The mediation role of adoption readiness on perceived anxiety and attitude toward using database management system at correctional institutions

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ABSTRACT

Taking into account the literature on technology acceptance and adoption, this study aimed to investigate the mediating role of adoption readiness, which was built on the Unified Theory of Acceptance and Use of Technology (UTAUT), on the relationship between perceived anxiety and attitude toward using the system. This research also evaluated demographic variations and gender roles that could be considered when developing technology-use strategies. In a nutshell, this research looked into the negative and positive effects of technology integration through UTAUT’s Correctional Database System (CDS). A survey was used to gather information from 230 middle managers whose responsibility is to manage information system database in correctional institutions. The data were then analyzed with SmartPLS 3 Software. The findings revealed that perceived anxiety has a significant effect on attitude toward using database management system and adoption readiness. Whereas adoption readiness could mediate perceived anxiety and attitude toward using database management system. However, gender was not proven to moderate the effect of adoption readiness on attitude toward using a database management system. This study provided a thorough grasp of both the supports that can help individuals develop positive attitudes toward an application system and the challenges that can obstruct the process. This study also gave an understanding that correctional institutions need to ascertain the middle managers that database management systems can be used easily and can overcome errors caused by human error.

1. Introduction

Information system is a big part of modern business technology, and they encourage a lot of creativity in the workplace (Ahmed et al., 2019). As a result, considering the long-term influence on company development, technology adoption must be prioritized for the organization’s survival. How these technologies are employed will be determined by people’s capacity to adapt and respond flexibly to technological breakthroughs. As a result, a suitable environment can only be developed once a technology has been effectively deployed and long-term incorporated into the work process (Chiu and Churchill, 2016). Adoption of relevant technology is frequently reliant on a well-defined work process aimed at cultivating a positive mindset. To ensure that workers are prepared for future challenges, rapid technology advancement will demand continuing change management strategies in the workplace.

The goal of this research was to gain a better knowledge of the barriers and supports to employee attitudes about a system, as well as to construct a model for the system. This research examined the Unified Theory of Acceptance and Use of Technology (UTAUT) as “adoption ready” and its mediation for correcting the negative impacts of personal attitudes toward a system. This is because UTAUT is built on the assumption that when individuals utilize a system that satisfies both their performance and their expectations, they will have a more positive attitude (Donmez-Turan, 2019). In fact, UTAUT, according to Almetere et al. (2020), is the most important and comprehensive model for forecasting technology adoption usage intentions, explaining 70% of changes in behavior or intentions. UTAUT aggregates user acceptance of technology literature that can reliably explain a considerable amount of diversity in technology usage and acceptance behavior across a variety of contexts, including online education,
communication technology, and health informatics (Wang et al., 2020).

Individuals in government organizations who either show a readiness to adapt and are resistant to modest or severe changes were the subject of this research. This research also focused on the use of the Correctional Database System (CDS). A database is a logically ordered collection of structured data kept electronically in a computer system. A database management system is generally in charge of this database (Oracle, 2022). CDS itself is a system that belongs to the Directorate General of Corrections in the Republic of Indonesia. It is a reporting mechanism and unified data management system for prisons that also serves as a work assistance when necessary. Individual beliefs, attitudes, and worries should be prioritized when employing CDS (Chiu and Churchill, 2016), because these characteristics typically change during and after experiencing, comprehending, and applying technology and related working techniques.

Previous scholars appeared to agree that when developing technology usage methods, demographic disparities should be taken into account. A study by Kalini et al. (2020) supports the general view that women have less experience and proficiency with computers and the internet than their male counterparts. Furthermore, as compared to males, they are more prone to exhibit unfavorable views and discomfort with technology. When technology is utilized over a longer length of time, however, the gap between the genders narrows dramatically. In addition, Humbani and Wiese’s (2018) study sheds light on ways to boost adoption and close gender inequalities in online application services. As a result, in a hypothetical connection, this study examines the moderator variable via gender. This is also in response to previous research suggestion that emphasizes the importance of analyzing gender roles in terms of technology acceptance (Tezer and Soykan, 2017). Though CDS is thought to have been employed correctly, and the information system has been able to deliver acceptable advantages, this study focuses on CDS optimization, which has not yet been fully realized. In summary, the purpose of this study is to investigate the negative and positive effects of technology integration utilizing CDS via UTAUT.

