

The Relationship Between Technostress and Health Behavior Among University Professors at the University of Algiers 2

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Abstract

The present study aimed to identify the sources of technostress among university professors at the University of Algiers 2 and to examine its relationship with their level of health behavior practice. To achieve this objective, a descriptive correlational approach was adopted on a sample of fifty (50) university professors. Data were collected using the Technostress Scale and the Health Behavior Scale developed by Al-Samadi Abdelmajid and Al-Samadi Abdelghafour (2011).

The findings revealed a statistically significant negative relationship between technostress and health behavior among university professors. The results also indicated a strong, significant, and inverse relationship between the dimensions of the technostress scale and the degree of health behavior practice among the study participants.

Keywords: Technostress, Health Behavior, University Professors, University of Algiers 2.
2.Introduction

Information and Communication Technology (ICT) represents one of the most important modern approaches adopted by the University of Algiers 2, like other universities across the country, in order to keep pace with the transformations and developments taking

place worldwide and to improve teaching methods and scientific research within the

framework of the university's digitalization policy.

The shift toward a digitalized higher education system is based on principles and components that require university professors to adopt an educational approach involving the delivery of course content, educational programs, and assessment processes through modern electronic devices such as computers, internet networks, educational websites, distance learning platforms, and digital applications. This, in turn, requires both professors and students to possess the necessary competencies for dealing effectively with electronic devices and internet technologies in general.

Accordingly, the lack of adequate digital training for professors, together with insufficient infrastructure, including computer equipment and internet networks within the university, makes this digital transformation a stressful experience for many professors. Such conditions may affect their daily behaviors, particularly health-related behaviors. Consequently, the present study was conducted to investigate the level of technostress among a sample of professors at the University of Algiers 2 and its repercussions on their health behavior.

1. Research Problem

The digitalization of higher education requires the preparation of specialized technical human resources closely linked to information infrastructure. Consequently, the work of university professors within the context of digitalization constitutes a major challenge and a significant stake for them, as they have found themselves compelled to abandon traditional teaching methods and adapt to the digital era while coping with changes affecting their professional duties.

These changes have led to the emergence of new models of academic work and new modes of communication with both administration and students. For instance, professors are now required to prepare electronic course materials to be uploaded to university websites and platforms such as the Moodle platform. They are also required to maintain personal accounts on the Progres platform for entering students' grades and managing matters related to promotion files and scientific research activities.

As a result, professors have had to exert greater efforts to adapt to these evolving demands by participating in training programs designed to enhance their competence in implementing digitalization applications and using computers. All these factors have become sources of stress whose effects vary depending on how professors perceive them. Some perceive them positively, whereas others view them as exceeding their physical, psychological, and professional capacities, especially given the limited resources available to professors and students alike. This situation generates intense stress referred to as technostress (Salem Mohamed Salah, 2002).

According to Shirley et al. (2021), technostress occurs among individuals who interact with digital technologies when they are unable to cope with new technologies in a

healthy manner, leading to stressful experiences. Research has demonstrated that one of the most significant sources of stress experienced by workers across various sectors, including higher education faculty members, is the rapid pace of technological advancement. Computers and modern technologies introduced into the workplace may generate feelings of threat and considerable pressure when individuals are unable to master their use (Cook & Hunsaker, 2000, p. 442). This situation may lead to the emergence of numerous occupational disorders and the adoption of unhealthy work-related behaviors (Benrabah, 2012; Dejours, 2010; Felio, 2011; Valléry & Leduc, 2014).

There is no doubt that such stress also affects other aspects of professors' lives, particularly their health. Recent studies have linked technostress to physical illnesses such as hypertension, gastrointestinal disorders, eye diseases, and other health problems, since it imposes a work pattern that requires professors to spend long hours in front of computers. Consequently, they may neglect self-care and adopt unhealthy dietary habits and insufficient physical activity.

Since health constitutes one of the fundamental determinants of the success and sustainability of university professors' professional performance, it is necessary to pay practical and effective attention to their health behavior. Health behavior refers to those actions performed by individuals with the aim of enhancing and maintaining their health status (Taylor, 2008, p. 124). Among the studies that have examined the relationship between stress and health behavior is the study conducted by Ayadi Nadia and colleagues on the relationship between occupational stress and health behavior among university administrative employees. The study sample consisted of 77 employees from Hadj Lakhdar University in Batna. The findings indicated

that university administrative employees experienced high levels of occupational stress and demonstrated low levels of health behavior practices. The study also revealed a significant negative relationship between occupational stress and health behavior among university administrative staff (Ayadi Nadia et al., 2015).

