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Relationship Between WhatsApp Usage and Employee Engagement in Department of National Unity and Integration (JPNIN)

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ABSTRACT

The usage of technology applications in the workplace has been an escalating phenomenon in which employees use several of these applications for different purposes in relation to work. One of the applications is using WhatsApp as a means of communication among the employees in various departments to ensure effective and fast response from all parties in relation to assigned tasks among the employees. This paper aims to determine the relationship between WhatsApp usage and employee engagement in the Department of National Unity and Integration (JPNIN) in Putrajaya. This research seeks to answer the following research questions: a) what is the level of WhatsApp usage in JPNIN among the staff, b) what is the acceptance level of WhatsApp usage in JPNIN, and c) what is the relationship between WhatsApp usage and employee engagement in JPNIN. This quantitative research is conducted among 274 respondents from JPNIN. The respondents are active users of the WhatsApp application for the communication purposes usage at work. The data was analysed using the Pearson Correlation. This study concludes that all the independent variables which are usage pattern, perceived usefulness, and perceived ease of use, have significant positive relations towards the employee engagement in JPNIN. This study will provide useful insights to JPNIN and other relevant stakeholders that includes the relevant policymakers.

Keywords: *WhatsApp usage, perceived ease of use, perceived usefulness, usage pattern, employee engagement.*

INTRODUCTION

The escalation of digital scape and new technologies has brought changes to business media operations, building interactive messaging and connecting everyone anywhere, anytime (Glabbeek, 2020), regardless of the nature of business (Abdul Hamid et al., 2022) or purpose (Mazlan et al., 2021). A survey conducted by Deloitte and *Fortune* on CEOs revealed that 85% of the CEOs indicated the need to respond quickly, innovate, and adapt in the era of fast-moving change. In addition, the revolution in the business landscape due to the COVID-19 pandemic has increased the digital transformation of many organisations throughout 2020 (Foutty, 2021).

According to Piperal (2019), going digital is effective administratively and financially. Digital government is much needed to regain citizens' trust with the user-centric service delivery system and eradicate outdated bureaucracy. The government will be actively engaged with its citizens, become more transparent, and provide proactive public services with this measure.

Mobile Instant Messaging (MIM) applications that provide real-time communication services have become prevalent with the current needs as part of the digital transformation. Interactive applications such as WhatsApp, Telegram, Line, and WeChat have become an integral part of day-to-day business. Due to the increasing number of social network usage, many

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organisations realised the importance of using alternate communication tools (Salleh, 2012) and opted for WhatsApp application usage to engage with employees at work (Anshari & Alas, 2015; Milfadzhilah et al., 2018; Kassim et al., 2020).

WhatsApp is reported to have overtaken traditional internal communication mediums such as memos, email, notices, and letters due to its swiftness (Ali et al., 2019). The organisation's internal communication tools are perceived as beneficial to create employees' positive behaviour, meaning, and worth in an organisation. In addition, it eases the interaction between an organisation, supervisor, and employee while creating meaning and achieving optimal employee engagement (Karanges et al., 2015). The use of suitable internal communication tools has a significant positive relationship with employee engagement (Varttala & Varttala, 2010; Sharma & Kamalanabhan, 2012; Kang & Sung, 2017). Chow (2018) highlighted in his study that when internal communications strategy is working well, everyone in the organisation unit becomes responsible while trust increases, resulting in increased employee engagement and 20-25% productivity.

Employee engagement is an emotional commitment of its employees towards the organisation and its goal to which human capital value, enjoy, and believe in what they do at work (Jena & Pradhan, 2017; Mazzei, 2018). As a result, engaged employees go beyond the call of duty and create a sense of belonging towards the organisation (Kang & Sung, 2017; Jena & Pradhan, 2017). Due to the fact that employee engagement is closely related to productivity and performance, it has rapidly gained popularity and importance (Mazzei, 2018). Hence, this study will examine the relationship between WhatsApp usage and employee engagement in the Department of National Unity and Integration, Putrajaya (JPNIN). Established on July 1st, 1969, following the May 13th, 1969 racial riot, JPNIN is responsible for managing unity and integration in Malaysia. The activities under its machinery, such as neighbourhood watch community, unity kindergarten, mediator community, and voluntary patrolling, require officers to work away from office settings. Therefore, JPNIN employees communicate work matters through the WhatsApp application since they need to be on the ground and away from the office most times. Therefore, this article will look into: the level of WhatsApp usage in JPNIN among the staff; what is the acceptance level of WhatsApp usage in JPNIN, and what is the relationship between WhatsApp usage and employee engagement in JPNIN.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Fred Davis in 1986, is the most employed model that measures an individual's acceptance of information systems. TAM, adapted from the Theory of Reasonable Action (TRA) and the Theory of Planned Behaviour (TPB), explained the user's behaviour, attitude and intention towards the information system (Marangunic & Granic, 2014).

