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Designing Strategy to Increase Intention to Use Maternal Perinatal Death Notification (MPDN) Technology in North Sumatra

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Abstract. In order to reduce the Maternal Mortality Rate (MMR) in Indonesia, the government has made various innovations to lessen the MMR. One of the improvement is to put in force Maternal Perinatal Death Notification (MPDN) technology. But in the implementation, there are still many hospitals and health centers in North Sumatra that have not longer applied MPDN optimally. Considering that North Sumatra is one of the provinces with the very best MMR in Indonesia, the utilization of MPDN desires to be extended in North Sumatera. In preceding research, it became stated that the readiness and recognition of a technology will have an affect on the successful implementation of the technology. Therefore, this take a look at pursuits to measure and notice the effect of every variable at the acceptance of MPDN technology based on the Unified Theory of Acceptance and Use of Technology (UTAUT). The variables located to have an influence at the acceptance of MPDN technology in North Sumatra are overall performance expectancy, effort expectancy, social influence, self-efficacy and technology anxiety. These five influential variables are then used as the basis for building strategies using Importance-Performance Analysis (IPA).

Keyword: Importance-Performance Analysis, MPDN, UTAUT

Abstrak. *Dalam rangka menurunkan Angka Kematian Ibu (AKI) yang masih tinggi di Indonesia, pemerintah telah melakukan berbagai upaya dalam menurunkan AKI. Salah satu upayanya adalah menerapkan teknologi Maternal Perinatal Death Notification (MPDN). Namun dalam implementasinya, masih banyak rumah sakit dan puskesmas di Sumatera Utara yang belum mengimplementasikan teknologi MPDN dengan maksimal. Mengingat Sumatera Utara merupakan salah satu provinsi dengan AKI tertinggi di Indonesia maka pemanfaatan MPDN di Sumatera Utara perlu untuk ditingkatkan. Di dalam penelitian- penelitian sebelumnya disebutkan bahwa kesiapan dan penerimaan suatu teknologi akan mempengaruhi keberhasilan implementasi suatu teknologi. Oleh karena itu, penelitian ini bertujuan untuk mengukur dan melihat pengaruh setiap variabel terhadap penerimaan teknologi MPDN yang mengacu pada Unified Theory of Acceptance and Use of Technology (UTAUT). Variabel yang ditemukan memiliki pengaruh terhadap penerimaan teknologi MPDN pada rumah sakit dan puskesmas di Sumatera Utara adalah performance expectancy, effort expectancy, social influence, self-efficacy dan technology anxiety. Variabel-variabel yang berpengaruh ini kemudian dijadikan dasar untuk membangun strategi dengan menggunakan Importance-Performance Analysis (IPA).*

Kata Kunci: Importance-Performance Analysis, MPDN, UTAUT

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1. Introduction

The industrial revolution 4.0 is a new period of the industrial world that emerged as a consequence of technological advances including robotics, artificial intelligence (artificial intelligence), big data, and fifth generation (5G) communication technology. The industrial revolution 4.0 brings a tremendous impact in various sectors, including the health sector which is always faced with new challenges. The amount of interconnection and automation in hospitals has improved dramatically due to the creation of Healthcare four.zero (H4.zero) in hospitals, taking into account greater green patient care and administrative strategies [1]. Implementation of H4.zero is becoming an increasing number of feasible as digital era develop extra low priced, smaller, and able to handling massive volumes of statistics [2] [3].

Efforts to strengthen basic health (primary health care) supported by the use of technology, are one of the ways to achieve better health quality. Therefore, the government is building a national e-health strategy and efforts to digitize health services. The strategy aims to implement e-health widely so it can improve the accessibility and continuity of quality services.

Fee of maternal and infant mortality in Indonesia are still high. The results of the 2015 Inter-Census populace Survey in Indonesia obtained a maternal mortality fee (MMR) of 305/100,000 stay births, because of this that 38 mothers die each day.This is still far from the Millennium Development Goals (MDGs) target of 102/100,000 live births in 2015 and the Sustainable Development Goals (SDGs) target in 2030 which is targeted at 70/100,000 live births [4]. The Infant Mortality Rate (IMR) in Indonesia is 24/1,000 live births. The SDGs target for IMR is 12/1,000 live births.

Reducing maternal mortality is very important for development because it is a progress indicator of a country. The government is targeting to reduce the MMR to 183 by 2024. In Indonesia, one of the biggest challenges in reducing the Maternal Mortality Rate (MMR) is the number of unreported maternal deaths under the current system. Therefore, a new valid recording and reporting mechanism is needed to address the large number of underreported deaths.

POGI (HOGSI) digitize the process of recording and reporting maternal deaths called Maternal Perinatal Death Notification. The innovation is replacing manual (paper-based) processes with digital electronics. The advantages provided are the fast process, the relatively low cost, and the information obtained is global. MPDN can be accessed anywhere, anytime, by anyone who has been registered.