2. Literature review

2.1. Theoretical basis

2.1.1. Perceived anxiety

Individual workers’ performance in incorporating technology into their work is influenced by three main factors: beliefs, attitudes, and anxiety (Chiu and Churchill, 2016). Anxiety is defined as a fearful, uncomfortable, frustrated, reflective, and fearful emotional state that impairs decision-making (Nayak, 2014). Anxiety relates to an individual’s fears (such as unhappiness, perception, and stress produced by stressful events) that they encounter while interacting with the underlying technology (Patil et al., 2020) Anxiety, in this case, relates to the dread of losing data or making major errors while utilizing technology. Anxiety is an important predictor of technology acceptance which harms technology integration (Celik and Yesilyurt, 2013). Anxiety is another factor that can affect the integration process. López-Bueno et al. (2020) categorize the perceived anxiety variable into two groups such as with a lower or the same level of perceived anxiety and those with a higher level. Helping employees overcome the anxiety they feel about technology, will be critical to successfully integrating technology into their work.

2.1.2. Adoption readiness

When attempting to use a new technological system, it is required to first adapt to the system, especially because it is linked to personality traits and emotional responses (Guo, 2017). This study will evaluate the Unified Theory of Acceptance and Use of Technology (UTAUT) as “adoption readiness” (Thakur and Srivastava, 2014). UTAUT compiles literature on user acceptance of technology with four main dimensions influencing intention and use: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). UTAUT argues that these four dimensions have consistently been shown to be able to explain a large amount of variation in technology use and acceptance behavior across various contexts (Wang et al., 2020). UTAUT can be evaluated as a single latent construct called adoption readiness by explaining the existing literature by concluding that these factors are not completely independent constructs that affect each other but they are actual dimensions of a single construct (Donmez-Turan, 2019).

In this study, the four characteristics of UTAUT will be evaluated as a latent construct called adoption readiness, based on earlier research. According to Kaufman et al. (2018), a series of adoption readiness assessments will assist businesses in shifting their attention from the expected amount of business value through adoption to balancing business value with risk during the adoption process.

2.2. Gender

Consumer satisfaction and usage rates are said to be influenced by gender demographics, which is a crucial moderator in user technology acceptance (Singh et al., 2017). Gender has also been identified as a major variable in technology adoption and uses, according to Humbani and Wiese (2018). As a result, gender was included as a moderating variable in this study to see how it affected online technology uptake. Psychological differences are known to cause gender variances (Chawla and Joshi, 2020). The focus of this study is on gender, intending to determine whether there are any disparities in decision-making processes between men and women when it comes to technological acceptance. This needs to be researched since, according to Kalini et al. (2020), when technology is utilized frequently for a longer time, the gender gap narrows dramatically.

2.3. Attitude toward using database management system

A learned disposition or predisposition to respond positively or negatively to some item, circumstance, concept, or other person is referred to as attitude (Recber et al., 2017). Moreover, the willingness to adopt the presence of technology for work reasons before making it a habit is referred to as attitude toward usage (Indarsin and Ali, 2017). Other phrases used to describe it include technology adoption. Specifically, attitude toward utilizing is a complex interplay of personal qualities, norms, sentiments, values, ideas, and beliefs that impact how a person behaves in specific situations (e.g., data use) (Van Gasse et al., 2020). According to Li et al. (2019), an individual’s attitude toward technology refers to how enthusiastic they are about using it. These expressions have the same meaning as characterizing a person’s acceptance of the desire to use or adopt the presence of a predetermined product or service. Behavioral intents, which describe behavior before someone conducts an intended action, shape adoption intentions.

2.4. Hypothesis development

2.4.1. Perceived anxiety and attitude toward using database management system

CDS provides new opportunities to promote better information in the context of using technology online. Individual attitudes regarding using applications are a major factor impacting internet technology’s success (Chiu and Churchill, 2016). Individuals who find applications beneficial and supportive of work are more likely to include them in their job goals. Additionally, regular professional training and development programs should be provided to help employees learn how to use technology successfully, reduce perceived anxiety and increase technological integration. There’s a chance that using applications as a tool to help with work will lead to changes in operational procedures and the use of foreign technologies. Changes in any form can induce anxiety, fear, and worry in certain people. Individuals may be apprehensive that adopting technology will result in a higher workload or that they would lose control over work procedures owing to a lack of familiarity with technology. In other words, people’s positive attitudes about technology will
be put to good use by lowering their anxiety levels. This demonstrates that people who are anxious about utilizing online apps as a significant new technology are less likely to see them as a useful tool for doing their jobs, and hence are less likely to use them (Chiu and Churchill, 2016). The value of anxiety, according to Kimilouglu et al. (2017), can be used as a learning motivation component to complete work. Individuals who are more apprehensive about utilizing internet resources as work and technology tools are less likely to think of them as simple to use and have a negative attitude about them (López-Bueno et al., 2020). On the other hand, user anxiety about the attitude toward using applications does not have a negative impact when they think the system needs to be strengthened and is considered not difficult to do (Donmez-Turan, 2019).