In light of the above, the importance of investigating the relationship between stress resulting from digitalization and the use of modern technologies among university professors at the University of Algiers 2 and their health behavior becomes evident. The present study seeks to address this issue by answering the following research questions:

General Research Question

Is there a statistically significant relationship between technostress and the practice of health behavior among university professors at the University of Algiers 2?

Sub-Research Questions

Is there a statistically significant relationship between the technological overload dimension and the practice of health behavior among university professors at the University of Algiers 2?

Is there a statistically significant relationship between the technological invasion dimension and the practice of health behavior among university professors at the University of Algiers 2?

Is there a statistically significant relationship between the technological complexity dimension and the practice of health behavior among university professors at the University of Algiers 2?

Is there a statistically significant relationship between the technological insecurity dimension and the practice of health

behavior among university professors at the University of Algiers 2?

Is there a statistically significant relationship between the technological uncertainty dimension and the practice of health behavior among university professors at the University of Algiers 2?

As a preliminary response to these research questions, the following hypotheses were proposed:

General Hypothesis

There is a statistically significant relationship between technostress and the practice of health behavior among university professors at the University of Algiers 2.

Sub-Hypotheses

There is a statistically significant relationship between the technological overload dimension and the practice of health behavior among university professors at the University of Algiers 2.

There is a statistically significant relationship between the technological invasion dimension and the practice of health behavior among university professors at the University of Algiers 2.

There is a statistically significant relationship between the technological complexity dimension and the practice of health behavior among university professors at the University of Algiers 2.

There is a statistically significant relationship between the technological insecurity dimension and the practice of health behavior among university professors at the University of Algiers 2.

There is a statistically significant relationship between the technological

uncertainty dimension and the practice of health behavior among university professors at the University of Algiers 2.

2. Objectives of the Study

The present study aimed to determine whether an individual's behavior is influenced by their psychological state resulting from the university's adoption of a digitalization policy, which may generate various forms of stress. To achieve this objective, the following goals were formulated:

To identify the nature of the relationship between the overall score of technostress and the level of health behavior practice among university professors at the University of Algiers 2.

To examine the nature of the relationship between the dimensions of technostress (technological overload, technological invasion, technological complexity, technological insecurity, and technological uncertainty) and the level of health behavior practice among university professors at the University of Algiers 2.

To determine whether stress in general, and technostress in particular, leads university professors to neglect their health through the adoption of unhealthy daily behaviors that may contribute to the development of physical illnesses.

3. Significance of the Study

The significance of the present study lies in its examination of a highly important issue within the professional environment, namely the exploration of variables that direct and influence behavior toward either healthy or unhealthy patterns in the context of digital transformation. This is achieved through a focus on the variable of technostress and its

relationship with health behavior among professors at the University of Algiers 2.

Furthermore, the importance of this study stems from its target population—university professors. The findings may provide scientific evidence and practical insights to stakeholders in the higher education sector, enabling them to develop preventive strategies against technostress. Such strategies may include providing specialized training programs for professors and ensuring the availability of resources and tools that facilitate their work. These measures can help prevent excessive strain and reduce its potential negative consequences on both the physical and psychological health of university faculty members.

4. Definition of the Study Concepts

.4.1 Technostress

Conceptual Definition

Although various terms have been used to describe this concept, such as electronic stress, technological anxiety, and technological stress, they all refer essentially to the same phenomenon. Amal Al-Zoghbi defines technostress as:

"A complex and dynamic response encompassing cognitive, emotional, and behavioral aspects. It begins with the individual's subjective perception of stimuli and events associated with the digital context (e-mails, the use of new software and applications, information overload, expectations of constant availability for communication, following publications and events), as well as other qualitative and quantitative aspects of information and communication technology use that may be perceived as stressful, exhausting, and detrimental to an individual's psychological well-being, threatening their sense of calmness

and stability. This response varies from one individual to another and may also vary within the same individual across different situations, depending on numerous cognitive, environmental, and personal variables, as well as each person's unique subjective experience." (Amal Abdel Mohsen Al-Zoghbi, 2022)

Operational Definition

Technostress refers to the level of stress experienced by professors at the University of Algiers 2 as a result of their intensive interaction with technology and modern technological tools following the digitalization of higher education. Operationally, it is represented by the score obtained by participants on the Technostress Scale.

