

Survey of Personal Information Management base on Electronic Information

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Article Info	Abstract
<p>Original Article</p> <p>Main Object: Computer Science & Technology</p> <p>Received: 29 October 2024 Revised: 05 November 2024 Accepted: 27 December 2024 Published online: 01 January 2025</p> <p>Keywords: electronic information, information management, information science and knowledge, personal information management.</p>	<p>Background: The rapid growth of computer technology in recent decades suggests that people today, in addition to print media, have many electronic information items that need to be managed appropriately and have increased the use of personal computers.</p> <p>Aims: This Researches descriptive and analytical based on the purpose of applied Research, and in terms of data collection and nature and comparison between the activities of personal information management and two measures of knowledge and skills has been presented.</p> <p>Methodology: The statistical population includes the students of Jundishapur University of Medical Sciences in Ahvaz in the academic year 2017-2018. To determine the statistical population, the sampling method was used by determining the total number of students 1300 and using the Karjesi-Morgan table, the approximate number of the sample was determined to be 297. The data collection was done using the questionnaire of 2012 and in order to analyze Pearson and Spearman correlation tests and AMOS and SPSS software were used.</p> <p>Results: The results of the survey show that knowledge and skill variables have a significant and positive effect on personal information management, and age, level of education, and school of study have a significant and positive effect on personal information management.</p> <p>Conclusions: The results of the research show that the status of personal information management of medical students in Jundishapur Ahvaz has a positive and meaningful effect based on the knowledge and skills of the students. According to the changes made in the management of personal information activities, it can be said that the difference in the amount and amount created in the variables of personal information management can be seen. The main reasons for this can include not having enough time, work pressures and lack of familiarity with the activities required for personal information management.</p>

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1. Introduction

The rapid growth of computer technology in recent decades suggests that people today, in addition to print media, have many electronic information items that need to be managed appropriately and have increased the use of personal computers. People are faced with a wide range of electronic objects that are stacked daily, and it is complicated to retrieve and use them, increasing volume of information. On the one hand, the increasing volume of information produced in the world and on the other hand Heterogeneous types of information have created a lot of confusion for information users and this problem is becoming more and more complexes and challenging (Jones, 2010).

Personal information management is a term that refers to both the process and the study of activities that an individual use to create, provide, store, organize, retrieve, and use information in their personal collections to obtain the information they need to meet specific needs and goals and find the right time. From the beginning of the decade and with the height of excitement caused by the potential capabilities of personal computers in promoting human capabilities in information processing and management, the term personal information management was used for the first time (Lansdale, 1988).

Personal information management can be defined by the ordering and arranging information through classification, placement, and performance in specific ways that make it easier to retrieve information when needed (Bellotti et al., 2022).

According to Jones (2008), personal information management is a set of procedures and activities that individuals serve to prepare, organize, maintain, retrieve, and use the different information items they perform daily to perform various work and non-work tasks in a variety of roles.

Different definitions for personal information management are defined by the steps in describing, collecting, storing, organizing, and retrieving digital options (such as emails, files, contacts, and bookmarks, etc.) by an individual in a personal computing environment (Henderson, 2009).

Bellotti et al. (2022) consider personal information management to be the organization of information by categorizing, locating, or arranging information so that it is easier to retrieve when needed.

Therefore, to be able to use their personal information efficiently and effectively, people need to use a set of activities called personal information management that can control the entry and exit of information to turn scattered and random pieces of information into something usable which can be used on-site and when needed. Therefore, it is necessary for non-individuals always to seek their personal information management processes (Kokabi et al., 2015).

In this study, activities the Jones' model (2008) have been examined, including finding and rediscovering, storage, organizing, maintenance,

security, valuation, planning and conceptualization. The present study tries to investigate the status of electronic personal information management of students of Ahvaz Jundishapur University of Medical Sciences by using Jones' model, which includes seven activities; and to examine the relationship between students in terms of age, level of education and the faculty of the place of study to eliminate the gaps and problems between the faculties and provide a basis for solving these problems. This article examines the management of PIM personal information among students using the Jones' model to evaluate key activities such as finding, storing, organizing and securing information, and studying an important issue in the field of increasing information load.

The purpose of this research is to investigate the level of students' awareness and personal information management capabilities in order to achieve appropriate levels of personal information management among students.

According to the mentioned cases, the problem of the current research is how personal information management is able to apply its theoretical and methodological contribution to the community of medical students, considering the difference in the production of information in the field of medical sciences and other sciences. If the method of applying personal information management among medical students does not have a smooth and complete process, it will have significant consequences in terms of the way information is organized, and ultimately, the promotion and growth of information will be harmed.

Another purpose of conducting this research is to respond to the role that this research can have in the personal electronic information management status of students at Jundishapur University of Medical Sciences, Ahvaz, and how the research can contribute to the advancement of the field of personal information management in this university. In general, it should be mentioned that the management of personal information can play an effective role in the management of students' educational and research issues, and the optimal use of personal information can be in line with the achievement of students' goals.