TAM has proven to lead to better prediction of acceptance and use of new information systems. It stands out as one of the best theories used in information management research (Lee et al., 2003). The model's strength is verified as it has been used extensively to study various technologies (Marangunic & Granic, 2014; Salleh, 2014; Lai, 2017). TAM assumes that four variables determine an individual's information system acceptance. Perceived Usefulness (PU)

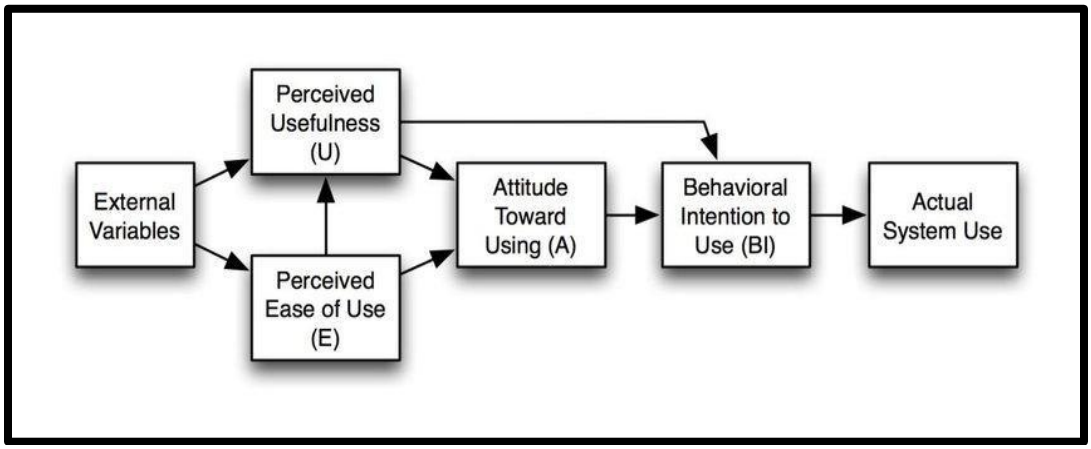
and Perceived Ease of Use (PEOU) serve as the main two variables, and the other two variables are Behavioural Intentions (BI) and Behavior (B) (Lee et al., 2003).

Perceived usefulness is the degree to which a person believes that using a particular system would enhance their job performance. In contrast, perceived ease is the degree to which a person believes that using a specific system would be free from effort (Davis 1989). Behaviour measures usage frequency, time, number, and diversity of usage (Lee et al., 2003).

According to Davis, the users' attitude toward using the system determines if the user accepts the system. User's attitude is influenced by two major variables: perceived usefulness and perceived ease of use (Marangunic & Granic, 2014). Although this theory was modified a few times, perceived usefulness and perceived ease of use remain relevant as the main variable influencing the behaviour intention to use the system (Lai, 2017).

Figure 1 below is the modified version of TAM theory by Venkatesh and Davis (1996). Based on the previous studies' adaptation, this study will employ two TAM variables, namely perceived usefulness and perceived ease of use, to test the respondent's acceptance of WhatsApp usage and employee engagement. These two variables will help to examine the acceptance level of WhatsApp usage.

Figure 1: Technology Acceptance Model (TAM) framework by Davis, Bogozzi and Warshaw (1989)



WhatsApp Application

Online communication has offered us as another potential source of information and communication channel in today's modern society. Social networking channels have great influence on their users and most importantly, keeping everyone connected in the globalized world becomes the major reason for just about anyone to choose messaging applications such as WhatsApp. WhatsApp became a globally used application with 200 million monthly active users within 4 years of its introduction. Today, it has become the most popular mobile messenger application globally with 2 billion monthly active users (Dean, 2021). WhatsApp, founded by Jan Koum and Brian Acton in 2009, is a free multiple features application and allows users to send real-time text, image, files, video, audio, video and conference call, groups chat, and sync with pc (WhatsApp, 2020). WhatsApp has become part of everyone's daily lives, and people check their WhatsApp every hour every day. Most people use WhatsApp as a primary messenger and

text message as an alternative for them to communicate (Kootbodien, 2017). Malaysia is considered a digital forerunner because 97% of the Malaysian population uses WhatsApp daily (Rana, 2019). Internet Users Survey (IUS) 2020 by Malaysian Communications and Multimedia Commission (MCMC) reports a saturated rate with 98.7% respondents using WhatsApp.

WhatsApp is suggested to replace traditional mediums for communication due to its convenience, time-saving factors, fast, inexpensive to use (et al., 2015; Wong et al., 2019). In the corporate or business world, the use of WhatsApp has taken over electronic mail as the 10 means of communication due to efficiency, which indirectly affects the job performance of the employees (Richter, 2014). WhatsApp is also revealed to be preferred by academicians (Rana, 2019). WhatsApp is recommended to be used extensively in the public sector since it enables the authorities to interact with the public (Kassim et al., 2020). Milfadzhilah et al. (2018) proposed WhatsApp in institutions such as hospitals because it is a quick information-sharing method in real-time. In recent times during the COVID 19 pandemic, the United Kingdom government launched Coronavirus Information Service on WhatsApp. These services reach out to the masses on official information and advice about coronavirus (PRWeek, 2020).