Based on data from the MPDN Evaluation in 2020, North Sumatra is included in the top 5 provinces with the most MMR in Indonesia. However, the percentage of using the MPDN system is one of the lowest. The low intention of using the MPDN could lead to delays in the implementation of the MPDN system.

Consequently, considerable demanding situations need to be overcome with a purpose to accomplish a a success implementation. It's miles unreasonable to count on information era that isn't used, or is simplest partly used, to contribute to increasing the high-quality of care. at the opposite, it is probably a source of similarly problem or reason other issues. it's far obvious that the impact of any such exchange might be a contributing cause in an organizational crisis, ensuing in professional war. It's miles therefore crucial to recognize how diverse factors of real-global sports engage with each other, in addition to to find out the elements that influence the reputation, utilization, or failure of the facts system. in this paper we find out the applicability of the unified concept of recognition and use of technology (UTAUT) theoretical version within the MPDN healthcare venture in analysing the recognition of the MPDN internet software via healthcare professionals in North Sumatra. this can assist in gaining a better expertise of the development and implementation of healthcare facts systems.

2. Literature Review

2.1. Maternal Perinatal Death Notification (MPDN)

The Indonesian Obstetrics and Gynecology Association (POGI) has developed a new innovation for reporting mechanisms that are accurate, fast, relatively inexpensive, the information obtained is global and can be used for tactical decision making. The innovation was in the form of an application called Maternal Perinatal Death Notification (MPDN), which was later adapted by the Indonesian Ministry of Health. Maternal Perinatal Death Notification (MPDN) is an application that makes it easier to report maternal deaths using the internet and smartphones. The data is sent using SMS or the internet, then it will be reported and stored on the server of the Ministry of Health of the Republic of Indonesia. Access to data (reporting and receiving reports) can be done by various registered parties, anytime and anywhere via a smartphone or computer that has been installed with the MPDN application.

2.2. Unified Theory of Acceptance and Use of Technology (UTAUT)

This research adopts the maximum influential version inside the evaluation of user attractiveness and conduct, the Unified principle of popularity and Use of era (UTAUT). The UTAUT model is claimed with a view to provide an explanation for as much as 70% of the intention variables. This version has been extensively adopted in diverse fields including e-health and Health [5] [6]. In figure 1. a photo of the UTAUT model is given.

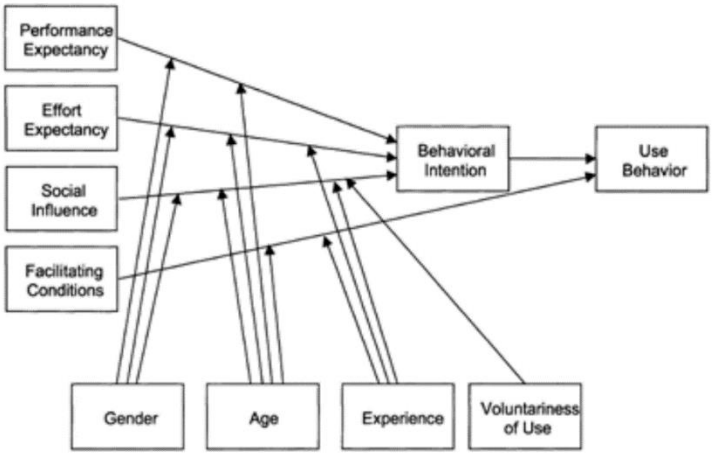

Figure 1 UTAUT Model

The UTAUT model is likewise applicable on this studies, due to the fact the variables within the initial version have been showed to be valid in the health context [7]. presently, the UTAUT version is considered the most suitable for reading fitness era adoption [8]. There are seven basic constructs used in this studies version:

1. Performance Expectancy (PE): PE is described as “the degree to which adopting a era brings effectiveness to customers in performing certain sports” [9] [10].
2. Effort Expectancy (EE): EE is defined as “the degree of ease associated with using the system”[9].
3. Social Influence (SI): SI is defined as “the degree to which an individual perceives the importance of the views of peers regarding whether they should use the new system” [9].
4. Facilitating Conditions (FC): FC is defined as “the availability of technological resources andtechnical infrastructure” [9].
5. Self-Efficacy (SE): on this research, Self-Efficacy (SE) refers to doctors' perceptions of their potential to apply the MPDN machine in appearing reporting duties. preceding empirical studies have shown that self-efficacy can considerably affect clinical workers in the usage of health generation [11] [12].
6. Technology Anxiety (TA): In this research, Technology Anxiety (TA) is described as a person's fear or difficulty while they are confronted with the possibility of using a technology [13]. Vitari et al. in [11] found that the anxiety aspect had a giant effect at the intention to use health technology by medical experts.
7. Attitude Towards Using Technology (ATUT): ATUT is described as “an character's usual affective response to using a era” [9]. Zhao et al. in [14] shows that attitudes in the direction of the use of a generation have a massive effect on behavioral intentions.

