Awareness of digital privacy among users of new media

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Abstract

The research aims to achieve the following main goal: to identify awareness of digital privacy among users of new media, as this research belongs to descriptive research, it used the media survey method, and used tools (cognitive structure test, awareness measure, and attitude test) on a sample of (90) male and female students from Minia University and Cairo University.

The most important results were as follows: There are no statistically significant differences at the level (0.05) among the members of the research sample in the level of the cognitive aspect of the sample, as it was slightly less than the test value (the hypothetical average) of (30 marks), which is equivalent to (50 %) of the total score of the cognitive aspect of digital privacy awareness, This indicates that there is an average level of the cognitive aspect in the sample, The results also indicated that there were statistically significant differences at the level (0.05) among the members of the research sample in the Level of the emotional aspect of the sample, which was slightly greater than the test value (hypothetical mean) of (40 marks), which equals (66.67). %) of the total degree of the emotional aspect of awareness of digital privacy, which indicates a slight increase in the level of the emotional aspect in the sample, and there are statistically significant differences at the level (0.05) between the members of the research sample in the level of the skills aspect of the sample, which was much less than The test value (hypothetical average), which indicates a low level of the skills aspect.

Keywords: Digital Privacy, New Media.

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**Introduction:**

Human societies are developing and going through stages in their intellectual and technological development, and the media and cognitive aspects had great luck in this development, so information and communication technology has known rapid development since its appearance, where the world is witnessing today a huge explosion and a major qualitative revolution in the field of information, and the world has become a small village; Any news can be transmitted anywhere and in a short time.

The right to privacy is one of the human rights that have been preserved by an ancient civilization, heavenly religions, and man-made laws in most countries of the world, but the emergence of new media gave weakness and violation of this right, as the digital revolution led us to a time described as a time of revelation, which was associated with the most important thing that a person possesses, which is his privacy, which has become largely targeted by some users and owners of modern communication technologies, privacy in the new media and its simplest sense is related to the confidentiality of the private lives of the users of those means; Whether facts or data on a personal computer or mobile phone, or stored in one of the new media that the user subscribes to and that may be hacked, as its theft or attack is a violation of privacy.

**The Cognitive Framework of the Research**

**First: Digital privacy**

**The concept of digital privacy**

The concept of digital privacy recently emerged due to the technological developments that occurred at the beginning of the contemporary era, where the content of the right to privacy was reconsidered. Which is the individual’s right to be protected from all forms of physical assault on their lives and property, such as the right to the inviolability of the home and the right to the confidentiality of correspondence. The computer and its use extended to all fields, a new concept of privacy was born that covers all aspects of the assault on the rights and personal freedoms of the individual, whatever their form or nature, including the challenges of the digital age It is called the right to
digital privacy or information privacy (Batihi, 2019, p. 62), the right to privacy was originally linked to the right to property and other civil rights, however in the modern era the right to privacy stems from other entitlements such as the right to private life (Osmani, 2016, P60).

Some believe that digital privacy is a description of the protection of the personal data of the individual, which is published and circulated through digital media, and the personal data is e-mail, bank accounts, personal photos, information about work and residence, and all the data that we use in our interaction on the Internet while we use the computer Automatic, mobile phone, or any other digital means of communication on the World Wide Web (Ibrahim, 2021, p. 12).

**Digital Privacy Areas**

Privacy can be divided into many areas that define for us the general framework of digital privacy, although at first glance they appear separate, they are linked together at the same time, namely:

![Digital Privacy Areas Diagram](image)

Figure No. (1) Areas of digital privacy
Information Fair Practice Principles

1. Principle One: Notice: Individuals are notified that their data is being generated and are informed of the purpose for which the data will be used.
2. Principle Two: Choice: Individuals are free to choose whether or not to participate, concerning whether and how they wish to use or disclose their data.
3. Principle Three: Consent: Data is created and disclosed only with the consent of the individuals concerned.
4. Principle Four: Security: Data is protected from loss, misuse, unauthorized access, disclosure, modification or destruction.
5. Principle Five: Integrity: Data is reliable, accurate, complete, and current.
6. Principle Six: Access: Individuals can access, verify and verify their personal data.
7. Principle Seventh: Accountability: The data collector is responsible for ensuring that the above-mentioned principles are met, and that he has the necessary means to ensure compliance with these principles (Ibrahim, 2021, p. 27).