The previous study by Omar (2018) concludes that WhatsApp usage is high for chatting, followed by planning, sharing and group conversation. Additionally, perceived ease of use and perceived usefulness significantly influence employee engagement. WhatsApp is highly regarded to create group cohesiveness. It may lead to an increase in the employee engagement level at work naturally, or with some effort, from the department or unit. Lee et al. (2015) indicate that users are concerned about the practical usage of the application. The application usage increases when the user perceives the application as useful and easy to use whilst increasing the user's satisfaction.

Additionally, Jamaludin et al. (2019) confirm that WhatsApp is easier to use than conventional internal communication tools such as email. It is easy since it encourages sending and opening documents from the phone instead of using conventional communication tools. This study believes that employees should adopt WhatsApp usage to keep social media a relevant internal communication tool. Therefore, based on the past literature findings as above, the following hypotheses are obtained: -

H1: There is a significant positive relationship between the Level of WhatsApp usage and employee engagement in JPNIN;
H2: There is a significant positive relationship between perceived usefulness of WhatsApp and employee engagement in JPNIN; and
H3: There is a significant positive relationship between perceived ease of use of WhatsApp and employee engagement in JPNIN.

METHODOLOGY

Data Collection

Data collection is done online using google form, which the supervisor had validated. Then, the approval from JPNIN is obtained to conduct a pilot test with 30 employees. In the next step, the amendments were made to the research questions and obtained the supervisor's approval. Following that, the questionnaire is distributed via WhatsApp to the respondents. This approach

was the most convenient method to employ primarily due to the movement control order in the country. Respondents were given a week to complete the questionnaire. The data collected was then exported from Google drive into an Excel sheet. Lastly, all the data collected from the respondents were entered into SPSS and analysed using SPSS, statistics software version 25.

Data Analysis and Discussion

To proceed with the data analysis, any missing data is identified first. Data cleaning is then done to clear any unwanted responses or wrong entries. Next is data coding and data entry into the SPSS Statistics software. Finally, the normality of the data is tested using the same software to ensure that the sample data has been drawn from a normally distributed population.

Descriptive analysis is then conducted describing the demographic characteristics of the respondents and level of WhatsApp usage. The data is then examined using frequency, percentage, mean and standard deviation. Finally, this part of the test will be used to conclude the research. As part of the inferential analysis, the Pearson Correlation test will be employed for hypothesis testing to determine the significant relationship between the level of WhatsApp usage by pattern and employee engagement in JPNIN; the significant relationship between perceived usefulness of WhatsApp and employee engagement in JPNIN, and the significant relationship between perceived ease of use of WhatsApp and employee engagement in JPNIN. The level of significance used for this research is valued at 0.05. Guilford's Rule of Thumb is applied to measure the relationship and strength between the variables in the research. Based on this, the r value below 0.2 is classified as a negligible relationship, 0.2 – 0.4 as low relationship, 0.4 – 0.7 moderate relationship, 0.7 – 0.9 high relationship and above 0.9 is very high.

RESULTS AND DISCUSSION

Demographic Characteristic of the Respondents

A total of 274 employees responded to the online survey questionnaire. Based on the data collected, more than half of the respondents who took part in this study are female respondents with 184 (67.2%), and male respondents only 90 (32.8%) which is the actual representation of employees in JPNIN. As for the age, the respondents involved in this study ranged between 21 and 60 years old, with an average of 41 years old. The majority of respondents are senior employees, made up of a productive age group, between 31 – 40 years old with 125 (45.6%). Respondents aged 21 – 30 years old are the smallest number with 27 (9.9%) employees. The research also finds that a high majority of respondents are married, with a total of 247 (90.1%). As for the race, Malay respondents are the majority with a total of 243 respondents (88.7%), followed by 10 (3.6%) Chinese and 5 (1.8%) Indian. Other ethnic groups are the Bumiputera Sabah and Sarawak, with 16 (5.8%) respondents.

The highest education level attained scored 197 (71.9%) respondents who possess PMR/SPM/STPM/Diploma while 67 (24.5%) are Degree holders and Master Degree with 10 respondents (3.6%). Past studies found that WhatsApp usage is less significant with education level since it is distinguished as the first application that needs no training or administrator supervision for users to familiarise themselves with the features (Bouhnik & Deshen, 2014). In addition, the majority are from the implementation group, with 180 (65.7%) respondents and 94 (34.3%) from the management and professional group. Employees from the implementation

group are required to do frequent ground supervision compared to the management and professional groups. Therefore, having larger samples from this group is advantageous in answering the survey questionnaire, where they can relate to their daily use of WhatsApp at work. Overall, the demographic characteristic of the employees in JPNIN is normally distributed and appropriate for this study. Therefore, the information given by these 274 respondents will help to analyse further the relationship between WhatsApp usage and employee engagement in JPNIN.