2. Literature review

2.1. Studies that have been done using the Jones' model (2008)

Heleen and Jatinder (2002) investigated Personal Information Management Systems (PIMS) seek to empower users by equipping them with mechanisms for mediating, monitoring and controlling how their data is accessed, used, or shared.

Rahimi et al. (2022) have made us as a society think more about cyber security and privacy, particularly and how we consider and protect personal information. Such developments have introduced a

temporal dimension to the definition of personal information and we have also witnessed new types of data emerging (e.g., phone sensor data, stress level measurements). These rapid technological changes introduce several challenges as legislation is often inadequate, and therefore questions regularly arise pertaining whether information should be considered personal or sensitive and thereby better protected.

Alen (2008) investigated the performance of scholars in the Department of Education and Health Sciences in a higher education institution in Kuwait. The findings indicated that the researchers are related to the research. The collection of personal information was supplemented with new information during the research: The collections they were huge, diverse, mixed and fragmented. The key factors in these problems were research pressures, limited time, quality of available space, lack of technology.

Yuan and Denise (2019) examined attitudes toward PIM among research scholars in faculties of applied sciences at the University of Kerala. Respondents reported problems when updating information, but had above-average skills in information retrieval and retention.

Soleymani et al. (2013) surveyed faculty members taking online courses as part of the Web-based Information Science Education (WISE) Consortium, participants managed information using email, desktop computers, web-based information systems, and learning management systems while information overload is usually a major issue, the main problem being the experience during information management in this case was "filter failure".

Zavaraghi, and Safaei (2012) studied the PIM activities performed by faculty members in three universities in Iran, focusing on four aspects, namely: acquisition, maintenance, organization, and recovery. The findings showed that 75% of the participants used PIM tools. They mostly preferred desktop computers.

Admozandeh et al. (2014) is one of the people who has studied the structure and definition of personal information management and in comparison with the three processes of entering, storing and retrieving information that exist in the traditional view. They considered the issue of personal information management deeply. As Bellotti et al. (2022) state, the activities that exist in Jones' personal information management process are trying to solve the permanent gap between the need for information and the information itself, so that the information always moves towards the need for information.

Whitaker (2012) investigated the use of bookmarks in the personal space of the web. According to the results, these environments are polluted due to the abundance and low quality of information, and the user due to the lack of a unified structure of having an environment and deprived overview has led to the forgetting of information, which has been solved by managing personal information, by creating a small archive of information to prevent information overflow, and by

selecting information items and selecting sources to prevent contamination, and by maintaining and organizing. The non-integrated nature of information has been reduced. It causes the dispersion of information and confuses the user.

2.2. Studies that investigated the management of personal information in electronic devices

Yoo and Hong (2011) investigated the management of personal information related to personal health. The method of data collection was interview. Participants were selected along with their photos sent electronically to document their behavior. The purpose of this research was how tracking technology as an emerging technology affects personal information management as a subset of information behavior. Management activity tracker personal information in this research is wristband, smart watch, and smart phone. The results showed that the tracking technology is a high-level tool that helps activity tracker users to meet their personal needs by providing information about their daily physical activities. Yoo and Hong investigated the role of personal information management motivation, the relationship between personal information management motivation and different types of knowledge system commitment in the organization. This study examines the characteristics of personal information management motivation, specifically, the stimulation of transparency and formality in users' commitment to knowledge systems. The results of the survey of 78 accounting experts show that information formalities have the greatest impact on the commitment of users' knowledge system to the leading and transparency of information.

Valizadeh (2011) investigated the use of mobile phone personal information (their contact list) (PIMA). The results of the prototype showed that PIMA has improved ease of use and efficiency in mobile devices. He suggested that to improve mobile PIM through a natural language interface, the integration of the designed program should be supported, which has the ability to overcome physical limitations.

At the end of the research literature review, it is necessary to examine the existing knowledge gap according to the existing literature. The activities that exist in Jones's personal information management process are trying to solve the permanent gap between the need and the information in such a way that the information always moves towards the information need. On the one hand, the production and increase of excessive information, on the other hand, the emergence of the World Wide Web has caused a challenge called information overflow, all of which provide many research fields for finding solutions to control and manage personal information. Therefore, it can be expected that the success in managing personal electronic information of Jundishaparahovaz University students will lead to the success of information management in this university and to its scientific growth,

as well as to closing the gap between the need for information and the existence of information (the information itself), which is due to the volume of information collections. By examining the way information is used, we can find out the existing gaps in the field of technology and areas for the promotion and growth of personal information management.

3. Methods

The present research, is considered to be applied research, and in terms of the method of data collection and its nature, it is descriptive and analytical. The research community includes all students of Jundishapur University of Medical Sciences, Ahvaz. The research community was made up of students who are studying postgraduate studies, including master's degree, specialized doctorate and professional doctorate. Finally, a questionnaire was prepared by examining the data set and content with three indicators of knowledge, skill and personal information management. In order to confirm the validity of the questionnaire, the validity of its content and appearance was confirmed by the professors, then a questionnaire was validated by determining the total number of students of 1300 and using the Kerjci Morgan table. An approximate number of 297 students were included to express their opinions in the form of a spectrum (Likert: very high, high, medium, low, very low). The distribution of the questionnaire was done in person, and if they chose the option very high, high, medium, low, very low 1-5 points should be considered for it, respectively. The main source of which is taken from Kokabi et al. (2015) and Admozandehe et al. (2014), which has been used in the development of the current questionnaire due to its generality and comprehensiveness.