4.2. Health Behavior

Conceptual Definition

Health behavior refers to a set of behavioral patterns and attitudes related to health, illness, and the utilization of medical services. It encompasses all forms of behavior aimed at developing and enhancing an individual's health capacities (Al-Musha'an & Khalifa, 1999).

Health behavior comprises three main dimensions:

Preventive Dimension

This dimension includes health practices intended to protect individuals from the risk of disease, such as receiving vaccinations against specific illnesses or regularly consulting a physician for medical examinations and check-ups.

Health Maintenance Dimension

This dimension refers to health practices that contribute to maintaining an individual's health status, such as adopting healthy eating

habits and engaging in other recommended health-related behaviors.

Health Promotion Dimension

This dimension encompasses all health practices aimed at enhancing health and elevating it to higher levels through physical activity and the regular and continuous practice of exercise (Yakhlef, 2001, pp. 20–21).

Operational Definition

Health behavior refers to the daily behaviors practiced by university professors to maintain an appropriate level of health while mitigating the effects of technostress resulting from the digitalization of education. Operationally, it is represented by the score obtained by participants on the Health Behavior Scale developed by Al-Samadi Abdelmajid and Al-Samadi Abdelghafour (Al-Samadi Abdelmajid & Al-Samadi Abdelghafour, 2011, p. 84), including the following dimensions:

Dietary Habits Dimension

This dimension measures the extent to which an individual selects food in a manner consistent with internationally recognized standards of healthy nutrition.

Physical Health Care Dimension

This dimension assesses behaviors that help individuals prevent disease or detect health problems at an early stage, while maintaining physical fitness through participation in physical activities.

Drug Use Dimension

This dimension measures the degree to which an individual performs their biological and daily functions without the unnecessary

use of chemical medications or pharmaceutical substances.

Psychological and Social Dimension

This dimension refers to the individual's level of awareness, acceptance, and regulation of emotions, as well as their ability to utilize their cognitive capacities to the fullest extent possible.

5. Field Study

This section provides a description of the methodological procedures followed to achieve the objectives of the study and to test its hypotheses. It includes the following:

5.1. Pilot Study

In order to avoid potential difficulties that might arise during the fieldwork phase of the study, to identify the conditions under which the main study procedures would be conducted, and to verify the psychometric properties of the research instruments in terms of validity and reliability, a pilot study was conducted at the University of Algiers 2 across its various faculties, departments, and administrative units.

Among the most important concerns expressed by professors during the preliminary interviews were the pressures they face on a daily and continuous basis as a result of technological changes and the rapid shift toward digitalization within the university (lack of training, limited material and technical resources, weak internet connectivity, etc.). Consequently, it became necessary to shed light on this variable and incorporate it into the present study, particularly among the targeted population.

The pilot study sample consisted of thirty (30) university professors.

5.2. Research Methodology

The descriptive correlational method was adopted to investigate the relationship between technostress and health behavior among university professors at the University of Algiers 2 within the context of digital transformation, as it is the most appropriate approach for the nature of the present study.

5.3. Study Sample

The study population consisted of university professors at the University of Algiers 2. The sample was selected using purposive sampling, with the condition that participants hold permanent academic positions. The final sample consisted of fifty (50) professors.

5.4. Study Boundaries

The present study was conducted during the 2025–2026 academic year, specifically within the Faculty of Social Sciences, which comprises four departments: the Department of Psychology, the Department of Speech Therapy (Orthophony), the Department of Educational Sciences, and the Department of Sociology.

5.5. Data Collection Instruments

5.5.1. Technostress Scale

The Technostress Scale is a quantitative measurement instrument used to assess the level of stress experienced by individuals as a result of their continuous and intensive interaction with technological tools, particularly in work and educational environments.

The scale consists of fifteen (15) items distributed across five principal dimensions as follows:

Techno-Overload

Refers to the individual's perception that technology imposes excessive pressure through increased workload and accelerated work pace.

Techno-Invasion

Reflects the individual's feeling of being unable to separate professional life from personal life due to technology.