**H1. Perceived Anxiety has a significant effect on Attitude Toward Using database management system**

2.4.2. Perceived anxiety and adoption readiness

Differences among services available in different applications will further support adopters to better articulate the value proposition compared to adoption risks and uncertainties, and make better decisions (Kaufman et al., 2018). Adoption readiness and an organization’s ability to adapt to the value of technology change over time. When an organization accepts perceived anxiety, it reduces adoption readiness which may not be recommended (Kaufman et al., 2018). The evaluation process is needed to explain how the organization identifies what else needs to be done to achieve adoption readiness and avoid perceived anxiety. Even if an organization has demonstrated readiness, the adoption process may not be completed promptly due to the anxiety of the individuals. Users perceived anxiety about the system, on the other hand, has no negative impact on system adoption unless they believe the system is difficult to learn or operate (Donmez-Turan, 2019). Focusing on the speed of the change adoption process, Coeurderoy et al. (2014) have identified the factors of “technology change adoption” and defined the drivers of adoption as attributes of perceived change (performance expectancy and effort expectancy), social influence (coworkers influence and supervisor), facilitating conditions (initial training and helpdesk support) and other individual characteristics (self-efficacy and personal acceptance). Following the basis of this research, a system may initially face rejection or perceived anxiety. However, this study assumes that if a system meets the four components of UTAUT, it can build positive attitudes in individuals. Therefore, the meta-UTAUT model will be most appropriate to understand the adoption readiness of using CDS.

**H2. Perceived Anxiety has a significant effect on Adoption Readiness**

2.4.3. Adoption readiness and attitude toward using database management system

Adoption readiness develops with innovation, optimism, and convenience while discomfort and insecurity prevent people from accepting the technology to be used (Acheampong et al., 2017). Furthermore, Acheampong et al. (2017) empirically confirmed the correlation between people’s technology adoption readiness and their tendency to use technology. The study revealed that individuals with high optimism and innovation and less discomfort would be more likely to have an attitude toward using the technology. Different researchers analyzed attitudes toward technology acceptance and individual adoption readiness for technology using different conceptualizations. Venkatesh’s UTAUT approach is one example of a technology acceptance paradigm. In the UTAUT model, a reliable predictor of behavioral intention in the context of technology adoption and use will provide benefits in performing certain activities, and the system will assist him in improving job performance, which is also a significant factor influencing attitude toward using a system. Users would expect higher performance if they perceive that using technology is simple (Wang et al., 2020). Furthermore, these predictors can lead to an individual’s perception of important others (for example, superiors, coworkers, and family) believing that the individual should use a specific technology (Maita et al., 2018), as well as the individual’s perception of readily available resources to perform a behavior (Maita et al., 2018). In the context of this study, the available resources are the CDS. A study by Mensah (2018) also found that Adoption readiness in individuals who seek to understand factors such as security, risk, usability, ease of use, attitude, quality, and trust will lead to a higher willingness to attitude toward using applications to make the job easier.

**H3. Adoption Readiness has a significant effect on Attitude Toward Using database management system**

2.4.4. Gender Moderates Adoption Readiness on Attitude Toward Using database management system

Gender has been identified as a key variable in technology adoption and use (Meyer, 2015). Therefore, gender is included in this study as a moderating variable to determine its effect on service adoption through online technology. The technology adoption readiness index is applied to determine the readiness of employees to adopt services through technology and the moderating effect of gender (Humbani and Wiese, 2018). Gender has been identified as a key variable in adoption and its vital role in gender segmentation and empowerment necessitates its inclusion. Several previous studies such as Chawla and Joshi (2020) have tried to examine the causal relationship between the antecedents that influence attitudes to adopt online applications. This study proposes a comprehensive model to examine the effect on attitude toward using database management system by taking the construction of the popular model for technology adoption, namely, the unified theory of acceptance and use of technology (UTAUT) regarding the need for adoption readiness to explain the adoption of online technology services. Companies should start a campaign that addresses the viewpoints of women and men, but also must be heard equally, according to Humbani and Wiese (2018), and in turn, can promote and educate consumers to enjoy the convenience of utilizing technology. Humbani and Wiese's (2018) research provides insight into ways to boost adoption and minimize gender gaps in online application services. Because most people are unfamiliar with online apps, it is thought that subjective standards may have a significant impact on their perception – how they view services in different ways and to varying degrees, which is known to be influenced by the sex variable (Kalinic et al., 2020). Chawla and Joshi (2020) found that gender had a substantial moderating influence on technology use, with men being presumed to have more favorable attitudes and be less worried about technological advancement. Therefore, the focus of this study is on gender, to look at whether there are any differences in decision-making processes between men and women when it comes to viewing toward utilizing the CDS program.