The dangers of new technology on digital privacy

- Electronic espionage on personal data: where some viruses process the nominal information of a particular person to obtain his information by certain means such as approximation and matching between the information available on social networking pages, preparing statistics, integrating different elements and linking them with their bite, and then translating the individual's life in a few seconds and then using it for illegal purposes (Massad, 2018, p. 844).
- Risks can arise in contact tracing procedures when implemented with the help of technical solutions such as applications, frameworks and prototypes such as the risk of private place visits detection; Such as the gay club visited by the majority of adults in South Korea, automated profiling, revealing religious beliefs, disclosing pathways, and social relationships and disclosures (Majeed, 2021, p6).
- Risks resulting from the theft of information or programs by employees: These risks result from employees' non-compliance
with professional secrecy, which allows for the theft of information or programs for employees and causes harm to them, especially since the technological leap facilitates the use of computers for long distances, which makes it easier for them to use the word The secret is unauthorized, and it creates a wider field for them to steal what they want from programs and information, and misuse them as monitoring and revealing the privacy of employees through personal data and information stored in computers (Mazouz, 2021, p. 130).

Second: the new media

New media concept

Researchers describe new media as highly interconnected, crossed nonlinear networks that differ markedly from older linear media formats such as print newspapers, books, or magazines using images, words, and sounds together (Goodman, 2018, p.7).

The term "new media" refers to media produced as a result of the use of digital systems and the Internet, as well as the applications that result from them, such as electronic newspapers, social networking sites, e-mail, and others, which correspond to traditional means such as printed newspapers and others (Ali, 2016, p. 165).

New media properties

• Globally: It indicates that the new basic environment for the means of communication is an international global environment so that it can track international events anywhere all over the world, where the means here are directed towards people's desires and needs away from geographical and spatial constraints, so communication has become global so that any individual in any part of the world can communicate with anyone else in any other place (Hamad, 2018, p. 54), as it provides them with all the information about the world outside their social circles (Beattie, 2019, p.3).

• Interactive: the new media is characterized by the practice of two-way communication, where the communicator and the recipient exchange roles, and the practice of communication is two-way and reciprocal, and not in a unilateral way, but rather there is a dialogue between the two parties (Qada, 2015 147),
interaction is a characteristic produced by the new capabilities of the media so that it abolished the non-interactive passive reception pattern that the audience was suffering from in dealing with the previous means. (Al-Ani, 2015, p. 72).

• **Hypertext**: a programming language used to create hypertext documents that can be used in computers and has become a standard image for structuring and describing information in documents. Hypertext documents contain links that refer the reader to other similar sites. This feature means that the user can easily navigate from one site to another the network immediate, and the efficiency of the site is measured by the number of links it contains to other sites (Al Sari, 2011, p. 371).

• **Non-Popularity**: it no longer depends on addressing the masses in general messages, but it has become one of its potentials to direct its messages and contents to a specific individual targeting him with its messages or to a group or a specific group according to its special interests and needs. (p. 34).

**New Media Sections**

**New media can be divided into the following four sections:**

• The new media is based on the Internet and its applications, which is completely new with unprecedented qualities and features, and it is growing rapidly, and a number of applications are generated from it.

• New media is based on mobile devices, including book readers and newspapers, which is also growing rapidly and new types of applications are emerging from it on different portable tools, including telephones, personal digital assistants, and others (Shafiq, 2013, p. 132).

• The new media is based on the traditional media platform such as radio and television, to which new features such as interactive, digital and demand response have been added.

• The new media is based on a computer platform, and this type is circulated either online or by various means of preservation such as optical discs and the like, including visual presentations, video games, e-books, and others (Ghanim, 2014, p. 119).
Literature review:
Digital privacy:
According to the topics and research issues that were addressed in previous studies, the research topics of digital privacy can be discussed in the following: The topics covered by the Arab studies on digital privacy in general varied, and the Arab studies focused in their entirety on the attitudes of university youth towards violating private life through social networks and privacy protection mechanisms (Al-Samman, 2022), and public awareness of violations of digital privacy through the new media in light of the influence of the person (Gharib, 2021), the legal protection of privacy in the virtual world (Travel, 2020), and the legal protection of the right to privacy for users of social networking sites (Abbas, 2020).