Table 1: Distribution of respondents' profile (n=274)

Profile		Frequency	Percentage (%)
Gender			
	Female	184	67.2
	Male	90	32.8
Age			
	21 – 30	27	9.9
	31 – 40	125	45.6
	41 – 50	75	27.4
	51 – 60	47	17.2
	M: 40.93		
	SD: 8.35		
Marital status			
	Married	247	90.1
	Single	19	6.9
	Divorced	8	2.9
Race			
	Malay	243	88.7
	Indian	10	3.6
	Chinese	5	1.8
	Others	16	5.8
Education			
	PMR/SPM/STPM/Diploma	197	71.9
	Degree	67	24.5
	Master	10	3.6
Designation			
	Implementation Group	180	65.7
	Management and Professional	94	34.3

WhatsApp Usage Profile

According to Table 2, majority respondents of 229 (83.6%) have been using the WhatsApp application for more than two years. 44 respondents (16.1%) have been using the WhatsApp application for more than a year, and only 1 respondent (0.4%) used it for less than a year.

As for the duration of WhatsApp usage in a day, the majority of 154 (56.2%) respondents spend more than 3 hours per day on WhatsApp, followed by 47 (17.25%) and 41 (15%) of the respondents who spend between 1 and 2 hours per day and 2 and 3 hours per day respectively. On the other hand, the minimum duration spent by 20 (7.3%) respondents is only from 30 minutes to 1 hour per day, and 12 (4.4%) of the respondents spend less than 30 minutes per day on WhatsApp.

Based on the usage, a majority of 196 (71.5%) respondents use WhatsApp countless times, and 78 (28.5%) use it at least 3 times a day. The table below also shows that 243 (88.7%) respondents joined more than three WhatsApp groups at work. In comparison, only 25 (9.1%) respondents joined three WhatsApp groups, 4 (1.5%) joined two, and only 2 (0.7%) joined one WhatsApp group. Group communication allows them to share messages, documents, photos, videos and voice notes to a maximum number of 256 members (WhatsApp, 2021). It makes information dissemination easier since it saves the time to log onto a PC to obtain the information needed. It is also time-saving to text in the WhatsApp group. Additionally, the sender can track the number of members in the group that have viewed the message sent.

The majority of 89 (32.5%) respondents received the maximum number of messages, with more than 20 official WhatsApp messages per day. In contrast, messages sent in a day can be very few, with only 1 to 5 messages sent by the majority of 106 (38.7%) respondents.

Table 2: WhatsApp usage profile (n=274)

Profile	**Frequency**	**Percentage (%)**
WhatsApp user for		
Less than a year	1	0.4
More than a year	44	16.1
More than two years	229	83.6
Duration of WhatsApp usage in a day		
Less than 30 minutes	12	4.4
Between 30 minutes and 1 hour	20	7.3
Between 1 and 2 hours	47	17.2
Between 2 and 3 hours	41	15.0
More than 3 hours	154	56.2
Number of times of WhatsApp usage in a day		
At least 3 times	78	28.5
Countless times	196	71.5
Number of WhatsApp group joined		
One	2	0.7
Two	4	1.5
Three	25	9.1
More than three	243	88.7
Number of official WhatsApp messages received in a day		
None	-	-
1-5	67	24.5
6-10	69	25.2
11-15	23	8.4
16-20	26	9.5
More than 20	89	32.5
Number of official WhatsApp messages sent in a day		
None	9	3.3
1-5	106	38.7
6-10	62	22.6
11-15	31	11.3
16-20	21	7.7
More than 20	45	16.4

Level of WhatsApp Usage

Table 3 presents the level of WhatsApp usage measured based on the percentage, mean and standard deviation. The four patterns measured under this section are sharing information related to work, group communication at work, work related planning, and chatting on work matters. This information is required to answer the first objective of this research on the level of WhatsApp usage in JPNIN. The 5-point Likert Scale for this part of the questionnaire measures are: 1 as never, 2 as almost never, 3 as sometimes, 4 as almost every time and 5 as every time.

WhatsApp usage for sharing information related to work shows the highest mean value, with 88% of respondents answering every time and almost every time (M=4.38, SD = 0.723). 10.9% indicated that they use it sometimes, and a small percentage of 1.1% answered they almost never use it to share work-related information. WhatsApp use for sharing information marked a saturated percentage since none of the respondents answered 'never' for this usage pattern. These results indicate that sharing information is convenient via WhatsApp. It is also consistent with past research by (Alubthane & Al Youssef, 2021; Anshari & Alas, 2015; Milfadzhilah et al., 2018; Kassim et al., 2020).

Many employees at JPNIN also prefer WhatsApp usage for group communication (M = 4.25, SD = 0.797). 83.2% of the total respondents answered every time and almost every time, while 14.6% of the employees sometimes answered using WhatsApp for group communication. Only 2.2% of respondents indicated never and almost never in using it for group communication. Results show that a majority of JPNIN employees feel comfortable using WhatsApp, especially for group communication. Furthermore, group communication is preferred, as it allows users to meet new friends among peers when added to a group chat. Introvert users found to open up to making new friends and peers with group communications (Chan et al., 2020). For work-related planning, 82.4% of JPNIN employees admitted that they use it every time and almost every time at work (M=4.20, SD = 0.789). 15.3% of the employees used it sometimes, and only 2.2% answered almost never and never used it for planning using WhatsApp.