**H4. Gender Moderates Adoption Readiness on Attitude Toward Using database management system**

2.4.5. Adoption readiness mediates perceived anxiety and attitudes towards using database management system

One of the focuses of this research is on the level of employee adoption readiness for attitude toward using applications as a predictor of employee perceptions of the ease and usefulness of the application that leads to the right attitude. According to Almetere et al. (2020), UTAUT is the most essential and complete model for predicting usage intentions in technology acceptance and can explain 70% of differences in behavior or intentions. The UTAUT benefit predictor states that employees will believe the benefits of using technology will include better productivity and increased efficiency (Ahmed et al., 2019). It will help them in the workplace because employees always take advantage of the functions provided by the use of technology and enable them to be more competitive in their work. According to Donmez-Turan (2019), there is a condition that causes anxiety to appear higher when users find the information system difficult to use. Anxiety arising from the use of computer-based systems will be negatively related to attitudes toward using toward use and usage behavior. Adoption readiness is known to be
able to mediate the negative effects of anxiety on attitude toward using a system (Donmez-Turan, 2019). It can be said that adoption readiness is very important to reverse the negative effect of attitude toward using a system through a mediation methodology model strategy which will show that there is a significant relationship between user anxiety and attitude towards use directly, through indirect adoption readiness (Donmez-Turan, 2019). As shown in research, adoption readiness fully mediates the relationship between consumer anxiety and attitude toward consumption. This happens because individuals’ negative attitudes towards the new system can come from their rejection and perceived anxiety. However, mediating adoption readiness related to reversing the negative effect of users’ perceived anxiety on attitudes toward using the system to a positive attitude has critical importance in the adaptation of users to the new system. A system may initially face resistance or personal concerns, but if the system meets all four components of UTAUT, it can build a positive attitude of individuals towards using the system.

H5. Adoption Readiness mediates Perceived Anxiety on Attitude Toward Using database management system

The overall hypotheses are conceptualized in the following framework (Figure 1).

3. Research methods

3.1. Research approach

This research used a quantitative approach with a purposive sampling procedure, which means that respondents were chosen based on specified criteria. The population of this study is all of the middle managers who work at the Directorate General of Corrections, however to be specific, the middle managers in this study are the heads of the sections who are in charge of managing information systems in correctional institutions and a total of 230 respondents were acquired. The data collection utilized Google Form to conduct a survey and distribute the questionnaire. Verbal informed consent was obtained from the Head of the relevant section, and a total of 230 respondents were acquired. The data were in charge of managing information systems in correctional institutions, specifically those who manage the database system are male and aged between 26-30 years. Furthermore, most of them have worked for 7–10 years and acquired Bachelor degree.

This study had received ethical approval from Universitas Airlangga, as represented by its research and development division. Universitas Airlangga’s Development and Innovation Institute for Publishing Journals and Intellectual Property Rights is responsible for monitoring publications and journals, as well as innovation and intellectual property rights. This institute is in charge of conducting research and directing the development of new research products for the benefit of the community. Additionally, it can also give ethical approval to studies undertaken by Universitas Airlangga academics.

3.2. Measurement

This study examined the direct and indirect relationship between variables, and also used mediator variables in hypothesis testing. The independent variable in this study is Perceived Anxiety (X), the mediating variable is Adoption Readiness (Z), the moderating variable is Gender (M), and finally, the dependent variable is Attitude Toward Using database management system (Y). Furthermore, this study used a Likert scale (ranging from 1 (strongly disagree) – 5 (strongly agree)), in measuring the level of indicators to show responses to the statements in the questionnaire. The items to measure Perceived Anxiety (X), Adoption Readiness (Z), and Attitude Toward Using database management system (Y) variables were all developed from a study by Donmez-Turan (2019) while the Gender variable (M) was obtained through the respondents’ demographics results which refers to a study by Meyer (2015).

3.3. Data analysis technique

This study analyzed the data by testing the relationship between several variables. Therefore, this study chose to use the multivariate analysis method. The instrument of this research was the SEM (structural equation modeling) method using the SmartPLS 3 software. SEM is one of the analytical tools used to determine the magnitude of the influence that occurs between the independent variables on the dependent variable. SEM is also known to be a multivariate analysis that can analyze the relationship between variables more complexly.