Foreign studies focused on: the role of civil society organizations in shaping the digital privacy discourse and making data protection policies in India (Basu, 2020), student privacy in the digital age (Mouawad, 2020), digital privacy and personal, social and civil responsibility (Voigts, 2020).
As for the objectives, Arab studies focused on identifying the trends of university youth towards violating private life through social networks and privacy protection mechanisms (Al-Samman, 2022), and identifying the extent to which members of the public are aware of the digital privacy violations they are exposed to, and to determine the extent to which the public is aware of the forms of violation of their digital privacy (Ghareeb, 2021), and On the meaning of privacy in the virtual world by researching the legislation of countries that dealt with the aspect of legal regulation of privacy in the Internet world (Abbas, 2020).

When foreign studies focused on Examining the role of civil society organizations in shaping the privacy discourse and influencing the making of digital data protection policies (Basu, 2020), identifying the measures taken to protect the privacy of students in higher education institutions in California as seen by technology leaders (Mouawad, 2020), and identifying personal and social responsibility and Civil for Digital Privacy (Voigts, 2020).

As for the method, tools, and sample, Arab studies focused on The study (Al-Samman, 2022) relied on the descriptive approach using the questionnaire tool on a sample of (300) university youth who use social networks. The study (Abbas, 2020) also relied on the historical method, as well as on the comparative method by presenting the legal texts of countries that have adopted the principle of Internet privacy.

When foreign studies relied on The descriptive approach using the interview and observation tools on a sample of (84) representatives of civil society organizations (Basu, 2020), and the study (Mouawad, 2020) relied on the interview tool with senior technology leaders from various accredited higher education institutions in California, the study identified (11) An axis related to technology safety laws and measures, while the study (Voigts, 2020) relied on the descriptive approach using the in-depth interview tool with (23) students in the East Midlands in the United Kingdom.

The results of Arab studies indicated To the validity of the hypothesis that there are statistically significant differences in the whole youth's attitudes towards the violation of private life
through social networks due to demographic variables (Al-Samman, 2022), and the study (Ghareeb, 2021) proved the validity of the first hypothesis and the existence of differences between the level of public awareness of violations of digital privacy. Through the new media, compared to their level of awareness of privacy violations (for family and friends - others), and the study (Abbas, 2020) found that there is a discrepancy among the countries of the world among themselves regarding the legal protection report for the principle of privacy between the strict report on it and the absolute permissibility of individual freedoms and choices, and hastened Many countries of the world are enacting laws aimed at protecting electronic privacy.

**When the results of foreign studies indicated that** The digital data protection policy is a subject of great conflict between stakeholders, and that digital media education provides a means for cooperation amongst civil society organizations, the government and private companies to protect digital privacy (Basu, 2020), and the study (Mouawad, 2020) found a gap in the literature related to student privacy. With the application of technology in all aspects of education, the study (Voigts, 2020) found that students lack many controls and rules in their dealings with new media and digital privacy; Despite their interest and eagerness to protect their digital data.

**New media:**

According to topics and research issues that were addressed in previous studies, the research topics for new media can be discussed in the following:

The topics covered by Arab studies on new media in general varied, **Arabic Studies Focused** In its entirety, on the impact of fake news in the new media on university youth and its relationship to their behavior (Maree, 2022), and the trends of the media elite towards the ethics of new media (Al-Subhi, 2021), and the attitudes of university youth towards digital media in Hafr Al-Batin Governorate, Saudi Arabia. Al-Subaie, 2019), and the impact of new media on methods of social practice (Lamtaei, 2019).

**Foreign Studies focused on** The relationship between the need to belong, fear of ostracism and the use of social media (Perna,
social media and social adaptation (Fowler, 2020), the test of credibility in the use of social media (Yuen, 2019), and the use of social media by students Universities and teachers (Huang, 2018).

As for the objectives, Arab studies focused on To identify the impact of fake news in the new media on university youth and its relationship to their behavior (Maree, 2022), and identifying the extent to which the media elite understand and assimilate the concepts of new media ethics and their attitudes towards it (Al-Subhi, 2021), and to identify the attitudes of university youth towards digital media (Al-Sab’i, 2019), and a study of the reality of the social practice of young traders on social networking sites (Lamtaei, 2019).

When foreign studies focused on The use of social media as predictors of emotional and behavioral interactions in ambiguous social situations (Perna, 2020), and to identify whether the social adaptation of students of the learning community was affected by the use of social media within their learning community (Fowler, 2020), and to identify the motivations of individuals to use social media Social (Yuen, 2019), and the impact of social media use on behavior (Huang, 2018).