By considering research questionnaire level, age, and the faculty with a 66-scale plan, the seven components of electronic personal information management of the Jones' model were examined.

Sampling technique using the questionnaire of 2012 include 38 questions. The reliability coefficient calculated for the questionnaire is equal to 0.9. Implementation method 297 students were selected from Jundishapur University of Medical Sciences in Ahvaz. The validation of the questionnaires was approved by the supervisor, which creates the generalizability and reliability of the findings.

Jones (2008) examines the issue of personal information management more deeply than the aforementioned researchers. It is more comprehensive than other models.

The method of data analysis and hypothesis testing is structural equation modeling using AMOS software to determine the sample size since the community is limited. Access to the complete list of people in the community is possible according to the formula of the Krjci Morgan table with the level of confidence. The sample size of 0.95 was estimated to be 298 people. In this study, the accessible qualitative

sampling method of the questionnaire was used for sampling due to the limited population. In this way, using the method of proportional distribution, the statistical population consisting of students of Jundishapur University of Medical Sciences in Ahvaz province was divided into the respective faculties, and sampling was done from each faculty according to the distribution of the questionnaires. In this research, library studies and internet searches were used to complete the literature and studies, and information was collected using a questionnaire in the field studies section. In order to check the validity of the questionnaire constructs, it was evaluated and confirmed by the experts. To measure the reliability of the research questionnaire, the most common questionnaire evaluation method, Cornbrash's alpha coefficient, was used. Cornbrash's alpha coefficient for all variables is 0.7 with later.

Table 1. Reliability calculation of personal information management components

Rresearch variables	Cornbrash's alpha
Finding	0.71
Storage	0.72
Organization	0.72
Evaluation and valuation	0.74
The whole questionnaire	0.90

The reliability coefficient of the entire questionnaire was equal to 90, which is accepted as a reliability coefficient. It should be noted that in the finding and organizing component, 2 questions were removed to obtain Cornbrash's alpha. In fact, this research determines the level of electronic information management activities of Jundishapur Ahvaz University of Medical Sciences students by following the Jones' model. Because the Jones' model has considered a comprehensive classification of electronic personal information management activities in each of the stages of personal information management, it is concluded that this review identifies the problems that students face in managing their personal information and at the same time they are paid now, recognizing weaknesses and taking action to strengthen them.

3.1. Research hypotheses

The purpose of this study is to investigate the status of electronic personal information management of Ahvaz Jundishapur medical students with emphasis on Jones' model (2008):

1. Finding and re-finding has a significant and positive effect on personal information management.
2. Storage it has a significant and positive effect on personal information management.
3. Organization it has a significant and positive effect on personal

information management.

4. Maintaining it has a positive and significant effect on personal information management.

3.2. Conceptual model of research

Therefore, according to the investigations and theoretical literature review, the research conceptual model based on the latest integrated theory of personal information management in 2008 is presented in Figure 1.

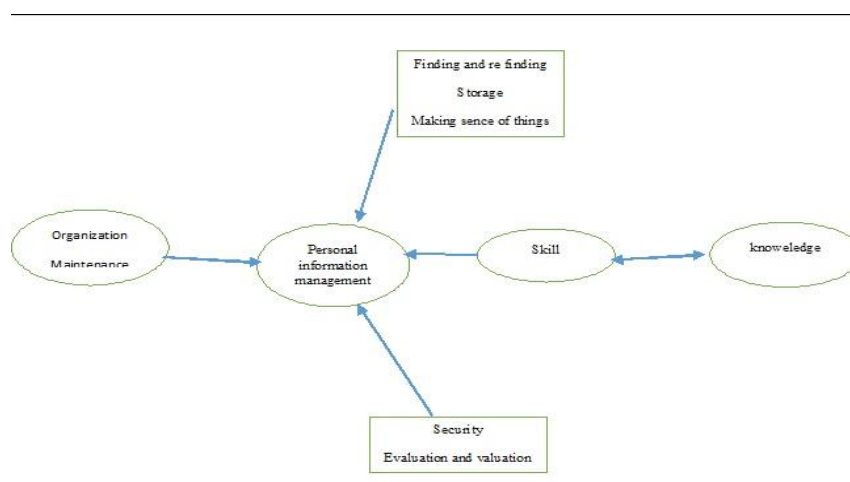


Figure 1. Conceptual model of research

4. Findings

Analysis descriptive statistic. To analyze the data and answer the research questions, the demographic characteristics of the studied community will be described in terms of educational level, age, and the faculty of the place of study.

Age. The age range of the respondents is projected in four categories. The highest frequency is related. To the age group less than 25 years, which is 54%, and the lowest frequency is associated with the age group over 35 years, which is 1%.