Venkatesh et al. in [9] evaluated the consequences of four moderators on one-of-a-kind variables of their first model. A moderator is provided inside the context of health technology adoption and goal to apply. The most commonplace and main moderator in this placing is age [15] [16]. Then, in [17], Lee and Rho found that gender has a moderating impact at the adoption of fitness era. As a result, gender and age have been used as modifiers in this take a look at.

2.3. Importance Performance Analysis (IPA)

Importance-Performance Analysis (IPA) changed into first added by means of John A. Martilla and John C. James in [18] as a technique to measure attributes associated with significance (importance) and performance that could enhance advertising packages extra efficaciously. IPA has been widely used in various industrial sectors to design and evaluate operations strategies, operations of Information Technology (IT), assess human resource management policies and strategies, and allocate organizational resources.

3. Methodology

3.1. Conceptual Model and Formulation of Hypotheses

This research applied att the United Theory of Acceptance and Use of Technology (UTAUT) model to see the relationship among the variables of purpose to apply MPDN technology. This research used the main conceptual UTAUT model to see the relationship between the variables of intention to use MPDN technology. Then the hypothesis of the impact between variables is constructed to peer what factors have a full-size have an impact on on behavioral aim. The hypothesis used in this research refers to the hypothesis contained in the research conducted by Arfi et al. in [19] entitled "Understanding acceptance of eHealthcare by IoT natives and IoT immigrants: An integrated model of UTAUT, perceived risk, and financial cost". There are several hypotheses to be tested in this research:

H1: Performance Expectancy undoubtedly have an effect on the behavioural aim to apply MPDN.

H2: Attempt Expectancy definitely affect the behavioural goal to apply MPDN.

H3: Attitude Towards Using Technology positively affect the behavioural aim to apply MPDN.

H4: Social impact positively affect the behavioural intention to apply MPDN.

H5: Facilitating situations positively have an effect on the behavioural intention to apply MPDN.

H6: Self-Efficacy definitely have an effect on the behavioural intention to use MPDN.

H7: Era tension negatively have an effect on the behavioural goal to apply MPDN.

H8: Gender will moderate the effects of (a) performance expectancy, (b) effort expectancy, (c) attitude towards using technology, (d) social influence, (e) facilitating conditions, (f) self-efficacy, and (g) technology anxiety on behavioural intention to use MPDN.

H9: Age will mild the effects of (a) performance expectancy, (b) effort expectancy, (c) mindset toward using technology, (d) social have an effect on, (e) facilitating situations, (f) self-efficacy, and (g) generation tension on behavioural aim to use MPDN.

3.2. Questionnaire Design and Data Collection

This research used a cross-sectional questionnaire to acquire facts. statistics for these studies had been accumulated in March 2021 the usage of an internet questionnaire. There are 8 main variables based on UTAUT which will be evaluated using indicator variables. The indicator variables will be assessed through a questionnaire. These variables are divided into 2 types, that is, exogenous variables and endogenous variables. Performance expectancy (PE), attempt expectancy (EE), attitude toward the usage of era (ATUT), social have an impact on (SI), facilitating situations (FC), self-efficacy (SE), technology tension (TA) are exogenous variables, at the same time as behavioral intention (BI) is an endogenous variable. The questionnaire used refers to 4 indicators for each variable PE, EE, ATUT, FC, and TA proposed by Kijsanayotin et al. in [7], Venkatesh et al. in [10] and Xue et al. in [20] and 3 indicators to measure each variable SI, SE, and BI proposed by Kijsanayotin et al. in [7] and Venkatesh et al. in [21]. Each indicator was assessed using a 5 Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). There are four types of respondents in this research who use

MPDN directly at hospitals or health centers, that is, doctors, nurses, registration administrators, and medical record staff. These respondents work in various hospitals or health centers in every 33 districts in North Sumatra.

3.3. Demographic Characteristics of Respondents

From a total of 191 responses obtained through distributed questionnaires, all data collected can be declared valid. Respondents came from hospitals and health centers in 33 districts in North Sumatra. Table 1 shows the demographic traits of the respondents in this research.

Table 1 Demographics of respondents

Variables	Categories	Frequency	Percentage (%)
Gender	Male	66	34,6
	Female	125	65,4
Age	23-31	44	21,5
	31-39	63	30,7
	40-49	59	28,8
	>49	39	19
Workplace	Public Health Center	141	73,8
	Hospital	50	26,2
Educational Qualification	Associate degree	130	68,1
	Bachelor's degree	49	25,7
	Master's degree	10	5,2
	Doctoral degree	2	1,0

3.4. Data Analysis

On this studies, Partial Least Square–Structural Equation Modeling (PLS-SEM) was used to test and analyze the relationship amongst elements within the version. The PLS-SEM method is considered more suitable in this study because this research is more exploratory than confirmatory. PLS- SEM is a cause-and-effect approach to SEM, where some of the variables are effects or consequences of other variables but simultaneously are the causes of subsequent variables. PLS-SEM has been widely used in various kinds of research. Another reason is PLS-SEM permits researchers to estimate complex models with a massive range of constructs/variables, indicators, and paths with out traumatic too much about the distribution of the information. By using PLS-SEM, it can be seen which variables have a significant influence on MPDN acceptance. This research used SmartPLS version 3.3 for data processing.