Techno-Insecurity

Reflects concerns related to job loss or replacement as a result of insufficient technological competence.

Techno-Uncertainty

Refers to instability resulting from continuous technological updates and changes.

Techno-Complexity

Represents the difficulty associated with using modern technologies and the constant need to acquire new skills.

Several items were reworded to fit the Algerian professional context while preserving their conceptual meaning. A five-point Likert scale was used to measure participants' responses to each item:

Strongly Disagree = 1 point

Disagree = 2 points

Neutral = 3 points

Agree = 4 points

Strongly Agree = 5 points

The scale allows for the assessment and classification of technostress levels as follows:

15–30 points: Low Technostress

31–50 points: Moderate Technostress

51–71 points: High Technostress

A. Validity and Reliability of the Scale

Validity

The validity of the scale was verified on the pilot sample using internal consistency validity by calculating the correlation coefficient between each item's score and the total score of the dimension to which it belongs. The results indicated that all dimensions were acceptable, with correlation coefficients ranging from 0.553 to 0.91 at the 0.01 significance level.

Construct validity was also examined by calculating the correlation coefficients between the total score of each dimension and the overall questionnaire score. The findings showed that the scale items possessed an acceptable degree of validity, with correlation coefficients ranging between 0.80 and 0.89 at the 0.01 significance level. Therefore, the scale was considered valid.

Reliability

The reliability of the questionnaire was assessed using Cronbach's Alpha coefficient. The overall Cronbach's Alpha value for the scale was 0.89, indicating a high level of reliability and confirming the suitability of the Technostress Scale for application in the main study.

5..5 2. Health Behavior Scale

The Health Behavior Scale was developed by Al-Samadi Abdelmajid and Al-Samadi Abdelghafour (2011). Based on the theoretical literature and previous studies on health behavior, and with reference to several existing scales, four dimensions were adopted:

Dietary Habits Dimension

Measures the extent to which individuals select their food in accordance with internationally recognized standards of healthy nutrition.

Physical Health Care Dimension

Measures behaviors that help individuals prevent diseases or detect them at an early stage, as well as maintain physical fitness through engagement in physical activities.

Drug Use Dimension

Measures the extent to which individuals perform their daily biological functions without unnecessary reliance on chemical medications.

Psychological and Social Dimension

Measures the individual's awareness of, acceptance of, and control over emotions, as well as the optimal use of cognitive abilities.

After the scale items were developed by the researchers, the instrument was reviewed by specialists in measurement and evaluation, counseling, educational psychology, psycholinguistics, and education. The scale was subsequently administered to a sample of 1,849 male and female students representing nine (9) public and private universities in Jordan.

Following the calculation of item–dimension correlation coefficients, several modifications were made, resulting in a final version comprising forty-five (45) items distributed as follows:

Body Care Dimension: 8 items

General Health Care Dimension: 14 items

Drug Use Dimension: 8 items

Psychological and Social Dimension: 15 items

All questionnaire items were formulated positively and assessed using a five-point Likert scale:

Always = 5 points

Often = 4 points

Sometimes = 3 points

Rarely = 2 points

Never = 1 point

Participants' scores range from 52 to 260 points. Higher scores indicate greater engagement in healthy behaviors that contribute to a healthy and normal lifestyle, reflecting a positive and health-oriented way of life (Al-Samadi Abdelmajid & Al-Samadi Abdelghafour, 2011).

A. Validity and Reliability of the Scale

Validity

The validity of the scale was verified on the pilot sample using internal consistency validity by calculating the correlation coefficient between each item and the total score of the dimension to which it belongs. Construct validity was also examined by calculating the correlation coefficients between the total scores of each dimension and the overall questionnaire score. The results indicated that the scale items possessed an acceptable level of validity.

Reliability

The reliability of the questionnaire was assessed using Cronbach's Alpha coefficient. The overall Cronbach's Alpha value for the scale was 0.862, indicating strong reliability and confirming the suitability of the Health

Behavior Scale for application in the main study.

6. Presentation and Discussion of the Study Results

6.1 Presentation of the Results of the General Research Hypothesis

To test this hypothesis, Pearson's correlation coefficient was used. The results are presented as follows:

Table 1. Pearson Correlation Coefficient Between Technostress and the Level of Health Behavior Practice Among University Professors at the University of Algiers 2

Study Variables	Correlation Coefficient (r)	p-value
Electronic Stress	-0.592 **	0.003
Health Behavior		

Significant at the 0.01 level.