Degree. Degrees include two levels of master's degree, and doctorate, the most respondents are 52 masters and 245 doctorates, respectively.

School of study. Respondents are students of Ahvaz Jundishapur medical schools. The highest number of respondents from medical school was 161 and the lowest number of respondents from paramedical school was 15.

In the present study, personal electronic information management includes seven activities of personal information management (2008).

Table 2. Descriptive data of age, degree, and faculty frequency percentage of frequency

Age	> 25 years	162	54%
	25-30 years	90	30%
	30-35 years	40	13%
	≤35 years	5	1%
	Total	297	99%
Degree	Master	52	17%
	PhD	245	82%
	Total	297	99%
School of Paramedical Education	Medicine	161	54%
	Paramedical	15	5%
	Health	17	5%
	Nursing and Midwifery	22	7%
	Rehabilitation	16	5%
	Pharmacy	43	14%
	Dentistry	23	7%
	Total	297	99%

Table 3. The descriptive information of each of the activities of personal electronic information management of students

Activity	Average	Standard deviation
Find and rediscover	2.66	0.84
Storage	3	3.59
Organizing	2.75	4.03
Maintenance	2.401	5.55
Personal electronic information management	2.50	5.48

This section examines the responses of the research community to each of the seven components of Jones' personal information management (2008).

To assess the status of the personal electronic information storage component of students of Ahvaz Jundishapur University of Medical Sciences, the average of each item has been calculated.

Table 4 shows that all items of this component are in relatively good condition, and the surveyed students can store their personal electronic information well.

Table 4. Status of, "Find and Rediscover", "Storage", Organize" components of personal electronic information

Component	Frequency	Percentage frequency	Mean	Standard deviation
Find and Retrieve	295	98	2.66	4.08
Storage	292	97	3	3.59
Organization	292	97	2.75	4.03

According to Table 3, the average of the most questions of the information retention component is higher than 2, the questions of the

security component and information management component is an average of 2.36 (security).

Table 5. Status of the "Maintenance" and "Security and Management of Information Flow" components of personal electronic information

Component	Frequency	Percentage frequency	Mean	Standard deviation
Retention	294	98	2.401	5.55

If the collected data has a normal distribution, parametric tests can be used, otherwise, we are only allowed to use non-parametric tests. The standard error can be used as a test of normality if it is smaller than -2 or greater than +2 which is rejected as normal (Momeni & Ghaebi, 2016). The results of the data normality test are given in Table 6.

Table 6. Results of data normality test results

Research variables	T	Significance level	Mean	Interval estimate of the mean low range/ high range	Variable state
Finding and re-finding	30.634	0.000	4.0299	0.9635	1.0964
Storage	25.387	0.000	4.0122	0.9354	1.0889
Organization	15.267	0.000	3.6597	0.5762	0/7433
Maintenance	16.345	0.000	3.7187	0.6341	0.8034

According to Table 7, for all the standard error variables, the distribution of the research data is normal and the parametric test will be used for the statistical test.

Table 7. Data normality test: Kolmogorof-Smirnof test results

Indicator	sig	z
Personal information management	0.072	2.502
The dispersion is not significant and the data is normal	Criterion	

Considering that the normality of the data was obtained after performing the Kolomorof Smirnoff test, we use parametric tests. Considering that the significance level of the test is higher than 0.05, the claim that the questionnaire questions are normal is accepted.

Table 8. Spearman correlation coefficient test for managing personal electronic information in terms of variables (degree)

	Spearman Sig correlation coefficient	At a significance level of 0.05
Degree (PIM)	0.42	0.0001

The reason for using the correlation test is that considering that the relationship between the education level, age and the faculty of the place of study was measured by personal information management, this test is used to investigate the relationship according to statistical topics. Correlation coefficient is an index to check the intensity and direction between variables. The being positive and negative indicates the direction between the variables and the closer the absolute value of this number is to 1, the greater the intensity.

According to the information obtained from the Spearman correlation test, the value is equal to 0.42, which is much higher than 0.0001. This means that the null hypothesis (no relationship between the two variables) is rejected, and there is a correlation between the degree and the personal information management of Ahvaz Jundishapur University of Medical Sciences investigation. Data analysis shows that the average personal electronic information management for students in the age range of "less than 25 years" with a score of 162 is 40.5 and for students in the age range of "25 to 30 years" with a score of 90 is 22.5. Also, students are in the age range of "30 to 35 years" and "35 years and above" with scores of 40 and 5, averages of 10 and 1.25, respectively.

As shown in Table 9, the value is -0.50, which is much higher than 0.0001. This means that the null hypothesis (no relationship between the two variables) is rejected. Therefore, there is a negative correlation between age and personal information management of Ahvaz Jundishapur University of Medical Sciences students, which means that with increasing age range, personal information management also changes, according to the correlation coefficient of 0.50.