PLS-SEM is considered stable even when the sample used is small. This is due to the separate calculations performed for the inner (structural) and outer (measurement) models. The sample size requirement according to Wijanto in [22] is a minimum of 5 respondents per observed variable. There were 29 variables observed, so the minimal number of samples needed in this research changed into 145 respondents.

4. Results and Discussion

4.1. Determinants of Intention Behaviour of MPDN Users

In the PLS-SEM model, it is necessary to evaluate the outer (measurement) and inner (structural) models. Data is processed using SmartPLS. In SmartPLS, a path model is built based on the relationship that will be tested in this research. First, all latent variables created and then named them according to the variable names in the conceptual version (performance expectancy (PE), effort expectancy (EE), attitude in the direction of using generation (ATUT), social have an impact on (SI), facilitating situations (FC), self-efficacy (SE), era anxiety (TA), and behavioral purpose (BI)). Next, each indicator or item connected to their respective latent variables. The arrows connecting each blue circle represent the relationship of the variables to each other. After that, the model will be evaluated. Figure 2 shows the path model built on SmartPLS.

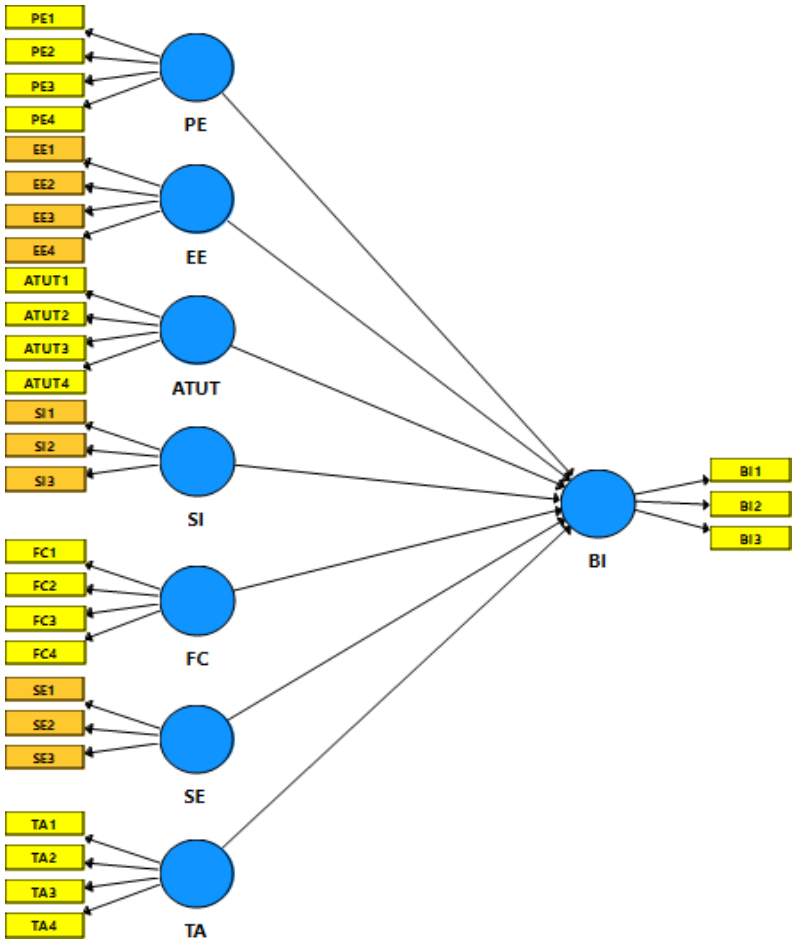

Figure 2 Path Model

A. Measurement Model

The assessment of the size version consists of analyzing internal consistency reliability, convergent validity, and discriminant validity. An exam of the internal consistency reliability is accomplished by way of looking at the composite reliability (CR) cost. CR with a price of zero.7 is taken into consideration to have excellent internal consistency reliability [23]. As shown in Table 2, the CR value ranges from 0.810 (SE) to 0.928 (PE), so this indicating internal consistency reliability. To check convergent validity, the Average Variance Extracted (AVE) value was calculated. The AVE value must be greater than 0.5 to be considered to have established convergent validity [23]. Based on the AVE value shown in Table 2, the value ranges from 0.666 (FC) to 0.840 (BI), so this indicating convergent validity.