As for the method, tools, and sample, Arab studies focused on The descriptive approach using the electronic questionnaire tool on a sample of (400) individuals from the youth of the universities of Kafr El-Sheikh and 6 October (Maree, 2022), and the study (Al-Subhi, 2021) relied on the descriptive approach using the questionnaire tool on a sample of (292) from the elite media, and used Study (Al-Subaie, 2019) the survey method, and the questionnaire tool on a random sample of (211) male and female students, and the study (Lamta’i, 2019) relied on the intentional sample by choosing certain vocabulary, which is the educated segment of the pioneers of these sites, and accordingly (50) were distributed A form on some of the pioneers of social networking sites.

When foreign studies relied on The approach is quasi-experimental, two groups of learning community students were used (Fowler, 2020), and online survey data were collected from (157) university students who use social media using the Need for
Affiliation Scale, the Social Media Time Use Scale, and the Rejection Scenarios Questionnaire (Perna, 2020). The study (Yuen, 2019) relied on the descriptive approach, and the questionnaire tool was used on a sample of (212) students aged (18-25) that included measures of psychological well-being and the need for belonging and the use of social media, and the correlations were tested using the structural equation model in a manner Hierarchical, and the study (Huang, 2018) is one of the descriptive studies that used the sample survey method. The study used the questionnaire tool on a sample of (197) university students and (54) full-time students from the Universities of Science and Technology in China.

The results of Arab studies indicated The percentage of (33.7%) of the sample members were able to distinguish between fake news and true news in new media, and the study revealed a strong inverse relationship between the degree of knowledge of university youth about fake news presented in new media and the degree to which it affects their behavior and how they deal with it. (Marei, 2022), and the study (Al-Subhi, 2021) concluded that most of the media elite support the media professionals’ commitment to signing a professional code of honour, and the study (Al-Subai’i, 2019) There were no statistically significant differences in the attitudes of the sample members to the variables of gender and specialization, while the differences were in the variable of the school year towards the fourth year students, and a study (Lamta’i, 2019) concluded that most of the respondents considered that the traditional social practice methods were more interconnected without these means. It made its users live more in virtual reality than in real life.

When the results of foreign studies indicated that Students’ use of social media with their colleagues and faculty do not reduce social adaptation. In addition, there were no differences in a social adaptation based on active, interactive or responsive social media use (Perna, 2020), and a study (Yuen, 2019) found that There is a positive correlation between psychological well-being and online credibility, and the use of social media is positively associated with companionship motivation and socialization motivation. The study (Huang, 2018) found that the average expected
performance, expected effort, social influence, facilitating conditions, motivation and habitual practice significantly affected the intention to use social media. Social media, and that the intent to use social media significantly affected the behavior of social media use.

**Finally, the researcher benefited from these studies in:**
- **Identifying the research problem and determining its variables:** through careful reading of previous studies and reading the results and multiple recommendations, thus identifying what has been studied and what has not been studied, helped the researcher in accurately identifying the current research problem.

- **Making sure of the importance of the current research:** by reading the previous studies, it was identified what the scientific heritage needs and the importance of having a study to know the awareness of digital privacy among users of new media.

- **Formulation of objectives, questions and hypotheses for the current research:** After reading the previous studies and verifying their objectives and hypotheses, the researcher made sure that the current research needed other objectives that had not been addressed before.

- **Selecting the appropriate approach and sample for the current research:** Through previous studies, the researcher was able to identify the method used in the current research, which belongs to the descriptive studies, and the researcher also concluded that university students will be the best sample in achieving the objectives of the current research.

- **Deciding on the tools that the researcher will use to measure hypotheses and answer questions:** By reviewing previous studies, the researcher found that most of the studies used the questionnaire and interview tools and multiple measures, and therefore the researcher chose the appropriate research tool.

- **Enriching the theoretical side through the studies included in topics related to the research topic.**

**Significance of the Research**

The importance of the current research lies in the theoretical and practical aspects, as follows:
The theoretical significance of the research:
1- This research derives its importance from the importance of the study sample, who are university students.
2- This research gains its importance from the fact that the violation of digital privacy harms many users of new media and modern technologies.
3- The study contributes to providing a list of concepts and skills to protect digital privacy.