Table 9. Spearman correlation coefficient test for managing student's personal electronic information in terms of "age"

	Spearman Sig correlation coefficient	At a significance level of 0.05
Age PIM	0.50	0.0001

As shown in Table 10, the value of is +0.58, which is much higher than 0.0001. This means that the null hypothesis (no relationship between the two variables) is rejected. Therefore, there is a correlation between the faculty of study and personal information management of students in Ahvaz Jundishapur University of Medical Sciences. According to the correlation coefficient of +0.58, this correlation is positive.

Table 10. The results of the Spearman correlation test to examine the relationship between the school of study and personal information management

	Spearman Sig correlation coefficient	At the significant level of 0.05
School of study PIM	0.58	0.0001

As seen in Table 11, the value is equal to 0.42, which is much less than 0.0001. This means that the null hypothesis (absence of relationship between two variables) is rejected and there is a positive correlation between the level of education and personal information management of students in Jundishapur University of Medical Sciences, Ahvaz. The R-value is equal to -0.50, which is much less than 0.0001. This means that the null hypothesis (no relationship between two variables) is rejected.

Table 11. The rate of change among students in terms of degree, age and college

	Spearman Sig correlation	At the significant level of 0.05
Degree PIM	0.42	0.0001
AgePIM	Spearman Sig correlation	At the significant level of 0.05
	0.50	0.0001
PIM college local education	Spearman Sig correlation	At the significant level of 0.05
	0.58	0.0001

Will be therefore, there is a correlation between age and personal information management of Jundishapur Ahvaz University of Medical Sciences students. This means that with increasing age, the management of personal information changes. Therefore, according to the correlation coefficient of 0.50, this relationship has a negative correlation; therefore, the negative correlation indicates that there is a significant relationship between the age variable and students' personal information management. The value of is equal to 0.58, which is much less than 0.0001. This means that the null hypothesis (absence of relationship between two variables) is rejected; therefore, there is a positive correlation between the faculty of the place of study and the management of personal information of students of Jundishapur University of Medical Sciences, Ahvaz. But according to the correlation coefficient (+0.58), this correlation is positive. In this research, structural equation method has been used to investigate the effect of two variables, knowledge and skill as dependent variable and personal information management as independent variable. The conceptual model of research includes a structural model of the impact of personal information management and two measurement models (two variables of knowledge and skill). The first step in conducting this test is the conceptual model of research in the software.

By running the structural equation modeling test in the software, fit indices are provided, which show that the claimed conceptual model is partially fitted by the experimental data. Unlike conventional statistical tests, which are confirmed and rejected with one statistic, a group of indicators are introduced in the modeling of structural problems.

4.1. Hypotheses and Model testing

The validity and suitability of the model is based on the indicators presented in Table 1. The suitability indicators in Table 12 show that these indicators are in a good condition.

Table 12. Results of fit index

Index name	CMIN/DF	RMSEA	CFI	GFI
Acceptable fit	> 3	> 0.08	< 0.9	< 0.9
Calculated value	2.52	0.067	0.969	0.934

Credit and suitability are based on the indicators presented Table 13. The suitability indicators are in a good condition.

Table13. Research results

Hypotheses	Regression weight	Criterion error	Critical correct	Significance level	Confirmation / Rejection
Finding and re-finding	1.12	0.064	1.869	0.058	Rejection
Storage	0.118	0.069	1.713	0.087	Rejection
Organization	0.152	0.066	2.309	0.021	Confirm
Maintenance	0.149	0.066	2.253	0.024	Confirm

4.2. Structural model in Amos software

1. Finding and re-finding has a significant and positive effect on personal information management.
2. Storage has a significant and positive effect on personal information management.
3. Organization has a significant and positive effect on personal information management.
4. Maintaining has a positive and significant effect on personal information management.

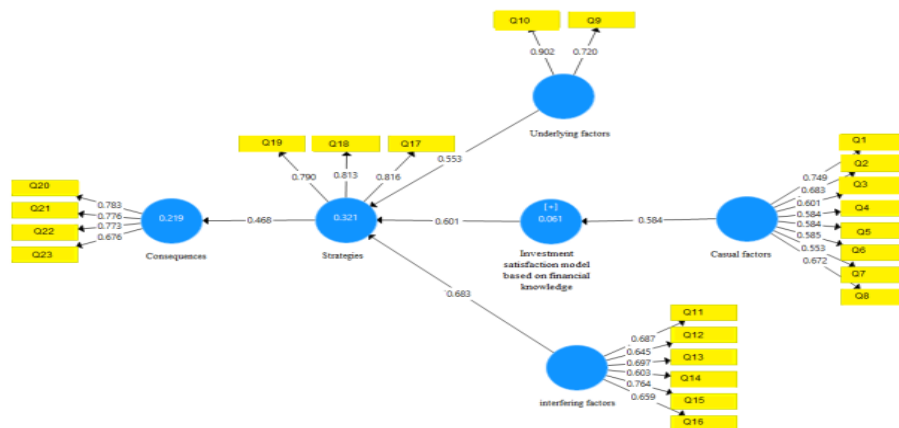


Figure 2. Factor load of the research model (external model)