The discriminant validity was checked by looking at the fornell-larcker. Fornell-Larcker said that the rectangular root of the AVE of every assemble ought to be extra than the square of the correlation with different constructs. For example, correlation between PE-PE (0,907) greater than PE-EE (0,455) or PE-ATUT (0,723) or PE-SI (0,468). As shown in Table 3, the square root price of the AVE of each assemble is extra than the square of the correlation with the opposite constructs so that it indicating discriminant validity.

Table 2 CR and AVE Value

Variable	CR (>0.7)	AVE (>0.5)
PE	0.928	0.823
EE	0.862	0.705
ATUT	0.905	0.780
SI	0.847	0.761
FC	0.820	0.666
SE	0.810	0.725
TA	0.933	0.826
BI	0,905	0,840

Table 3 Fornell-Larcker Criterion

Variable	PE	EE	ATUT	SI	FC	SE	TA	BI
PE	**0,907**							
EE	0,455	**0,841**						
ATUT	0,723	0,703	**0,883**					
SI	0,468	0,681	0,646	**0,875**				
FC	0,727	0,492	0,691	0,418	**0,910**			
SE	0,324	0,714	0,631	0,534	0,384	**0,851**		
TA	0,179	0,249	0,295	0,365	0,189	0,136	**0,911**	
BI	0,688	0,591	0,691	0,368	0,610	0,500	0,259	**0,919**

B. Structural Model

Table 4 VIF Value

	BI
PE	2.835
EE	1.047
ATUT	1.254
SI	2.243
FC	2.452
SE	2.344
TA	1.191

The evaluation of the structural version on these studies consisted of analyzing collinearity (VIF), explanatory power (R2), predictive energy (Q2), and direction coefficient. Before assessing the structural relationship, collinearity needs to be checked to ensure that there is no bias towards the regression results. The technique used to test collinearity is to study the value of the variance inflation element (VIF). The value of Variance Inflation Factor (VIF) must be less than 3 to be indicated not having collinearity problem. As shown in Table 4, all VIF value are below the critical value of 3.

The explanatory power was calculated. According to Hair et al. in [23], the R2 value of 0.75 is stated to be substantial (strong), 0.5 is moderate, and 0.25 is weak. As shown in Table 5, Behavioural Intention (BI) has an R2 value of 0.646. This value indicated that all independent

variables (PE, EE, ATUT, SI, FC, SE, TA) have moderate power in explaining BI. The predictive power was calculated. According to Hair et al. in [24], the predictive power of Q2 greater than 0 was included in the small category, a Q2 value greater than 0.25 was included in the medium category, and a Q2 value greater than 0.5 was included in the large category. Based on the value shown in Table 5, BI has a Q2 value of 0.533, which indicates that each independent variable has a large predictive power towards BI.

Table 5 R^2 dan Q^2 Value

	R^2 Value	**Q^2 Value**
Behavioural Intention (BI)	0.646	0.404

The magnitude of the effect is shown in the form of path coefficients. The significance of the path coefficients is processed by bootstrapping with a subsample of 5000. The significance of the influence of a variable is determined by looking at the t-statistic and p-value. A large effect is indicated statistically significant if it has a t-statistic value above 1.96 and a p-value below 0.5. The results of the path coefficients, t-statistics, and p-value for direct effects are shown in Table 6 based totally on the cost proven in the desk underneath, the variables that have a statistically significant impact are the performance expectancy (PE), effort expectancy (EE), mindset in the direction of the use of technology (ATUT), social influence (SI), facilitating situations (FC), self-efficacy (SE), and technology tension (TA).

Table 6 Results of the Test of the Contributions of the Independent Variables to Behavioral Intention

	Path Coefficient (β)	**t-statistic**	**p-value**
PE → UI	0,457	5,498	0,000
EE → UI	0,310	3,515	0,000
ATUT → UI	0,183	1,615	0,106
SI → UI	0,328	4,147	0,000
FC → UI	0,053	0,855	0,393
SE → UI	0,152	2,018	0,044
TA → UI	-0,136	2,475	0,013

The multigroup analysis method was used to test the moderating effect. Gender and age were protected as moderating variables on this observe. A causality test was done for two groups, male respondents (66) and female respondents (66), to see if gender had a moderating influence (125). Table 7 depicts the key differences in MPDN intention between men and women. The findings revealed that four factors significantly influenced the female group's behavioral intentions: performance expectancy, attitude toward using technology, facilitating conditions, and self- efficacy. Only performance expectancy had a substantial impact on the male group's behavioural intention.

The permutation test indicates the differences among the two agencies in better detail. Table 8 suggests that the male group and female organization vary drastically within the contributions of overall performance expectancy (H8a) to their behavioural intention.