The practical significance of the research:
1- The results of the research indicate that youth welfare agencies need to educate young people about the dangers of violating digital privacy and how to protect their personal data.
2- The results of the research benefit the users of new media in raising awareness of the methods of penetrating digital privacy.
3- The results of the research indicate the concerned authorities draw their attention to the necessity of activating laws and legislation that contribute to limiting the violation of digital privacy on new media.

Aims of the research
The research aims to achieve the following main objective:
Identify awareness of digital privacy among users of new media.

The following is derived from this objective:
1- Understand the concept of digital privacy.
2- To identify the extent of awareness of digital privacy among the research sample.
3- Motivating students to identify their role in violating their digital privacy.
4- Gain the ability to protect personal data from the dangers of modern techniques of communication
5- Dealing with caution with the content that is circulated by the new media.

Questions Of the Research
The main question:
Is the level of awareness of digital privacy different from the hypothetical average of the research sample?
It has 3 questions as follows:
1- Does the level of the cognitive aspect of awareness of digital privacy in the research sample differ from the hypothetical average?
2- Does the level of the emotional side of awareness of digital privacy differ in the research sample from the hypothetical average?
3- Does the level of the skill aspect of awareness of digital privacy differ in the research sample from the hypothetical average?

**Hypothesis Of the Research**
1- There is a statistically significant difference at the level of ≤ (0.05) among the average scores of the research sample students in the level of awareness of digital privacy in its three dimensions due to the gender variable.
2- There is a statistically significant difference at the level of ≤ (0.05) among the average scores of the research sample students in the level of awareness of digital privacy in its three dimensions due to the variable of residence.
3- There is a statistically significant difference at the level of ≤ (0.05) between the average scores of the research sample students in the level of awareness of digital privacy in its three dimensions due to the university variable.

**Method:** The current research relied on the media survey method, which aims to collect data from a large number of cases to diagnose their conditions or certain aspects of those situations.

**Tools Of the Research:** The researcher used the following data collection tools (cognitive structure test - digital privacy awareness scale - digital privacy attitude test) to collect data from the current research sample.

**Research population and sample**

**Research population:** The research community consists of the Minia university and Cairo university..

**Research sample:** The researcher selected a deliberate sample of new media users, consisting of (90) male and female students from Minia university and Cairo university.
Procedural Definitions:

Digital Privacy: The Researcher knows the right of the individual to control the information and data that belong to him through the new media, as well as the right of the individual to control the timing of sharing that data and information with other and not informing them of this privacy without his knowledge or permission.

New Media: The Researcher defines them as digital media that is carried out through electronic methods, and is based on the idea of merging both traditional media and the internet, and it is characterized by several characteristics, including: interactive, global, instantaneous, flexible and diversity.

Research results and explanations

Table (1) Description of the research sample

<table>
<thead>
<tr>
<th>Variable/Number</th>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>male</td>
<td>52</td>
<td>57.78</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>38</td>
<td>42.22</td>
</tr>
<tr>
<td>Residence</td>
<td>Urban</td>
<td>44</td>
<td>48.89</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>46</td>
<td>51.11</td>
</tr>
<tr>
<td>University</td>
<td>Minia</td>
<td>59</td>
<td>65.56</td>
</tr>
<tr>
<td></td>
<td>Cairo</td>
<td>31</td>
<td>34.44</td>
</tr>
</tbody>
</table>

It is clear from the sample description table that the total number of males is (52); While the number of females was (38), and according to the variable of residence, the total number of rural people was (46); While the number of urban (44), and according to the variable of the university was Minya University (59); but Cairo University (31).

Questions Of the Research

The main question: Is the level of awareness of digital privacy in the research sample different from the hypothetical average?

It has 3 questions as the following:

1- Does the level of the cognitive aspect of awareness of digital privacy in the research sample differ from the hypothetical average?
The researcher calculated the descriptive statistics (mean calculation and standard deviation) in the cognitive aspect, and compared the actual mean with a test value (hypothesis mean) of (30 marks), which is equivalent to (50%) of the total score for the cognitive aspect of digital privacy awareness, and the t-test was calculated for one group One-sample T- Test, and the results are in Table (2).