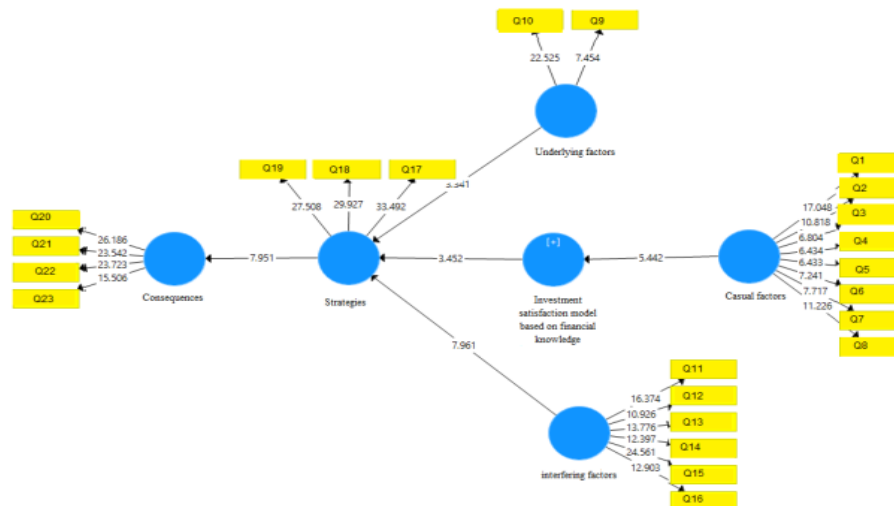


Figure 3. Statistics research model (external research model)

5. Discussion

In the current research, a set of index elements was extracted from valid questionnaires for measuring personal information management and elements that shared with the evaluation indicators of personal information management. A number of indicators were provided as the primary basis for measuring the level of personal information management of students. Considering the importance of personal information management and the problems that students face in managing their personal information and the effects that knowledge, skills and seven activities of personal information management can increase the ability of individuals to meet their information needs and optimal management in the face of massive amounts of information. Finally, to improve the performance of individuals in the correct management of the current research, a set of index elements was extracted from valid questionnaires for measuring personal information management and elements that shared with the evaluation indicators of personal information management.

The average of knowledge, skill and seven personal information management activities of the students is equal to 2.50. It indicates the relatively unfavorable limit of seven personal information management activities.

In response, the reason can be explained by the students' answers (12%) to the open question under the title of comments, which were placed at the end of the questionnaire, during which they were asked to provide suggestions in the field of personal information management, or in the notes that students wrote next to some Questions open that they

had written a questionnaire. The students decided that more than most of the elements in the questionnaire they have enough information or they have encountered such questions for the first time.

In the current research, a set of index elements was extracted from valid questionnaires for measuring personal information management and elements that shared information management evaluation indicators, and a number of indicators were provided as the primary basis for measuring the level of personal information management of students, considering the importance of personal information management and problems that students face in managing their personal information.

The effects that knowledge, skill and seven activities of personal information management can have to increase the ability of individuals to meet their information needs. Optimal management in front of the massive amount of information can ultimately improve the performance of individuals in the correct management of information sources and selecting the information they need. In this research, it was tried to investigate the status of personal information management from three aspects of knowledge, skills and seven activities of personal information management based on the Jones' model (2008).

The comparison of seven personal information management activities with their knowledge and skills shows that despite the fact that students expressed high knowledge and skills regarding personal information management, the level of their activities is on the low side. The open question under the title of comments was placed at the end of the questionnaire and during which they were asked to provide suggestions in the field of personal information management. Or mentioned in the notes that the students wrote next to some questions in the questionnaire

5.1. The findings related to the first research hypothesis: Information finding

In the first hypothesis, the activities of finding and retrieving information, the effect of this component does not affect the management of personal information with its items that were measured, and the items were less than optimal, so the hypothesis was not considered.

Also, people tend to recognize their information to a moderate extent due to their large amount of information. The activity of storing information in the current research is done with an average of 3 at a relatively favorable level. This finding is in line with the findings of Deng and Feng (2010), and Shekari and Heidari (2015). The activity of finding information in the present research is relatively unfavorable with an average of 2.66, and with the findings of Soleymani (2013), Malek Mohammadi and Zavaraghi (2018), and Dang and Feng (2010). But, Majid et al. (2010) concluded that people use Internet services to

store their digital items. The results of Capra (2009) are in opposite to the present research. The activity of finding information in the present research with an average of 2.66 is relatively unfavorable and is inconsistent with the findings of the research, but they concluded that people use Internet services to store their digital items; Also, they mainly use bookmarks and e-mails for storage, which is opposite to the present research.

To check the significance of the relationship, Spearman's correlation coefficient test showed that there is a significant relationship between the collection of personal electronic information activities of students of Jundishapur University of Medical Sciences, Ahvaz, in terms of master's and doctoral degrees. On the other hand, the results of the Pearson correlation coefficient test indicated that there is a significant correlation between the set of electronic personal information management activities in terms of the faculty of the place of study.