For the moderating effect of age, a causality check has become finished for two companies, Gen X respondents (seventy-eight respondents) and Gen Y (103 respondents). Table 9 suggests the primary variations among Gen X and Gen Y in purpose to use MPDN. The consequences showed that for the Gen X group there had been 4 factors that appreciably determined their behavioral intentions, namely performance expectancy, social affect, self-efficacy, and generation tension. For the Gen Y group, performance expectancy, effort expectancy, and social affect are factors that make contributions drastically to their behavioral intentions.

The permutation test indicates the differences between the two groups in better detail. Table 10 shows that the Gen X group and Gen Y group differ significantly in the contributions of effort expectancy (H9b), self-efficacy (H9f), and technology anxiety (H9g) to their behavioural intention.

Table 7 Test of the Moderation Impact of Gender at the Relationships of the Version

Dependent Variable	Independent Variable	Path Coefficient (β)	t-statistic	p-value
Male	PerformanceExpectancy	0,763	4,657	0,000
R^2=0,679	Effort Expectancy	0,043	0,117	0,601
	Attitude Towards Using Technology	0,293	0,310	0,456
	Social Influence	-0,378	1,129	0,180
	FacilitatingConditions	0,046	0,198	0,539
	Self-Efficacy	0,189	1,386	0,115
	TechnologyAnxiety	0,131	1,460	0,101
Female	PerformanceExpectancy	0,231	1,989	0,047
R^2=0,758	Effort Expectancy	0,168	1,195	0,161
	Attitude Towards Using Technology	0,448	3,660	0,000
	Social Influence	-0,046	0,285	0,474
	FacilitatingConditions	0,354	2,506	0,012
	Self-Efficacy	0,161	2,297	0,022
	Technology Anxiety	0,087	0,608	0,265

Table 8 Test of Permutation

Independent Variable	Permutation Test Difference	p-value	Significance
Performance Expectancy	0,533	0,002	Yes
Effort Expectancy	-0,137	0,428	No
Attitude Towards Using Technology	-0,313	0,104	No
Social Influence	-0,232	0,146	No
Facilitating Conditions	0,278	0,925	No
Self-Efficacy	0,029	0,845	No
Technology Anxiety	0,069	0,538	No

Table 9 Test of the Moderation Effect of Age on the Relationships of the Model

Dependent Variable	Independent Variable	Path Coefficient (β)	t-statistic	p-value
Generation X R^2=0,690	Performance Expectancy	0,418	2.769	0,006
	Effort Expectancy	0,149	1.383	0,167
	Attitude Towards Using Technology	0,075	0,453	0,651
	Social Influence	0,351	3.491	0,001
	Facilitating Conditions	0,112	0,701	0,484
	Self-Efficacy	0,398	4.086	0,000
	Technology Anxiety	-0,254	3.519	0,000
Generation Y R^2=0,717	Performance Expectancy	0,476	4.325	0,000
	Effort Expectancy	0,5	3.570	0,000
	Attitude Towards Using Technology	0,203	1.305	0,192
	Social Influence	0,367	2.990	0,003
	Facilitating Conditions	0,132	1.660	0,097
	Self-Efficacy	-0,049	0,566	0,571
	Technology Anxiety	0,01	0,132	0,895

Table 10 Test of Permutation

Independent Variable	Permutation Test Difference	p-value	Significance
Performance Expectancy	-0,058	0,725	No
Effort Expectancy	-0,351	0,066	Yes
Attitude Towards Using Technology	-0,128	0,592	No
Social Influence	0,015	0,926	No
Facilitating Conditions	-0,020	0,878	No
Self-Efficacy	0,446	0,004	Yes
Technology Anxiety	-0,244	0,019	Yes

The structural version come to be evolved to discover the relationships a few of the constructs within the research model. The study examined the connection between based totally and impartial variables. As shown in Table 11, there are 9 hypotheses which are stated to have a sizable and ideal affect, that is, hypothesis 1 (H1), speculation 2 (H2), hypothesis 4 (H4), hypothesis 6 (H6), speculation 7 (H7), speculation 8a (H8a), speculation 9b (H9b), speculation 9f (H9f), and hypothesis 9g (H9g).

As found out inside the original UTAUT take a look at [9] and other similar research on generation adoption and use [25], [26], [27]. however, mind-set in the direction of using technology do not have a great influence on behavioural aim. performance expectancy, effort expectancy, and social impact all have a substantial effect on behavioural intention. Behavioral intention, on the other hand, is unaffected by one's attitude toward using technology. Several prior studies have backed up this conclusion. In a study published in [28], Vanneste, Vermeulen,

and Declercq located that customers' mindset closer to using era (ATUT) had no statistically substantial impact on their Behavioral Intention (BI) to undertake new health technology. This confirms the elimination of ATUT from the UTAUT model.