### Table (2) T-test results for comparing the mean of the research groups and the test value, the hypothetical mean

<table>
<thead>
<tr>
<th>Variable</th>
<th>Actual Average</th>
<th>Standard Deviation</th>
<th>Hypothetical Mean</th>
<th>T Value</th>
<th>Indication Level</th>
<th>Indication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cognitive aspect of awareness of digital privacy</td>
<td>29.24</td>
<td>8.85</td>
<td>30</td>
<td>0.810</td>
<td>0.420</td>
<td>Not Statistically Significant</td>
</tr>
</tbody>
</table>

It is clear from the results of the previous table that there are no statistically significant differences at the level (0.05) among the members of the research sample in the level of the knowledge side of the sample, which was slightly less than the test value (hypothesis mean), which is (30 marks), which is equivalent to (50%) of the total degree of the cognitive aspect of digital privacy awareness, which indicates that there is an average level of the cognitive aspect of the sample.

2- Does the level of the emotional side of awareness of digital privacy differ in the research sample from the hypothetical average?

The researcher calculated descriptive statistics (mean calculation and standard deviation) on the emotional side, and compared the actual mean with a test value (hypothetical mean) of (median degree "2" * the number of phrases "20" = 40 marks), which is equivalent to (66.67%) of the total score of the affective aspect of awareness of digital privacy, and the one-sample T Test was calculated, and the results are in Table (3).
Table (3) results of the t-test for comparing the mean of the research groups and the test value, the hypothetical mean

<table>
<thead>
<tr>
<th>Variable</th>
<th>Actual Average</th>
<th>Standard Deviation</th>
<th>Hypothetical Mean</th>
<th>T Value</th>
<th>Indication Level</th>
<th>Indication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>The emotional side of awareness of digital privacy</td>
<td>41.81</td>
<td>2.61</td>
<td>40</td>
<td>6.575</td>
<td>0.000</td>
<td>Statistically Significant</td>
</tr>
</tbody>
</table>

It is clear from the results of the previous table that there are statistically significant differences at the level (0.05) among the members of the research sample in the level of the emotional side of the sample, which was slightly greater than the test value (hypothetical average) which amounted to (40 marks), which equals (66 , 67%) of the total score of the emotional aspect of awareness of digital privacy, which indicates a slight increase in the level of the emotional aspect of the sample.

3- Does the level of the skill side of awareness of digital privacy differ in the research sample from the hypothetical average?

The researcher calculated the descriptive statistics (mean calculation and standard deviation) on the skill side, and compared the actual mean of it (median degree "2.5" * the number of phrases "12" = 30 marks), which is equivalent to (50%) of the total degree of the skill side of privacy awareness. The one-sample T Test was calculated, and the results are in Table (4).

Table (4) T-test results to compare the mean of the research groups and the test value, the hypothetical mean

<table>
<thead>
<tr>
<th>Variable</th>
<th>Actual Average</th>
<th>Standard Deviation</th>
<th>Hypothetical Mean</th>
<th>T Value</th>
<th>Indication Level</th>
<th>Indication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>The skill side of awareness of digital privacy</td>
<td>19.62</td>
<td>6.56</td>
<td>30</td>
<td>14.998</td>
<td>0.000</td>
<td>Statistically Significant</td>
</tr>
</tbody>
</table>

It is clear from the results of the previous table that there are statistically significant differences at the level (0.05) among the members of the research sample in the level of the skill side of the
sample, as it was much less than the test value (hypothetical average) of (30 marks), which is equivalent to (50%) of the total score of the skill aspect of digital privacy awareness, which indicates a low level of the skill aspect.

**Hypothesis Of the Research**

The first hypothesis: Presentation, analysis and interpretation of the results of the first hypothesis

The first hypothesis states that "there is a statistically significant difference at the level of ≤ (0.05) between the mean scores of the research sample students in the level of awareness of digital privacy in its three dimensions due to the gender variable".

**The results of the differences according to the variable type:**

The Independent Sample T-Test was used to clarify the significance of the differences in the level of awareness of digital privacy in its three dimensions in the research sample according to the difference in the gender variable, and the results came as shown in the following table:

<table>
<thead>
<tr>
<th>The Dimension</th>
<th>type</th>
<th>SMA</th>
<th>Standard Deviation</th>
<th>T Value</th>
<th>Indication Level</th>
<th>Indication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Side</td>
<td>Male=52</td>
<td>28.33</td>
<td>8.62</td>
<td>2.358</td>
<td>0.021</td>
<td>Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Female=38</td>
<td>32.89</td>
<td>9.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skill Side</td>
<td>Male=52</td>
<td>21.96</td>
<td>21.96</td>
<td>2.924</td>
<td>0.004</td>
<td>Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Female=38</td>
<td>17.79</td>
<td>7.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Side</td>
<td>Male=52</td>
<td>41.85</td>
<td>3.04</td>
<td>0.174</td>
<td>0.862</td>
<td>Not Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Female=38</td>
<td>41.95</td>
<td>2.22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from the results of the previous table that there are statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the gender variable in the level of the cognitive aspect towards the larger average (females), and the presence of statistically significant differences at the level of ≤ (0.05) among the members of the research sample. It is attributed to the gender variable in the level of the skill side.
towards the larger mean (males), while there were no statistically significant differences at the level of ≤ (0.05) among the members of the research sample in the level of the emotional side of the sample due to the gender variable, and this may be due to the fact that female psychology tends more for preservation, while male psychology tends to be more understandable and practical.

The result of the first hypothesis is in agreement with the study of Hani Ibrahim Al-Samman (2022), which indicated that there are statistically significant differences due to demographic variables.

The result of the first hypothesis differs from the study of Salman bin Mutlaq Al-Subaie (2019), as there are no statistically significant differences in the trends of the sample members for the gender variable.

**The second hypothesis:**
Presentation, analysis and interpretation of the results of the second hypothesis
The second hypothesis states that "there is a statistically significant difference at the level of ≤ (0.05) between the mean scores of the research sample students in the level of awareness of digital privacy in its three dimensions due to the variable of residence".

The results of the differences according to the variable of residence:
The t-test of independent samples was used to clarify the significance of the differences in the level of awareness of digital privacy in its three dimensions in the research according to the difference in the variable of residence, and the results came as illustrated by the following table:
Table (6) independent samples t-test for the differences between the responses of the research sample members according to the difference in the housing variable

<table>
<thead>
<tr>
<th>The Dimension</th>
<th>Residence</th>
<th>SMA</th>
<th>Standard Deviation</th>
<th>T Value</th>
<th>Indication Level</th>
<th>Indication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Side</td>
<td>Urban=44</td>
<td>31.59</td>
<td>9.86</td>
<td>2.498</td>
<td>0.014</td>
<td>Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Rural=46</td>
<td>27.04</td>
<td>7.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Skill Side</td>
<td>Urban=44</td>
<td>19.41</td>
<td>7.41</td>
<td>2.061</td>
<td>0.042</td>
<td>Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Rural=46</td>
<td>22.26</td>
<td>5.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Emotional Side</td>
<td>Urban=44</td>
<td>41.77</td>
<td>2.68</td>
<td>1.246</td>
<td>0.216</td>
<td>Not Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Rural=46</td>
<td>42.52</td>
<td>3.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from the results of the previous table that there are statistically significant differences at the level of ≤ (0.05) among the research sample members due to the variable of residence in the level of the cognitive aspect towards the larger mean (urban), and the presence of statistically significant differences at the level of ≤ (0.05) among the sample members The research is attributed to the variable of residence in the level of the skill side towards the larger average (rural), while there were no statistically significant differences at the level of ≤ (0.05) among the members of the research sample in the level of the emotional side of the sample due to the variable of residence, This may be because the urbanites believe that nothing affects their reputation as it does in the countryside; They believe that they have a space of freedom available to them compared to the countryside; Thus, they do not care much about the practical side of how to protect their digital privacy, and deal with it without restriction, unlike the countryside.

The result of the second hypothesis differs with the study of Matthew Voigts (2020), which showed that students in general, whether rural or urban, lack a lot of information and knowledge related to general controls and rules in their dealings with new media, which are related to digital privacy.
The third hypothesis:
Presentation, analysis and interpretation of the results for the third hypothesis
The third hypothesis states that "there is a statistically significant difference at the level of ≤ (0.05) between the mean scores of the research sample students in the level of awareness of digital privacy in its three dimensions due to the university variable".