According to the result, WhatsApp use for chatting on work matters scored the minimum compared to other patterns (M = 4.19, SD = 0.831). However, based on the percentage of use, WhatsApp for chatting is still high, with 81.7% used every time and almost every time. Only 15.7% of respondents answered sometimes and 2.6% answered never and almost never.

Table 3: WhatsApp usage by patterns (n=274)

Items	1	2	3	4	5	Mean	SD
Sharing Information Related to Work	-	1.1%	10.9%	36.5%	51.5%	4.38	0.723
Group Communication at Work	0.4%	1.8%	14.6%	38.7%	44.5%	4.25	0.797
Work Related Planning	0.4%	1.8%	15.3%	42.3%	40.1%	4.20	0.789
Chatting on Work Matters	1.1%	1.5%	15.7%	40.5%	41.2%	4.19	0.831
Overall						4.30	0.785

Note 1 - Never, 2 – Almost Never, 3 - Sometimes, 4 – Almost Every time and 5 – Every time
M - Mean, SD - Standard Deviation

Table 4 below shows the WhatsApp usage by level based on the patterns included; which are ‘sharing information related to work’, ‘group communication at work’, ‘work related planning’, and ‘chatting on work matters’. Based on the four patterns measured using four levels

of usage (low, moderate, high and mean), WhatsApp usage is generally high among JPNIN employees (M = 4.30, SD = 0.785). The research finds that the majority of 220 respondents (80.3%) highly use WhatsApp, while 47 (17.2%) use it moderately and only 7 (2.5%) with low scores on the usage of this application.

Table 4: Level of WhatsApp usage (n=274)

Level of WhatsApp Usage	**Frequency**	**Percentage (%)**
Low (1.00-2.33)	7	2.5
Moderate (2.34 – 3.67)	47	17.2
High (3.68 – 5.00)	220	80.3
Mean = 4.30		
SD = 0.785		

Technology Acceptance Factors

According to Aggarwal et al. (2016), the best practices in digital transformation are adding technology in the organisation and a mind-shift and process in changing skills, especially in using the system or tools. Therefore, this part of the research focuses on the second objective of this research: to determine the acceptance of WhatsApp usage in JPNIN. Based on this objective, the factors influencing the acceptance of WhatsApp usage are measured using variables from the TAM theory, which is perceived usefulness and perceived ease of use. In this section, the respondents must indicate their agreement or disagreement based on a 5-point Likert Scale that ranges from 1 as strongly disagree to 5 as strongly agree.

Perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance (Davis 1989). This section on perceived usefulness consists of five questions related to how respondents perceive WhatsApp as a useful factor in their work. Table 5 shows the highest mean (M = 4.36, SD = 0.678), indicating that the WhatsApp application contributes to time-saving in completing tasks at work. The majority of 89.4% of respondents strongly agree and agree, while 10.2% of respondents moderately agree and 0.4% disagree with this statement. Jamaludin et al. (2019) in his study indicates that information and instructions are conveyed fast through WhatsApp and that it has simplified the daily tasks for the employees. He suggested to the management to provide a Wi-Fi router to enable employees to use WhatsApp in their daily tasks due to its convenience compared to conventional communication tools.

48.2% and 38.3% of respondents strongly agree and agree that using WhatsApp is helpful in their work-related communications (M = 4.34, SD = 0.725). Respondents also indicate that WhatsApp helps to accomplish more work (M=4.22, SD = 0.805). Based on the data, 43.1% of the respondents strongly agree, and 38.3% of respondents agree that it makes it easy to interact via WhatsApp. On the other hand, 16.1% moderately agree, and 2.6% disagree with this statement. As for the fact that WhatsApp improves the quality of work, the mean and standard deviation are the second lowest (M = 4.10, SD = 0.841). Only 35.8% in total strongly agree, 42.7% agree, 18.6% moderately agree, 1.8% disagree, and 1.1% strongly disagree with this statement.

Lastly, the statement on WhatsApp increasing productivity scored the lowest mean (M = 4.03, SD = 0.866). The lowest percentage, with 33.2%, scored where the respondents strongly agree to this statement while 41.6% agree. Next, 21.5% of the respondents moderately agree,

2.6% disagree, and 1.1% strongly disagree. This result contradicts the result of Aggarwal et al. (2016), where the emergence of digital communication is expected to witness an enormous productivity boost. Results may contradict past studies because the data analysis on JPNIN employees is based on employee perception and not based on the actual performance report by the human resource division.