The calculation of Pearson's correlation coefficient between technostress and health behavior revealed a statistically significant negative correlation coefficient of -0.592 at the 0.01 significance level. This result indicates the existence of a significant inverse relationship between technostress and health behavior. In other words, as technostress increases, health behavior decreases among university professors.

6.2. Discussion and Interpretation of the General Research Hypothesis

The results obtained through Pearson's correlation analysis demonstrated the existence of an inverse relationship between technostress and health behavior. The digitalization of higher education has required university professors to interact extensively with the Internet and related technologies and to use modern electronic devices in their professional activities.

The general hypothesis states that:

"There is a statistically significant correlational relationship between technostress and the practice of health behavior among university professors at the University of Algiers 2."

For instance, in order to deliver a lecture, professors are required to prepare digital course materials and upload them to university online platforms (such as Moodle), as well as conduct distance-learning sessions. All of these tasks require proficiency in Internet technologies and prolonged periods of work in front of computers. Similar demands arise when entering students' grades on the Progres platform and carrying out other administrative and academic tasks.

The study observed that some professors have not fully adapted to these technologies yet find themselves compelled to learn and use them. Others are technologically competent and become heavily engaged with digital environments, spending long periods online. Meanwhile, some professors continue to depend on assistance from others to complete technology-related tasks. In all these situations, professors are exposed to stress, frustration, and psychological pressure.

Furthermore, technostress may contribute to the emergence of psychological symptoms such as anxiety and stress, as well as physiological symptoms such as back pain and visual problems. These outcomes are often associated with unhealthy behavioral patterns, particularly reduced physical activity and poor dietary habits, including eating unhealthy foods outside regular meal times. Moreover, professors may find it increasingly difficult to regulate their emotions, which reflects a decline in their overall health behavior.

These findings are consistent with the results of Farie (2019), whose study on the level of health behavior among faculty members at the Yemeni University of Science and Technology found that the overall level of health behavior among faculty members was moderate (Farie Arwa, 2019).

Similarly, the study conducted by José Manuel Castillo Pimentel (2022) on mental

workload and strain resulting from the use of digital technologies in the workplace concluded that frequent remote use of technology did not significantly affect technological dimensions or mental workload directly. However, technology increased employees' workload through working conditions related to time management, organizational factors, and aspects of the social climate.

6.3. Presentation of the Results of the First Sub-Hypothesis

The first sub-hypothesis states that:

"There is a statistically significant correlational relationship between techno-overload and the practice of health behavior among university professors at the University of Algiers 2."

Table 2. Pearson Correlation Coefficient Between Techno-Overload and the Level of Health Behavior Practice Among University Professors at the University of Algiers 2

Study Variables	Correlation Coefficient (r)	p-value
Electronic Overload	-0.736 **	0.003
Health Behavior		

Significant at the 0.01 level.

The results presented in the table above indicate that the relationship between health behavior and techno-overload is strong and inverse. The correlation coefficient reached -0.736, indicating that excessive technological workload has a significant impact on the health behavior of university professors.

6.4. Discussion and Interpretation of the First Sub-Hypothesis

The statistical analysis of the first sub-hypothesis demonstrated a strong, statistically significant, and negative relationship between techno-overload and health behavior.

This finding may be explained by the fact that university professors, in the context of the rapid expansion of information and communication technologies, often experience difficulty transitioning quickly from one technological tool to another and from one

working mode to another. Moreover, their continuous efforts to keep pace with this transformation have intensified their workload and increased their professional responsibilities, requiring them to exert additional effort.

Preparing digital educational content requires extensive time spent searching for and processing information online. Likewise, delivering this content to students largely depends on computers, which have become the primary medium through which professors and students interact within virtual learning environments. Consequently, professors spend longer periods sitting in front of computers, which may result in pain affecting the neck, back, and limbs.

It is also important to emphasize the limited resources available to students in particular, as well as problems associated with internet access, including inadequate coverage in some areas, low connection speeds, and frequent interruptions even in major cities. In addition, both students and professors may possess limited digital competencies, especially older faculty members who often perceive the digital system as a substantial burden. These factors collectively increase professors' workload, generate considerable stress, and negatively affect their emotional, social, and physical well-being.