The results of the differences according to the variable of the university:
The t-test of independent samples was used to clarify the significance of the differences in the level of awareness of digital privacy in its three dimensions among the research sample according to the difference in the university variable, and the results came as illustrated by the following table:

Table (7) independent samples t-test for the differences between the responses of the research sample members according to the difference of the university variable

<table>
<thead>
<tr>
<th>The Dimension</th>
<th>The University</th>
<th>SMA</th>
<th>Standard Deviation</th>
<th>T Value</th>
<th>Indication Level</th>
<th>Indication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Side</td>
<td>Minya=59</td>
<td>31.59</td>
<td>9.86</td>
<td>2.892</td>
<td>0.005</td>
<td>Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Cairo=31</td>
<td>27.04</td>
<td>7.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skill Side</td>
<td>Minya=59</td>
<td>19.41</td>
<td>7.41</td>
<td>2.519</td>
<td>0.014</td>
<td>Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Cairo=31</td>
<td>22.26</td>
<td>5.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Side</td>
<td>Minya=59</td>
<td>41.77</td>
<td>2.68</td>
<td>0.191</td>
<td>0.849</td>
<td>Not Statistically Significant</td>
</tr>
<tr>
<td></td>
<td>Cairo=31</td>
<td>42.52</td>
<td>3.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from the results of the previous table that there are statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the university variable in the level of the cognitive aspect towards the larger mean (Minya University), and the presence of statistically significant differences at the level of ≤ (0.05) among the sample members The research is attributed to the university variable in the level of the skill side towards the larger average (Cairo University), while there were no statistically significant differences at the level ≤ (0.05) among the members of the research sample in the level of
the emotional side of the sample due to the university variable. This may be due to the fact that the urban development in all areas of life has led to the practical application of everything related to the protection of their privacy and digital data, and there has become a love of acquaintance and practical knowledge of these means and applications, while the countryside still has some shortcomings in the availability of services that may hinder the application Practical and skilled to protect their digital privacy.

**General results and discussion:**
1- There are no statistically significant differences at the level (0.05) among the members of the research sample in the level of the cognitive aspect of the sample, which was slightly less than the test value (Hypothetical average), which is (30 marks), which is equivalent to (50%) of the total degree of the cognitive aspect of awareness of digital privacy, which indicates that there is an average level of the cognitive aspect of the sample.

2- There are statistically significant differences at the level of (0.05) among the members of the research sample in the level of the emotional side of the sample, which was slightly greater than the test value (hypothesis mean) which amounted to (40 marks), which is equivalent to (66.67%). the total score of the affective aspect of awareness of digital privacy, indicates a slight increase in the level of the affective aspect of the sample.

3- There are statistically significant differences at the level (0.05) among the members of the research sample in the skill level of the sample, which was much less than the test value (the hypothetical average) of (30 marks), which is equivalent to (50%) of the degree. The total skill aspect of digital privacy awareness, which indicates a low level of the skill aspect.

4- There are statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the gender variable in the level of the cognitive aspect towards the larger mean (females), and the presence of statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the gender variable in The level of the skill side towards the larger mean (males), while there were no statistically significant differences at the level of ≤ (0.05) among
the members of the research sample in the level of the emotional side of the sample due to the gender variable.

5- There are statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the variable of residence in the level of the cognitive aspect towards the larger mean (urban), and the presence of statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the variable of location. Residence at the level of the skill side towards the larger average (rural), while there were no statistically significant differences at the level of ≤ (0.05) among the members of the research sample in the level of the emotional side of the sample due to the variable of residence.

6- There are statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the university variable in the level of the cognitive aspect towards the larger mean (Minya University), and the presence of statistically significant differences at the level of ≤ (0.05) among the members of the research sample due to the university variable. At the level of the skill side towards the larger mean (Cairo University), there were no statistically significant differences at the level of ≤ (0.05) among the members of the research sample in the level of the emotional side of the sample due to the university variable.

**Recommendations**

1- The need to intensify awareness programs and campaigns for digital privacy in the new and traditional media, and to show its danger among all segments of society.

2- Providing and making available more security programs and applications that help protect digital privacy.

3- The need for competent authorities on information security and telecommunications companies to hold seminars and intensive courses to educate new media users about the violation of digital privacy.

4- Announcing the penalties that have been implemented against violators of digital privacy at the level of all media, whether new or old.
Resources and references:
First: Arabic references

A - books.

B- Published scientific research


C- Conferences and seminars

D- Master's and PhD theses

Second: Foreign references
A - books
b- Articles published in scientific journals

C-Masters and PhD theses
26-Voigts, Matthew (2020). Digital Privacy and Personal, Social and Civic Agency: Refugees' Experiences.PHD. The University of Nottingham(United Kingdom)-England
30- Yuen. C. Nathalie (2019). An Examination of Authenticity in Social Media Use. PHD. University of Nebraska at Omaha, Nebraska- United States.