Table 5: Perceived usefulness of WhatsApp (n=274)

Statement	1	2	3	4	5	Mean	SD
WhatsApp Usage							
Save time to complete a given task	-	0.4	10.2	42.0	47.4	4.36	0.678
Useful for work-related communication.	-	0.7	12.8	38.3	48.2	4.34	0.725
Enable me to accomplish more work	-	2.6	16.1	38.3	43.1	4.22	0.805
Improves the quality of work I do	1.1	1.8	18.6	42.7	35.8	4.10	0.841
Increase my productivity	1.1	2.6	21.5	41.6	33.2	4.03	0.866
Overall						4.21	0.780

Note 1 - Strongly Disagree, 2 - Disagree, 3 - Moderate, 4 – Agree and 5 - Strongly Agree
M - Mean, SD - Standard Deviation

All five statements show a mean value greater than 4 (M=4.21, SD = 0.78). 209 (76.3%) respondents find using WhatsApp at work to be highly useful for communication, and 62 (22.6) find it as moderately useful and only 3 (1.1%) as low.

Table 6: Level of perceived usefulness of WhatsApp (n=274)

Level of WhatsApp Usage	Frequency	Percentage (%)
Low (1.00-2.33)	3	1.1
Moderate (2.34 – 3.67)	62	22.6
High (3.68 – 5.00)	209	76.3
Mean = 4.21		
SD = 0.78		

Perceived ease of use is the degree to which a person believes that using a particular system would be free from effort (Davis, 1989). Table 7 presents the percentage, mean and standard deviation for all five items measured on the perceived ease of use by JPNIN employees. The mean values are scored the highest with 4.39 to the lowest mean at 3.89. Based on the highest mean value, respondents showed a positive response on communicating via WhatsApp to enable respondents to engage with anyone at the workplace at any time and any place (M = 4.39, SD = 0.724). More than half of the respondents (51.8%) strongly agree that WhatsApp allows them to connect with the workplace at any time and place. Furthermore, 36.9% respondents agree while 9.9% respondents moderately agree and 1.5% disagree with this statement.

The next one is interacting via WhatsApp to enable knowledge sharing (M=4.37, SD = 0.663), with 46.7% and 44.5% of respondents strongly agreeing and agreeing with this statement. As for communication at work, 90.5% of the respondents agree and highly agree that communicating via WhatsApp makes it easy to interact (M=4.35, SD = 0.681). This finding also aligned with past studies. Chan et al. (2020) found that communicating via WhatsApp is

convenient and efficient and needs no training, making it easy for anyone to use it. Wu (2016), in his research, also confirmed that the flexibility and easy-to-use features of MIM applications make consumers functionally dependent on MIM applications. As for the statement relating to instructions via WhatsApp being easy to understand, respondents indicate a strong statement where only 36.5% agree, and 42% strongly agree. In comparison, 17.9% moderately agree, and 3.7% disagree and strongly disagree with this statement. This question scored the second-lowest mean value (M=4.11, SD=0.836).

The clarity of the message delivered through WhatsApp scored the lowest percentage, with only 26.3% of respondents strongly agreeing with this statement (M=3.89, 0.833). Khan, Saleh and Quazi (2021) supported the clarity of WhatsApp messages, where their study demonstrated that misinformation and disinformation are the challenges to consider when using new media.

Table 7: Perceived ease of use of WhatsApp (n=274)

Statement	1	2	3	4	5	Mean	SD
WhatsApp							
Allows me to engage with the workplace at any time and any place.	-	1.5	9.9	36.9	51.8	4.39	0.724
Allows knowledge sharing	-	0.7	8.0	44.5	46.7	4.37	0.663
Easy for me to use	-	1.1	8.4	44.5	46.0	4.35	0.681
Instruction is easy to understand	0.4	3.3	17.9	42.0	36.5	4.11	0.836
Instruction is clear	-	3.3	31.0	39.4	26.3	3.89	0.833
Overall						4.22	0.75

Note 1 - Strongly Disagree, 2 - Disagree, 3 - Moderate, 4 – Agree and 5 - Strongly Agree
M - Mean, SD - Standard Deviation

Based on a study by Venkatesh and Davis (2020), users perceived a system as easy to use with hands-on experience over time. Since the high majority of 229 (83.6%) have been using WhatsApp for more than two years, they have indicated that WhatsApp is easy to use. Four statements show a high mean and percentage except for the statement on the instruction given through WhatsApp is clear. Instructions via WhatsApp score least mean value (M=3.89, SD = 0.833), and the lowest percentage with only 26.3% to strongly agree. On the other hand, the overall mean value (M=4.22, SD = 0.75) shows how they highly regard the use of WhatsApp at work. A total of 215 (78.5%) found WhatsApp as easy to use.

Table 8: Level of perceived ease of use of WhatsApp (n=274)

Level of WhatsApp Usage	Frequency	Percentage (%)
Low (1.00-2.33)	1	0.4
Moderate (2.34 – 3.67)	58	21.2
High (3.68 – 5.00)	215	78.5
Mean = 4.22		
SD = 0.75		

Data from Tables 4 -8 show that the acceptance level for WhatsApp Application usage in JPNIN is high. Both perceived ease of use and perceived usefulness show almost the same results. According to Lee et al. (2015), the perceived ease of use positively influences perceived usefulness. When users can quickly learn to use an app, it positively contributes to goal accomplishments and enhances their work efficiency.