3.4. Findings

In this study, the questionnaires were addressed to middle managers at the Directorate General of Corrections.

Based on Table 1, it is known that the majority of the middle managers in correctional institutions, specifically those who manage the database system are male and aged between 26-30 years. Furthermore, most of them have worked for 7–10 years and acquired Bachelor degree.

The average results of respondents’ responses to each statement item were categorized using the class interval formula guide which showed the resulting class interval is 0.80, this value was then used as a guide to determine categories based on the average interval. So, based on Table 2, it is known that the perceived anxiety variable is included in the sufficient category, while other variables such as adoption readiness (performance expectancy, effort expectancy, social influence, facilitating conditions), and attitude toward using a database system are included in the very high category.

Table 3 shows the results of the Validity and Reliability Test on perceived anxiety, adoption readiness, and attitude toward using...
These results have met the validity and reliability requirements for the study. It is stated that all indicators in this study affect the latent variables because the loading value $>0.5$ so that it is declared valid and a composite reliability $>0.6$ so that it is also declared reliable (Hair et al., 2014). Thus, it is stated that all indicators in this study affect the latent variables because these results have met the validity and reliability requirements for the study.

As shown in Table 4, there is a direct effect that the T-statistics value is expected to be $>1.96$ and P-Value $<0.05$ to be able to conclude that the relationship between the variables tested is stated to have a significant effect (Hair et al., 2014). In addition, the original sample in the table will show the direction of the hypothetical relationship between the variables used. Thus, according to the path coefficient results of this study, it shows that hypothesis 2 has no significant effect.

Based on Table 5, an indirect effect means that the T-statistics value is expected to be $>1.96$ and P-Value $<0.05$ to be able to conclude that the relationship between the variables tested is declared to have a significant effect (Hair et al., 2014). In addition, the original sample in the figure will also show the direction of the hypothetical relationship between the variables used. Thus, according to the results of the specific indirect effect, this study shows that there is one hypothesis that has no significant effect.

### 4. Discussion

The results of the hypothesis test indicated that the effect of perceived anxiety was significant on attitude toward using CDS with a T-Statistics value of 5.807 ($>1.96$) and a p-value of $0.000 < 0.05$. The coefficient of influence shown through the original sample generated was 0.209 (positive), meaning that the higher the perceived anxiety of middle managers at the Directorate General of Corrections can lead to an attitude toward using CDS. Thus, the first hypothesis which states that perceived anxiety has a significant effect on attitude toward using CDS was accepted. The results of this study confirmed the research by Kimiloglu et al. (2017) which states that someone can benefit from anxiety and take it as a learning motivation factor in operating tools that can support the work. This study also confirmed the research by Chiu & Churchill (2016) which shows that continuous professional training and development programs need to be provided to help officers understand how to use technology effectively, and thus the results are reduced perceived anxiety and increased technology integration. The results of this study indicated that work anxiety of middle managers at the Directorate General of Corrections led to an attitude toward using CDS. This might be because they were enrolled in a training and professional development program offered by the institution, allowing them to continue working on CDS despite their anxiety. The middle managers' anxiety did not prevent them from utilizing CDS since they believed the system to be necessary and simple to use (Donmez-Turan, 2019). However, this finding was not in

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**Table 2. Description of research variable answers.**

