ethics training, group management, and systematic information flow management. These findings can form the basis for developing internal communication policies in digital-based social service institutions.

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