This result is consistent with statistics reported by Catherine Vasey, a specialist in psychology and burnout since 2000, indicating that 15% of burnout and occupational stress victims are employees aged between 50 and 60 years, in contrast to younger workers.

Likewise, the study conducted by Sultan Belghith (2010) entitled *The Reality of Internet Use in Scientific Research at the University: A Field Study at Tebessa University* sought to examine Internet services

and the ways in which faculty members utilize them in scientific research. The study concluded that most professors at Tebessa University use the Internet continuously and for extended periods in order to stay informed about recent developments and scientific advances within their respective fields of specialization.

Another study conducted among students at the American University by Queen Esher Booker examined technostress associated with technology use among online learners. The findings revealed a relationship between technostress and student outcomes in online learning environments, demonstrating the impact of technostress on educational and research performance.

Furthermore, Mahanti and Jena (2014) found that age, gender, technological vigilance, and length of employment significantly influence exposure to technostress and are associated with various psychological and physical health symptoms.

6.5. Presentation of the Results of the Second Sub-Hypothesis

The second sub-hypothesis states that:

"There is a statistically significant correlational relationship between techno-invasion and the practice of health behavior among university professors at the University of Algiers 2."

To test this hypothesis, Pearson's correlation coefficient was calculated, yielding the following results:

Table 3. Pearson Correlation Coefficient Between Techno-Invasion and the Level of Health Behavior Practice Among University Professors at the University of Algiers 2

Study Variables	Correlation Coefficient (r)	p-value
Electronic Invasion	-0.424 **	0.003
Health Behavior		

Significant at the 0.01 level.

The results presented in Table 3 indicate the existence of a statistically significant relationship, although relatively weaker than those observed for the other dimensions of the Technostress Scale, between health behavior and techno-invasion. The correlation coefficient reached $r = -0.424$, suggesting that university professors continue to use modern technological tools even outside official working hours, as most of their daily interactions with students and colleagues occur through e-mail or WhatsApp, which require the use of computers or smartphones.

6.6. Discussion and Interpretation of the Results of the Second Sub-Hypothesis

The correlation results indicate the existence of a significant negative relationship between techno-invasion and health behavior.

This finding may be explained by the fact that university professors' use of the Internet and computers is not limited to official working hours; rather, it frequently extends beyond work time and encroaches upon their personal lives. Professors are required to check their e-mail accounts regularly, as e-mail constitutes the principal channel of communication between faculty members and university administration, between professors and students in supervision activities, and among faculty members both nationally and internationally.

In addition, professors devote considerable time to conducting research, writing articles, preparing course materials and books, and entering students' grades into digital systems. These responsibilities often require them to remain awake until late hours, negatively affecting their sleep patterns, physical activity levels, physical health, and emotional stability. Consequently, professors may adopt unhealthy behavioral patterns.

These findings are consistent with the results reported by Meziane Bizan (2006), who found that university professors, regardless of gender, spend more than twenty minutes browsing useful websites. The study also revealed that faculty members across different academic ranks primarily use the Internet during the morning period, followed by the evening and nighttime periods, and to a lesser extent during midday (Meziane Bizan, 2006).

Similarly, Khaled Mataa (2015/2016), in a study examining the extent of Internet use among faculty members according to gender, found that 23.84% of male professors and 23.07% of female professors connect to the Internet daily. This was followed by 9.23% of male professors and 6.15% of female professors who connected five days per week, while 9.23% of male professors and 6.92% of female professors reported using the Internet four days per week. Usage for two days per week reached 6.92% among male professors and 2.30% among female professors, whereas only 1.53% reported not using the Internet.

These findings illustrate the extent to which this lifestyle may influence professors' health and their adoption of healthy behaviors in daily life (Khaled Mataa, 2016).

6.7. Presentation of the Results of the Third Sub-Hypothesis

The third sub-hypothesis states that:

"There is a statistically significant correlational relationship between techno-

complexity and the practice of health behavior among university professors at the University of Algiers 2."

To test this hypothesis, Pearson's correlation coefficient was applied, producing the following results:

Table 4. Pearson Correlation Coefficient Between Techno-Complexity and the Level of Health Behavior Practice Among University Professors at the University of Algiers 2

Study Variables	Correlation Coefficient (r)	p-value
Electronic Complexity	-0.550 **	0.003
Health Behavior		

Significant at the 0.01 level.