The facilitating condition variable has no effect on behavioural intention, according to this observe. Given that a couple of previous research have established the favorable dating among Facilitating Conditions (FC) and Behavioral Intentions (BI) in generation adoption, this locating can also come as a surprise. Facilitating Conditions, for example, has a substantial impact on the adoption of healthinformation technology, according to Hossain, Quaresma, and Rahman [29]. The outcomes of this study could be due to the fact that in North Sumatra, most senior medical workers rely heavily on younger medical personnel to conduct computer-intensive jobs. As a result, they are less likely to realize the importance of technical and infrastructure resource requirements and their impact on the adoption and use of the MPDN system. It is also true that if the constructs of Performance Expectancy (PE) and Effort Expectancy (EE) are present in the model and their effect is significant, then FC becomes insignificant in predicting user behavioral intentions for technology adoption and acceptance.

Table 11 Results of the Test of the Research Hypotheses

Hypotheses	Results
H1: Performance Expectancy undoubtedly have an effect on the behavioural aim to apply MPDN.	**Supported**
H2: Attempt Expectancy definitely affect the behavioural goal to apply MPDN.	**Supported**
H3: Attitude Towards Using Technology positively affect the behavioural aim to apply MPDN.	Rejected
H4: Social impact positively affect the behavioural intention to apply MPDN.	**Supported**
H5: Facilitating situations positively have an effect on the behavioural intention to apply MPDN.	Rejected
H6: Self-Efficacy definitely have an effect on the behavioural intention to use MPDN.	**Supported**
H7: Era tension negatively have an effect on the behavioural goal to apply MPDN.	**Supported**
H8a: Gender will moderate the effects of performance expectancy on behavioural intention to use MPDN.	**Supported**
H8b: Gender will moderate the effects of effort expectancy on behavioural intention to use MPDN.	Rejected
H8c: Gender will moderate the effects of attitude towards using technology on behavioural intention to use MPDN.	Rejected
H8d: Gender will moderate the effects of social influence on behaviouralintention to use MPDN.	Rejected
H8e: Gender will moderate the effects of facilitating conditions on behavioural intention to use MPDN.	Rejected
H8f: Gender will moderate the effects of self-efficacy on behavioural intention to use MPDN.	Rejected
H8g: Gender will moderate the effects of technology anxiety on behavioural intention to use MPDN.	Rejected
H9a: Age will mild the effects of performance expectancy on behavioural intention to use MPDN.	Rejected
H9b: Age will mild the effects of effort expectancy on behavioural intention to use MPDN.	**Supported**

Hypotheses	Results
H9c: Age will mild the effects of attitude towards using technologyon behavioural intention to use MPDN.	Rejected
H9d: Age will mild the effects of social influence on behavioural intention to use MPDN.	Rejected
H9e: Age will mild the effects of facilitating conditions on behavioural intention to use MPDN.	Rejected
H9f: Age will mild the effects of self-efficacy on behavioural intention to use MPDN.	**Supported**
H9g: Age will mild the effects of technology anxiety on behavioural intention to use MPDN.	**Supported**

The moderating effect of gender on MPDN behavioral intentions turned into now not established to be vast in influencing attempt expectancy, mindset toward the usage of generation, social impact, facilitating conditions, self-efficacy, and technology anxiety. those outcomes are consistent with preceding studies [10]. Inside the context of this finding, each women and men have the equal intention to undertake generation so that gender variations are increasingly insignificant at the moment.

In this study it was also found that MPDN users showed different behaviors depending on their age group (Gen X and Gen Y). These results are in line with research conducted by Bawack and Kamdjoug in [30]. In addition, it was also found that effort expectancy affects behavioral intention more strongly for Gen Y than Gen X. As for Gen X, concerns about technology use (technology anxiety) and self-efficacy more strongly influences their behavioral intention to use MPDN compared to Gen Y. This is because older adults tend to have technology anxiety and resist change [15] [16]. In contrast to Gen Y, who is younger and raised in the technology era so this age group tends to be more aware of technology [31].

The theoretical contributions focus on how these connected devices are used in context. A broad range of authors have explored the adoption of connected healthcare systems by elderly consumers in earlier studies [15] [32]. This study is different in that it compared the intentions of different age groups to utilize MPDN to report maternal deaths. Furthermore, no previous research, to our knowledge, has compared MPDN users using a generation classification.

5. Designing Strategy

Based on the factors that significantly influence the acceptance of MPDN technology, several strategies are designed to increase the acceptance of MPDN technology by its users. The technique used in designing the recommended strategy is Importance-Performance Analysis (IPA). With this method, it will be seen what attributes need to be improved so that the acceptance and implementation of MPDN technology in hospitals and health centers in Sumatra increases. In the first step, literature research was conducted to determine the attributes to be assessed, then in the second step a questionnaire was compiled to measure the importance and performance of each attribute. The questionnaire was filled out by 3 doctors who have been

using MPDN for more than 2 years. The data obtained is then calculated on average as shown in Table 12.