| Questionnaire Statement | Mean | Information |
|-------------------------|------|-------------|
| **Perceived Anxiety**   |      |             |
| I am worried about using the CDS system | 2.483 | Low |
| I am concerned to think that I could lose a lot of information (e.g., important data) on the CDS system if I operate it incorrectly by mistake. | 3.387 | Moderate |
| I hesitate to use this CDS system for fear of making mistakes I can’t fix. | 2.674 | Low |
| The CDS system is a bit intimidating to me. | 2.317 | Low |
| **Total Mean**           | 2.715 | Low |
| **Adoption Readiness**   |      |             |
| **Performance Expectancy** |      |             |
| For me, CDS is useful in my work. | 4.687 | Very high |
| Using CDS allows me to complete performance appraisal and evaluation tasks more quickly. | 4.639 | Very high |
| The existence of the CDS application increases my productivity. | 4.657 | Very high |
| CDS will increase the chances of getting a raise. | 4.091 | High |
| **Total Mean**           | 4.519 | Very high |
| **Effort Expectancy**    |      |             |
| My interactions within CDS are clear and understandable. | 4.561 | Very high |
| It will be easy for me to become skilled at using CDS | 4.570 | Very high |
| I would find CDS easy to use. | 4.565 | Very high |
| Learning to operate CDS was easy for me. | 4.509 | Very high |
| **Total Mean**           | 4.551 | Very high |
| **Social Influence**     |      |             |
| People who influence my behavior think it's time to use CDS | 4.526 | Very high |
| People important to me think that it's time to use CDS | 4.543 | Very high |
| The senior management of this business has assisted in the use of CDS | 4.435 | Very high |
| In general, the organization has supported the use of CDS | 4.643 | Very high |
| **Total Mean**           | 4.537 | Very high |
| **Facilitating Conditions** |      |             |
| I have the necessary abilities to use CDS | 4.526 | Very high |
| I have the necessary knowledge to use CDS | 4.517 | Very high |
| CDS is very different from the previous system used in institutions. | 4.465 | Very high |
| Several people (work teams) are available for assistance in dealing with difficulties in CDS | 4.517 | Very high |
| **Total Mean**           | 4.506 | Very high |
| **Attitude Toward Using Database management system** |      |             |
| With a lot of consideration, I use CDS in my work is a wise idea. | 4.287 | Very high |
| With many considerations, using CDS offers many advantages for me. | 4.243 | Very high |
| With many considerations, using CDS in my work is a good idea. | 4.348 | Very high |
| With many considerations, it is beneficial for me to use CDS in my work. | 4.387 | Very high |
| **Total Mean**           | 4.316 | Very high |

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**Table 3. Validity and reliability test.**

| Variables            | Code | Factor Loading | CR  | (AVE) |
|----------------------|------|----------------|-----|-------|
| **Perceived Anxiety**|      | 0.892          | 0.933 | 0.778 |
|                      | UAX2 | 0.851          |       |       |
|                      | UAX3 | 0.912          |       |       |
|                      | UAX4 | 0.871          |       |       |
| **Adoption Readiness**| PE1  | 0.827          | 0.975 | 0.710 |
|                      | PE2  | 0.850          |       |       |
|                      | PE3  | 0.880          |       |       |
|                      | PE4  | 0.540          |       |       |
|                      | EE1  | 0.885          |       |       |
|                      | EE2  | 0.930          |       |       |
|                      | EE3  | 0.900          |       |       |
|                      | EE4  | 0.858          |       |       |
|                      | SI1  | 0.908          |       |       |
|                      | SI2  | 0.867          |       |       |
|                      | SI3  | 0.826          |       |       |
|                      | SI4  | 0.877          |       |       |
|                      | FC1  | 0.847          |       |       |
|                      | FC2  | 0.825          |       |       |
|                      | FC3  | 0.779          |       |       |
|                      | FC4  | 0.811          |       |       |
| **Attitude Toward Using** | ATU1 | 0.921          | 0.973 | 0.900 |
|                      | ATU2 | 0.934          |       |       |
|                      | ATU3 | 0.969          |       |       |
|                      | ATU4 | 0.970          |       |       |

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line with previous research which states that the low anxiety of individuals towards technology causes them to tend to behave better towards the technology (Hong and Koh, 2002).

The results of the hypothesis test indicated that the effect of perceived anxiety was significant on adoption readiness with a T-Statistics value of 6.041 (>1.96) and a p-value of 0.000 < 0.05. The coefficient of influence shown through the original sample generated was 0.278 (positive), meaning that although the perceived anxiety of middle managers were high, they still showed CDS adoption readiness. Thus, the second hypothesis which states that perceived anxiety has a significant effect on adoption readiness was accepted. This result was in line with the research by Donmez-Turan (2019) which states that it is common for a system to reduce anxiety in middle managers. Perceived anxiety in middle managers did not hinder their adoption readiness because the Directorate General of Corrections showed that CDS could increase their productivity and performance (performance expectancy), CDS applications were easy to use because they received professional development (effort expectancy), and resources and support at the Directorate General of Corrections are well provided ( facilitating conditions). As a result, middle managers' perceived anxiety did not affect their CDS adoption readiness since, in any case, they must be prepared to operate CDS in all of their duties. Although perceived anxiety was found to have a substantial impact on adoption readiness in this study, earlier research revealed that an individual's anxiety about a technology actually diminishes readiness to embrace that technology (Suseno et al., 2022).