The results displayed in the table above indicate the existence of a statistically significant negative relationship between techno-complexity and health behavior among university professors. In other words, when professors perceive the technological skills required for digital teaching and Internet use as complex and difficult to acquire, they experience increased psychological stress, which negatively affects their health behavior.

6.8. Discussion and Interpretation of the Results of the Third Sub-Hypothesis

The statistical analysis of the third hypothesis revealed a strong, statistically significant, and negative relationship between techno-complexity and health behavior.

This result may be explained by the limited ability of some professors and students to access and effectively use digital platforms and websites, as well as difficulties associated with

computer use. Such challenges generate stress among professors and often compel them to seek assistance, sometimes at the expense of their time, financial resources, and mobility.

These difficulties are exacerbated by the insufficient role of universities in providing modern technological resources, organizing training programs for faculty members, and ensuring adequate access to Internet facilities. Such circumstances are inconsistent with the healthy lifestyle practices that professors are expected to maintain in their daily lives.

The findings of the present study are consistent with those of Bachir Ben Tia (2002), who concluded that university professors possess only moderate or basic skills in the use of Internet technologies (Bachir Ben Tia, 2002).

Likewise, Khaled Mataa (2016) reported variations in Internet-related competencies among academic staff. Assistant Professors (A and B) demonstrated the highest level of digital skills, followed by Lecturers (A and B), while

Full Professors ranked last in terms of Internet proficiency (Khaled Mataa, 2016).

This difference may be explained by the greater need of assistant and lecturer-level faculty members to use the Internet for preparing research papers, publishing articles, participating in scientific conferences, and searching for references and information to enrich their academic work. Consequently, they become more proficient in digital technologies. These findings also highlight the difficulties encountered by older professors in acquiring such skills. According to statements made by some participants, their health conditions, including chronic illnesses, sometimes prevent them from attending training sessions, leading them to neglect meal schedules and medication routines.

Furthermore, Dahshan Gamal Ali Khalil (2020), in his study proposing a framework for

transforming public universities into smart universities in light of digital transformation initiatives, surveyed a sample of 296 faculty members. The study concluded that the successful transformation of universities requires three essential components: a digital vision, smart infrastructure, and smart human resources (Dahshan Gamal Ali Khalil, 2020).

6.9. Presentation of the Results of the Fourth Sub-Hypothesis

The fourth sub-hypothesis states that:

"There is a statistically significant correlational relationship between techno-insecurity and the practice of health behavior among university professors at the University of Algiers 2."

Pearson's correlation coefficient was employed to test this hypothesis.

Table 5. Pearson Correlation Coefficient Between Techno-Insecurity and the Level of Health Behavior Practice Among University Professors at the University of Algiers 2

Study Variables	Correlation Coefficient (r)	p-value
Electronic Insecurity	-0.451 **	0.003
Health Behavior		

Significant at the 0.01 level.

The results presented in Table 5 indicate a statistically significant negative relationship between techno-insecurity and health behavior among the study participants. Feelings of insecurity associated with digital interactions in educational contexts, including concerns about the theft, misuse, or unauthorized access to academic materials, appear to generate anxiety and stress, which in turn negatively

affect professors' health status and health-related behaviors.

6.10. Discussion and Interpretation of the Results of the Fourth Sub-Hypothesis

The results of the fourth sub-hypothesis indicate that university professors' lack of perceived technological security negatively affects their health behavior.

This finding may be explained by the fact that university professors invest considerable effort in preparing digital course materials and uploading them to online platforms. However, these platforms may also be accessed by others, who can view and potentially use the uploaded content. Furthermore, academic publications and educational materials are vulnerable to cyberattacks, piracy, and unauthorized use, all of which constitute risks associated with Internet technologies. Such concerns generate stress and anxiety among professors, thereby negatively influencing their health behavior.

In this regard, Meziane Bizan (2006), in his study on Internet-related risks, found that professors considered information encryption to be the most appropriate, effective, and reliable solution for minimizing network risks and protecting academic materials from unauthorized access or theft.

A similar conclusion was reached by Khaled Mataa, who reported that university professors across different academic ranks perceive electronic encryption as an important and effective security tool, as it restricts access to information exclusively to individuals

possessing the decryption key. Consequently, encryption enhances the confidentiality and privacy of academic publications and digital educational materials.