Table 12 Importance-Performance Value of Each Attribute

Variable	Attribute Code	Attribute	Importance	Performance
Performance Expectancy	EK1	Time Efficient	4,33	3,33
	EK2	Efficient Interaction	5,00	3,00
	EK3	Accessibility	4,67	3,67
Effort Expectancy	EU1	Minimizing Cognitive Load	3,67	4,33
	EU2	Naturalness	4,33	4,00
Social Influence	PS1	Effective Feedback	4,00	3,67
Self-Efficacy	SE1	Computer Literacy	4,67	4,00
Technology Anxiety	K1	Leadership	5,00	4,00
	K2	Habituation	4,67	3,33

The value in the table above is plotted onto the IPA matrix as shown in Figure 3. Based on the map or matrix above, it can be seen that those included in quadrant 1 "Contentrate Here" are: (1) EK2 (Efficient Interaction) which is related to the efficiency of the number of steps that need to be taken when completing a task on MPDN technology; (2) EK3 (Accessibility) which is related to how fast and stable the MPDN application system is to process the input data; (3) K2 (Habituation) which is related to the habit of using MPDN in order to reduce the gap between habits when using the old system and the MPDN system. These three attributes are the main priorities for designing a strategy to increase the acceptance of MPDN technology in hospitals and health centers in North Sumatra.

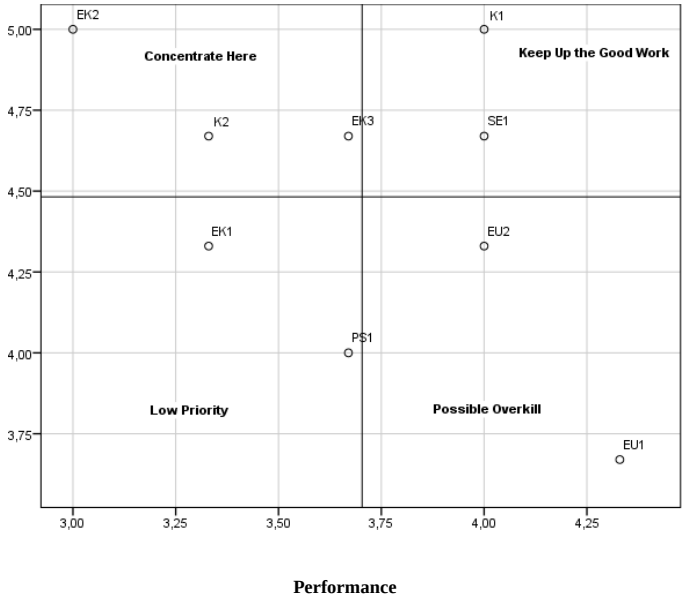

Figure 3 IPA Matrix

Recommendations were made based on literature research which was adjusted according to the situation and conditions in North Sumatra. The strategies for the three attributes are shown in Table 13. These are several suggestions that hospitals and health centers can choose to apply, these strategies need to be adjusted according to what is most needed.

Table 13 Strategy Recommendations

Attribute	Strategy Recommendations
EK2 (*Efficient Interaction)*	Provides the option to print data that has been inputted into the MPDN system. If the hospital or puskesmas wants to do paper-based documentation, the data can be directly printed on paper and compiled based on the official form format that has been determined.
EK3 (*Accessibility*)	Updating the system or adding a new processor server so the MPDN application system that is accessed via smartphones is fast to process data entry so the employee performance increases.
K2 (*Habituation*)	Require workers to routinely use MPDN demo at least once a week so as to minimize workers' anxiety because they are not used to using MPDN.

6. Conclusion

This studies pursuits to decide the variables that most have an effect on the conduct of the usage of MPDN and the relationship between them in influencing the attractiveness of MPDN technology in North Sumatra. The identity and analysis method are based totally on the Unified theory of popularity and Use of technology (UTAUT). After analyzing each factor that has a large have an impact on at the recognition of MPDN, then an approach is designed by means of looking on the attributes that most want to be advanced. thru these studies it changed into found that there are 5 variables or factors which have a full-size have an impact on on the attractiveness of MPDN era, this is, overall performance expectancy, effort expectatncy, social affects, self-efficacy, and technology anxiety. It changed into found that gender has a significant moderating effect on the connection between overall performance expectancy and consumer behavioural intention. Age had a considerable moderating effect on the relationship between attempt expectancy, self-efficacy, technology tension, and consumer behavioural intention. based on these factors, strategic pointers have been designed the use of significance- overall performance evaluation (IPA), acquired 3 important attributes that want to be stepped forward, this is, green interplay, accessibility, and habituation to the usage of technology.

There are still many things that can be improved and developed from this research. This research can be improved by involving more respondents with samples from every province in Indonesia to better describe the existing population. Next, analyze the acceptance of MPDN technology using other technology acceptance models that include other variables that have not been discussed in this research. For example, innovativeness, personality traits, and resistance to change. Then, analyze the effect of age moderation by considering the Generation Z group. In the acceptance evaluation, user classification or segmentation can also be carried out based on the combination of each variable.

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