The research used Pearson's correlation coefficient test to investigate the significance of the relationship in terms of age and it was found that there is a significant relationship between the activities of personal electronic information management activities of Jundishapur medical students in Ahvaz and between the age groups of less than 25 years and 35 years. The age group of 25 to 30 years had an average of 90 and the age group of 30 to 35 years had an average of 40.

5.2. The findings related to the second research hypothesis: Information storage

The activity of storing information in the present study is done at a doctoral and master's degree students deal with computers to perform their daily functions and are faced with meeting their information needs and completing their assignments and projects and theses. They do not have an opportunity to teach the principles and techniques of personal information management. Finally, there may be many activities. May not have, but because of the importance of personal information management in their academic, they clearly feel the need for training in this area. According to the second hypothesis of the research, the effect of storage on knowledge and skills has no significant effect. This hypothesis was not confirmed in the current research. In fact, students store their personal information more to meet their current needs.

This section was investigated only factor amount and personal information storage strategies students of Ahvaz Jundishapur University of medical sciences average obtained from data storage elements personal electronic information for students Ahvaz Jundishapur University of medical sciences equal to 3 and was desirable relatively. Results showed that students, saving their required personal information comparable for meet their current needs, to meet possible future. Doublet for probable obviation needs at prospective students averagely using of peripheral tools accessories such flash, CD, DVD,

and peripheral memory for store their personal information until from web spaces such bookmarks, emails, and personal, also, differently their average personal information storing from a subject at a specific place or extra unit to be in a public.

5.3. The findings related to the third research hypothesis: Information organization

The activity of organizing information among the students of Jundishapur University of Medical Sciences in Ahvaz, with an average of 2.75, is relatively unfavorable. Only in several items with an average of less than 3, information organization can be observed in a relatively weak level. the current research is in line with the findings of Deng and Feng (2010). The average value (2.88) was found to be a satisfactory performance and it is inconsistent with the findings of Malek Mohammadi and Zavaraghi (2018), Soleymani (2013) and Shekari and Heidari (2015).

Ph.D. and M.A. students are dealing with computers to perform their daily functions and are faced with meeting their information needs and completing their assignments, projects, and theses. In this situation, they do not have the opportunity to teach the principles and techniques of personal information management. In the end, they may not have many activities, but because of the importance of personal information management in their academic, they clearly feel the need for training in this field. The activity of organizing information among the students of Jundishapur University of Medical Sciences, Ahvaz, with an average of 2.75, is relatively unfavorable, and only in several items with an average of less than 3, information organization can be seen at a relatively weak level.

Research showed that students using for contain their personal information more than organizing on basis creation subject folders, and prefer organization on base type data formats like text files, pdf, PowerPoint, and less using than explanatory notes, paying ably average to reason increase amount stored information to ordering information again it is much time consuming and organization based creation folders and shelves prefer more on explanatory structure notes and information format.

5.4. The findings related to the fourth research hypothesis: Information maintaining

The average activity of "keeping personal information" among the students of Jundishapur Ahvaz University of Medical Sciences is at a relatively unfavorable level with 2.401. It is inconsistent with the findings of Shekari and Heidari (2015), Malek Mohammadi and Zavaraghi (2018), and Soleymani (2013).

It unsafe relatively students medical university regular space pc to average on their insist and mentality and prefer on their current needs.

Less to take backup files electronic personal is lot of time over. Also, results showed that students don't regularly find space on their methodically and insists. Much of taken methods protection and maintenance personal electronic information collection can be continuous backups up on computer peripherals automatically, back up file compression data synchronization and house cleaning for removing unnecessary items stored on computer.

5.5. The findings related to the fourth research hypothesis: Information evaluation and Valuation

The average activity of evaluating and valuing personal information among students of Jundishapur University of Medical Sciences Ahvaz with 2.43 is at a relatively unfavorable level and this finding is consistent with the inconsistent findings of the research. Results showed that effect amount use of data folder on effectiveness explanatory notes, highlighting tittle files, and recalling tools. Further, students medical university unfavorable relatively method organizing information handled by their truly and faithful know and most try to learn new methods and appropriate organizing personal information, and are differently able to identify old information and inappropriate on computer and adapt themselves to software different changes, according to those changes, to manage personal information, and on the other hand, by using of ability create subject folders direct information indifferently, control data entered to computer and exit information.

5.6. The findings related to the fourth research hypothesis: Information security and Information flow management

Activity of security and information flow management among the students of Ahvaz Jundishapur University of Medical Sciences with a score of 2.36 is at a relatively unfavorable level and is inconsistent with the findings. The average activity of keeping personal information is 2.401, which is at a relatively unfavorable level and is inconsistent with the findings.

Due to the large amount of information in the current research, the average of 3 is relatively favorable. This finding is in line with the findings of the research.

5.7. The findings related to the fourth research hypothesis: Making sense of things

Mean obtained from activities making sense of things personal electronic information students is 3. Desirable relative students try before beginning perform a project to draw a clear plan of that, and then think to output and result from each project before begin to do and so sufficient knowledge and fundamental about it and average designee regular program and work before of starting do any research or task, that have cause relation either collection information.