Likewise, Khaled Mataa (2016) found that university professors express considerable concerns regarding Internet-related risks, primarily due to exposure to malicious software attacks and the possibility of their academic work being hacked or stolen. These findings are consistent with those of Hassina Salim (2002), who reported that most university professors harbor concerns about Internet security.

6.11. Presentation of the Results of the Fifth Sub-Hypothesis

The fifth sub-hypothesis states that:

"There is a statistically significant correlational relationship between techno-uncertainty and the practice of health behavior among university professors at the University of Algiers 2."

To verify this hypothesis, Pearson's correlation coefficient was calculated, yielding the following results:

Table 6. Pearson Correlation Coefficient Between Techno-Uncertainty and the Level of Health Behavior Practice Among University Professors at the University of Algiers 2

Study Variables	Correlation Coefficient (r)	p-value
Technological Uncertainty	-0.592 **	0.003
Health Behavior		

Significant at the 0.01 level.

The results presented in the table above indicate a strong negative relationship between techno-uncertainty and health behavior. The correlation coefficient reached $r = -0.592$ at the 0.01 significance level, indicating that university professors demonstrate lower levels of healthy behavior practices as a consequence

of the constant need to adapt to rapid and continuous technological updates and developments. These changes generate stress and tension, particularly given the nature of academic work, which requires professors to prepare digital course materials, publish scholarly work, participate in academic

discussions, and continuously evaluate students.

.612. Discussion and Interpretation of the Results of the Fifth Sub-Hypothesis

The results presented in Table 6 reveal a strong relationship between techno-uncertainty and health behavior.

The continuous and rapid updates affecting digital learning platforms, educational environments, and computer software often make it difficult for professors to keep pace with the speed at which information and technological innovations evolve. Such a dynamic environment requires the rapid adoption and integration of new technological tools. In many cases, these changes require specialized programming or technical support skills, which may not be readily available due to insufficient training and limited technological competence. Consequently, professors may respond to these stressful circumstances with psychological and physical symptoms resulting from neglecting their health and healthy lifestyle practices.

The findings of the present study are consistent with those reported by Yusuf Levent Sahin et al. (2015), who investigated the level of technostress among Turkish university professors using a quantitative research approach supplemented by direct interviews with participants. Their results indicated that insufficient training and inadequate education were among the major sources of technostress, in addition to technical and security-related Internet problems. Eye strain, headaches, and technology-related addictive behaviors were also identified as significant contributors to technostress.

Similarly, Naaas Omar (2008) argued that individuals differ substantially in their physiological, psychological, social, and behavioral responses to stress, highlighting the importance of social and cultural contexts in shaping reactions to stressful situations (Naaas Omar, 2008).

Conclusion

The present study aimed to examine health behavior and its relationship with technostress resulting from the implementation of digitalization in higher education among university professors at the University of Algiers 2.

The findings revealed that the digitalization of higher education has compelled professors to engage extensively with Internet technologies and modern technological tools, particularly computers. This transformation has required faculty members to adapt continuously to technological change. However, the rapid and ongoing updates affecting digital technologies have forced professors to increase both their effort and working hours, thereby generating substantial levels of stress.

The pressure experienced by university professors has intensified due to several factors associated with this educational model, most notably inadequate training and technological competence, limited availability of modern technological resources, the complexity of digital systems, and the insufficient digital skills of both students and faculty members.

Under such pressures, professors become primarily concerned with completing their tasks efficiently and on time, often at the expense of their dietary habits, physical activity, medication adherence, and overall health maintenance. As a result of these unhealthy behavioral patterns, numerous studies have linked the emergence of various physical and psychological health problems to unhealthy lifestyle habits and prolonged exposure to stress across different domains of life.

Accordingly, the findings of the present study underscore the importance of adopting healthy daily behaviors as a protective factor against health deterioration and stress-related disorders.

Recommendations

Based on the findings of the study, the following recommendations are proposed:

Promote healthy behaviors among university professors by providing institutional facilities that enable them to allocate sufficient time for meals and rest during working hours.

Improve university infrastructure through the provision of modern technological equipment and resources, particularly computers and Internet network facilities.

Ensure the availability of high-speed Internet access within university campuses.

Organize regular training programs for university professors on the use of digital platforms, online learning environments, and university information systems.

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