Level of Employee Engagement in Relation to WhatsApp usage

The analysis also presents the percentage, mean and standard deviation for 12 statements to examine employee engagement in relation to WhatsApp usage in JPNIN. These statements were adopted from Gallup Q12 metrics, which have been widely used for studies relating to employee engagement. These questions also match the areas pointed as the potential cause of employee disengagement by Pech and Slade (2006). Psychological factors such as a sense of being undervalued, stress and anxiety, lack of meaningfulness, lack of identification, lack of trust and organisational issues on work complexity and bureaucracy.

Based on the analysis, the mean values results are within the range from highest of 4.11 to the lowest 3.62. Utilising these features at work makes 79.2% of the employees strongly agree and agree to the statement that WhatsApp usage offers enough materials and equipment they need, to do their work right (M = 4.11, SD = 0.775). Virtual interpersonal connections between two people who interact via texting are increasingly growing in volume and importance. As a result, 76.3% of respondents highly agree with the statement on having a best friend at work using WhatsApp (M= 4.08, SD = 0.863).

On the statement with WhatsApp, they know what they are expected to do at work, only 29.2% strongly agree, and 44.9 % agree (M=3.98, SD = 0.862). This result is also a close score with WhatsApp, I know that the mission or purpose of my company makes me feel that my job is important (M=3.96, SD = 0.901). The mean score (M = 3.95, SD = 0.848) indicates that the respondents feel that they have opportunities to learn and grow at their workplace by using WhatsApp. The respondents also believe that with WhatsApp usage, they can do the best for their work every day (M = 3.92, SD = 0.888).

70.8% of respondents feel that their opinions count at work (M=3.88, SD = 0.898) and 68% of respondents feel that their leader or someone at work cares about them with WhatsApp (M = 3.87 SD = 0.904). On the other hand, only 67% of respondents feel that they have feedback on their progress at work (M=3.88, SD = 0.898). Thus, the research found that organisations' internal communication practices still lack feedback and engage in two-way communication (Michal, 2015). Wu (2016) regards feedback as only a basic function of MIM and not the primary motivating factor of application usage. Hence, he indicated that WhatsApp usage is not affected by the lack of feedback received. Additionally, only 64.6% of respondents feel that someone encourages their development at work (M=3.81, SD = 0.957), and 65.4% of respondents think their associates or fellow employees are committed to doing quality work (M = 3.78, SD = 0.956). Finally, the lowest score with only 54.8% of respondents stated that they feel that they have received recognition or praise for doing good work (M=3.62, SD = 1.024).

Next, the results of the analysis also showed that employee engagement with the use of WhatsApp in JPNIN is high. 215 (78.5%) respondents indicated a high level of employee engagement in JPNIN using the WhatsApp application. 58 (21.2%) respondents fall under

moderate level, and only 1 (0.4%) is low. An exploratory study by Martinez-Comeche and Ruthven (2021) found WhatsApp to remain relevant in promoting interaction and long-term engagement.

The results also showed that H1, H2 and H3 are supported. WhatsApp usage level positively correlates with employee engagement at JPNIN (r = 0.520, p = .000). Therefore, H1 is accepted since the significant value (*p*) 0.000 is less than the significant level of 0.05. According to Guilford's Rule of Thumb, the results indicate the relationship between the variables as moderate (r = 0.520). Perceived usefulness of WhatsApp also shows a positive correlation with employee engagement at JPNIN (r = 0.685, p = .000). Therefore, H2 is accepted since the significant value (*p*) 0.000 is less than the significant level of 0.05. According to Guilford's Rule of Thumb the results indicate the relationship between the variables as moderate (r = 0. 685).

Perceived ease of use of WhatsApp positively correlates with employee engagement at JPNIN (r = 0. 725, p = .000). Therefore, H3 is accepted since the significant value (*p*) 0.000 is less than the significant level of 0.05. According to Guilford's Rule of Thumb the results indicate the relationship between the variables as high (r = 0. 725).

CONCLUSION

This study fulfilled its aims to investigate the relationship between WhatsApp usage and employee engagement at JPNIN. As a whole, this study is consistent with past research on employee engagement regarding WhatsApp usages. The first objective, which is to identify the level of WhatsApp usage in JPNIN is evaluated based on the pattern of usage. Results found that employees highly use WhatsApp for all the four-patterns tested. Among the patterns discussed in table 6, sharing information related to work shows the highest mean value (M=4.38, SD = 0.723) and chatting scores the minimum mean value (M = 4.19, SD = 0.831).