According average obtained from answered given students about knowledge skills and seven activities personal information management of Jundishapur Ahvaz University of Medical Sciences, this can conclude that among seven activities personal information management information, activity finding with an average of 2.45 and a deviation of 4.08 is lowest category and activities making sense of things while average 3, and SD 3.54 at up category. Student's amounts knowledge (average 1.22) compared to skill mean (2.05) that to personal information management is also unsafe and relatively unfavorable.

In general, the results showed that the electronic personal information management status of Jundishapur Ahvaz University of Medical Sciences students is at a relatively unfavorable level. The reason for this can be seen as students' lack of awareness and familiarity with the benefits of personal information management activities and the lack of use of personal information management software and tools.

Improving personal information management skills can improve the timing of activities, increase information literacy skills, get information faster, reduce confusion and confusion, prevent information from being lost and damaged, and help to identify information relationships and dependencies, increase efficiency. The progress and success of students is suggested due to the importance of maintenance and security steps in the personal information management process

To witness the holding of educational courses and workshops in the form of basic frameworks at introductory and advanced levels for students in Olympiads and scientific gatherings. It is suggested that the activity that obtained the lowest average in this research, i.e. maintenance with an average of 2.401, should be analyzed in detail and coherently and at a deep level.

Its outputs should be used in the design of software and tools in line with the demand. In this research, three factors of age, level of education and college of the place of study were investigated.

6. Conclusion

The data and indicators of personal information management in all faculties can have the most promise for improvement and quality in the field of personal information management of graduate students and it is considered one of the important goals of the information level improvement program. It provides an opportunity for targeted planning for the group of students who are studying. It also identifies students who need to take advantage of personal information management activities, with the aim of collecting integrated information at the level of the faculties of Jundishapur University of Medical Sciences, Ahvaz, among the student population. The challenges of measuring the status of personal information management in the software environment of Imus is a comprehensive system that provides the status of personal information management and the status of students' knowledge and

skills in the process of their personal and academic activities from acquisition to transfer and application. Diagnosis and identification of inadequacy and lack of information or its weakness help to improve the quality of information, training and control of some factors affecting the status of personal information management and checking the extent of prevalence and extent of information volume, students with information acquisition problems and previous background of learned information. Since this research was conducted on medical students, according to the findings of the research, it could not to improve the performance of users and provide them with the necessary efficiency, it seems that the reason for the volume of personal information is in the recovery of personal information of people. In fact, due to the significant growth of technology and especially smartphones among students, it is simple and easy to acquire the knowledge, skills and level of learning necessary to do research work. Hence this factor can lead to the acquisition of skills from technologies. Personal information management skills will not be approved.

Based on this, it is suggested that universities respond to this group of people who are sensitive to the level of user-friendliness of personal information management software by making it possible to compare the use of personal information management components in the form of software and guarantee the widespread use of it by students compared to other organizations. Therefore, it is suggested that universities, including the University of Medical Sciences, should accurately strengthen the factors affecting students' knowledge and skills of the personal information management components among students and thus increase the level of interaction.

Also, data and indicators of information management in all faculties can have the most promise for improvement and quality in the field of personal information management of postgraduate students, and it is considered one of the important goals of the program to improve the level of information and an opportunity for targeted planning.

It also provides the identification of students who need to take advantage of personal information management activities with the aim of collecting integrated information at the level of Jundishapur University of Medical Sciences, among the students, and the challenges of measuring the status of personal information management in the SPSS software environment. Imus is a comprehensive system that provides the status of personal information management and the status of students' knowledge and skills in the process of their personal affairs and academic activities from acquisition to transfer and application.

Diagnosing and identifying the inadequacy and lack of information or its weakness, helping to improve the quality of information, training and controlling some of the factors affecting the state of personal information management and checking the prevalence and extent of the amount of information, students who have problems obtaining

information and the previous history of information learned and stored in his mind or without any previous information can play a significant role.

In addition, it helps students in determining the status of personal information management and knowledge and skills and improving the level of information. In this research, with the activities of personal information management, the level of knowledge and skill of personal information management status and its changes are identified in terms of age, educational level and local college. Education was investigated.

Perhaps it can be concluded that for any reason, this relationship among the students of Jundishapur University of Medical Sciences in Ahvaz has weaknesses. This finding can indicate the existence of weak communication between all students, because generally there are considerations in interpersonal communication that cannot indicate the existence of close and strong relationship between all students.

It seems that among the community of this research, like any other educational community, there are students who do not have a balanced relationship and a favorable relationship with others.

Conflict of interest

The authors declared no conflicts of interest.

Authors' contributions

All authors contributed to the original idea, study design.

Ethical considerations

The authors have completely considered ethical issues, including informed consent, plagiarism, data fabrication, misconduct, and/or falsification, double publication and/or redundancy, submission, etc. This article was not authored by artificial intelligence. This study is the result of a research project entitled "Survey of personal information management status of Ahvaz Jundishapur University of Medical Sciences students based on Jones model with emphasis on electronic information and Code of Ethics IR.IUMS.REC.1399.802

Data availability

The dataset generated and analyzed during the current study is available from the corresponding author on reasonable request.

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