Next hypothesis test indicated that the effect of readiness adoption was significant on attitude toward using CDS with a T-Statistics value of 7.579 (>1.96) and a p-value of 0.000 < 0.05. The coefficient of influence shown through the original sample produced was 0.550 (positive), meaning that higher adoption readiness made by middle managers at the Directorate General of Corrections led to an attitude toward using CDS. Thus, the third hypothesis which states that adoption readiness has a significant effect on attitude toward using CDS was accepted. It confirmed research by Acheampong et al. (2017) which states that community technology adoption readiness and their tendency correlate with attitude toward using technology. Middle managers at the Directorate General of Corrections were recognized to benefit from the UTAUT model's adoption context predictors, which might help them improve job performance and, in turn, promote attitudes about utilizing CDS. This is also supported by Wang et al. (2020) who state that when users believe using technology is easy, they will reach better performance. The four predictors of adoption readiness will also make middle managers understand factors such as security, risk, usability, ease of use, attitude, quality, and trustworthiness, which made them increase their attitude toward using CDS. In addition, previous research also proved that technology readiness plays a positive role in supporting attitudes toward using technology (Lee et al., 2012). Even though the research was carried out in different contexts, it still shows that individuals need mature readiness in adopting a technology in order to use the technology properly.

The results of this research hypothesis test indicated that the effect of gender in moderating adoption readiness on attitude toward using database management system was insignificant with a T-Statistics value of 0.426 (<1.96) and a p-value of 0.670 > 0.05. This means that gender in the Directorate General of Corrections did not influence middle managers to have readiness for attitude toward using CDS. Thus, the fourth hypothesis which states that gender moderates' adoption readiness towards attitude toward using CDS was not accepted. This result was in line with the research by Chawla & Joshi (2020) who reported that the moderating effect of gender concerning technology use is significant, indicating that men are assumed to have more positive attitudes and are less anxious about technological innovation. The results of this study indicated that gender did not affect middle managers to adoption readiness and attitude toward using CDS. This was reinforced by the fact that middle managers at the Directorate General of Corrections understood the need of having SDP adoption readiness to assist their job. According to Humbani & Wiese (2018) companies need to start campaigns that target the opinions of women and men who also need to be heard equally, and in turn, can encourage individuals to enjoy the convenience of using technology. The results of this study indicate that attitudes toward using CDS do not target opinions based on gender. This can be seen from the respondent's statement that the use of CDS is a wise and good idea, profitable, and beneficial for both genders in the Directorate General of Corrections. Thus, it can be interpreted that the gender variable has no influence because the middle manager at the Directorate General of Corrections had good adoption readiness.

The results of this research hypothesis test indicated that the effect of adoption readiness in mediating perceived anxiety on attitude toward using CDS was significant with a T-Statistics value of 4.111 (>1.96) and a p-value of 0.000 < 0.05. The coefficient of influence shown through the original sample produced was 0.137 (positive), meaning that adoption readiness by middle managers at the Directorate General of Corrections influenced their perceived anxiety in leading to an attitude toward using CDS. Thus, the fifth hypothesis was acceptable. This was in line with research by Donmez-Turan (2019) which states that adoption readiness is known to be able to mediate the negative effects of anxiety on attitude toward using database management system. It also indicated that adoption readiness is also important for reversing the negative effects of anxiety on attitudes toward using CDS. In this study, employees' anxiety to use applications did not reduce their attitude towards the use of CDS. This means that anxiety of middle managers did not cause a negative thing that affected the use of CDS. So even when they felt adoption readiness, their anxiety was still existed. Adoption readiness is very important to reverse the negative effect of perceived anxiety to attitude of use through a mediation methodology model strategy which showed that there was a significant relationship between user anxiety and attitude towards use, through indirect adoption readiness (Donmez-Turan, 2019). Moreover, it was known that the total mean of perceived anxiety

| Variable | Adoption Readiness (Z) → Attitude Toward Using Database management system (Y) | Original Sample T statistic P Values Information |
|----------|---------------------------------------------------------------------------------|---------------------------------------------------|
|          | 0.494 5.903 0.000 Significant                                                   |
| Moderating Effect 1 → Attitude Toward Using Database management system (Y) | 0.009 0.193 0.847 Not significant                                                                 |
| Perceived Anxiety (X) → Adoption Readiness (Z)          | 0.278 6.041 0.000 Significant                                                   |
| Perceived Anxiety (X) → Attitude Toward Using Database management system (Y) | 0.209 5.807 0.000 Significant                                                   |

| Variable | Perceived Anxiety (X) → Adoption Readiness (Z) → Attitude Toward Using Database management system (Y) | Original Sample T statistic P Values Information |
|----------|------------------------------------------------------------------------------------------------------|---------------------------------------------------|
|          | 0.137 4.111 0.000 Significant                                                                   |