According to Iqbal (2021), over 100 billion messages are sent per day worldwide. However, based on the results, 106 (38.7%) respondents send only 1-5 messages in a day. It could be due to the distribution of employees where most of the respondents are from the implementation group and they may feel uncomfortable sending messages to the superiors. Hence, the low frequency of sending messages is justified. As for the patterns of usage sharing, information is the highest mean score (M = 4.38, SD = 0.723), with none of the respondents indicating that they have never used WhatsApp for information sharing. Other patterns of WhatsApp usage measured are for chatting, planning, and group communication.

One of the aims of the research is to determine the acceptance level for WhatsApp usage, and almost all employees 209 (76.3%) found using WhatsApp at work to be useful and 215 (78.5%) found that using WhatsApp at work is ‘ease of use’. However, only 26.3% respondents indicate that they accept WhatsApp due to the clarity of the message, and this is the lowest percentage. For improving work quality and productivity, the percentage to strongly agree is 35.8% and 33.2%, respectively.

Statements related to employee engagement at JPNIN scored the mean values within the range from the highest of 4.11 to the lowest 3.62. Employees acknowledge that they have enough materials and equipment to do their work right (M = 4.11, SD = 0.775). Employees also highly agree that they have a best friend at work using WhatsApp (M= 4.08, SD = 0.863). However, results show the lowest mean score for respondents who feel that their associates or fellow employees are committed to doing quality work (M = 3.78, SD = 0.956). They also agreed to the

statement that they were not recognised or praised for doing good work (M=3.62, SD = 1.024). Finally, another objective is to examine the relationship between WhatsApp usage and employee engagement in JPNIN. The study concludes that all the independent variables, namely usage pattern, perceived usefulness, and perceived ease of use, have a significant positive relation towards employee engagement at JPNIN. The strength of the relationship is high for perceived ease compared to perceived usefulness and usage pattern that is found to be moderate.

Recommendation and Implication

This research has contributed to both theory and practice. As for the theory, this study has further reinforced Technology Acceptance Model (TAM) in verifying the significant relationship between the two variables under TAM, which is perceived ease of use and perceived usefulness towards employee engagement.

Meanwhile, this study will also be helpful for any organisation that is looking at the effect of WhatsApp usage concerning employee engagement. This research provides an insight not only to JPNIN but also to the department with similar functions on factors that impact employee engagement, especially pertaining to WhatsApp usage. Hence, this study is suitable and relatable to the organisations in Malaysia, especially government organisations, due to the similarities in the operations of the sector.

From the practical perspective, the organisation can evaluate and tackle adverse effects and strengthen the positive impacts of WhatsApp usage toward better human capital management in the organisation. Thus, it not only improves employee engagement but also contributes toward a healthy organisation and increases productivity. Additionally, it is also hoped that this study will assist policymakers in determining the essential key points for future policy and planning related to this field. Therefore, it is recommended that this study's findings are extended further to the organisation to seek a better clarity on the current practice in the social media usage at work, especially with reference to WhatsApp application. Additionally, there are many areas to look into in future works.

Suggestion for Further Research

Based on this paper and past papers in relation to WhatsApp usage and employee engagement, future research in the same context may be able to be narrowed down to one particular pattern of WhatsApp usage for a better elaboration on how it affects employee engagement at the workplace. For example, how does group communication in the WhatsApp application contribute to employee engagement? Other patterns can also be considered since it has an equal share and effects on employee engagement. Focusing on specific details may lead to a better discovery, especially new findings of the topic.

It is also suggested to use mixed-method research where a combination of quantitative and qualitative approaches is used. Mixed method complements the absence of information when only one particular approach is used. Missing information through quantitative methods such as the emotional value and further elaboration can be fulfilled using interview or focus group discussions. Semi structured interviews on the emotional bonding between the users can be defined to understand usage patterns. It will help answer if the employee is comfortable using the application regardless of the level of adhesion between superiors and peers in the

organisation. On the other hand, the use and reference from the secondary data will evaluate the performance-related elements in the questionnaire. For example, the question on whether or not WhatsApp increases productivity at work is more appropriate to be answered by human resources personnel rather than the employee. Productivity is the best measure with performance data.

Extending the study to the organisation that requires employees to use WhatsApp extensively is also a good choice. Some organisations use the WhatsApp video call for smaller group meetings and discussions. The subsequent research can include questions related to emoticons and images that portray the sender's virtual expression. This can be tested from the sender and receivers' point of view. This detailed information may help determine how the use of images and emoticons is perceived as informal settings.

As reported by MCMC (2020), 62.5% users are not familiar with digital identity. Digital identity is expected to be the foremost issue in line with the protection and privacy of its users. Hence, further research is suggested to seek opinions on privacy matters related to WhatsApp. On employee engagement, further study can be extended from the perspective of the management. The Gallup employee engagement questions take more of the employee's view. Hence, for different perspectives, the management perspective can be included to strengthen the current research findings with a different outlook. This suggestion can be implemented with proper planning, budget, method, and scope of the study. These elements are essential to generate relevant and reliable data collection and analysis. In addition, widening and diversifying the scope of research related to WhatsApp usage and employee engagement will expand the viewpoint of this topic.

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