| Path specification indirect effect. |
|-----------------------------------|
| Variable | Original Sample | T statistic | P Values | Information |
|----------|-----------------|-------------|----------|-------------|
| Perceived Anxiety (X) → Adoption Readiness (Z) → Attitude Toward Using Database management system (Y) | 0.137 | 4.111 | 0.000 | Significant |

| Path specification indirect effect. |
|-----------------------------------|
| Variable | Original Sample | T statistic | P Values | Information |
|----------|-----------------|-------------|----------|-------------|
| Perceived Anxiety (X) → Adoption Readiness (Z) → Attitude Toward Using Database management system (Y) | 0.137 | 4.111 | 0.000 | Significant |
in middle managers was in the sufficient category meaning that anxiety did not dominate.

5. Conclusions

Based on the test results and data processing analysis and discussion, it is concluded in this study that the direct effect of perceived anxiety on attitude toward using CDS and adoption readiness shows a significant effect, then the direct effect of adoption readiness on attitude toward using CDS also shows a significant effect, then it is known that gender is unable moderated adoption readiness toward attitude of use, and it was found that adoption readiness was able to partially mediate perceived anxiety toward attitude of use. The conclusion is that middle managers at work will carry out their duties according to certain procedures and systems well when the attitude toward using the application is done well. In the use of continuous applications in the workplace, operators' and middle managers' perceptions of it are well responded to in line with the intended individual and organizational goals. The use of these applications has depended on the ability of the individuals involved to adapt and respond flexibly even though they may experience anxiety. In the results of this study, it has been shown that the factors that positively through adoption readiness can influence the level of attitude of use well. Likewise, with perceived anxiety, which is generally considered negative, the results of this study show that it does not prevent individuals from influencing the level of attitude toward of use well. So that the organization can achieve organizational goals properly and appropriately through creating good quality work in all perceived conditions. That way, the organization will also be more effective when it has employees who focus on achieving organizational goals even though there are all possible obstacles.

6. Implications

6.1. Theoretical implication

This research focuses on conceptual frameworks for sustaining and enhancing attitudes about utilizing a work-related application. The analysis provides evidence that unfavorable attitudes can persist in those who have anxiety, and that this anxiety is more likely to be felt when utilizing technology. Furthermore, this research clarifies an inference that refers to the Unified Theory of Acceptance and Use of Technology (UTAUT) in order to thoroughly explain a prediction connected to individual acceptance of information technology, namely intentions and behavior. Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC) are used to assess the theory as a single construct, which is then referred to as adoption ready. This study highlights adoption readiness which is considered to have a very important effect on personal attitudes towards using the system and in adjusting to being closely related to personality traits and emotional responses. If the system satisfies the four UTAUT constructs, it is shown that it will build a positive attitude of the individual towards the use of this system. Therefore, regardless of how they feel anxiety, they must focus on attitudes toward adoption readiness to support increasing attitudes toward using an application. This study also has demographic differences that must be taken into account in planning application usage strategies. It is intended that the organization as a whole can identify the factors that lead to the proper use of an application.

6.2. Practical implications

Based on the results of the research and the conclusions that have been described regarding the effect of perceived anxiety on attitude toward using CDS with adoption readiness mediation and gender mediators, several suggestions are given, namely that organizations are expected to be able to respond positively to perceived anxiety, encourage individuals to be able to adapt in using an application, and able to create individual willingness to accept the presence of technology in achieving work goals. In addition, this research is also able to influence managers in analyzing the effect of perceived anxiety, adoption readiness, and gender on attitude toward using applications because it can support individual success in integrating technology into their work, helping organizations to balance and adapt to technology. Moreover, it can support user technology acceptance which will also affect satisfaction, and support the extent to which individuals have positive feelings about technology use. Thus, this research has implications for being able to face the obstacles that may occur by providing the right attitude in the use of technology. That’s because the use of technology in doing work can create efficiency and effectiveness.

Declarations

Author contribution statement

1) conceived and designed the experiments: Anis Eliyana.
2) performed the experiments: Nanankan Syamsudin, Sitig Budiyanto, Zainal Arif, Aisha Anwar.
3) analyzed and interpreted the data: Sitig Budiyanto, Zainal Arif, Aisha Anwar.
4) contributed reagents, materials, analysis tools or data: Aisha Anwar, Dodot Adikoeswanto, Nanankan Syamsudin,
5) wrote the paper: Dodot Adikoeswanto, Anis Eliyana.

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