



Future anxiety among media professionals and its relationship to utilizing artificial intelligence techniques: The case of Egypt, France, and UAE

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ABSTRACT

This article aims to study professional future anxiety differences among media professionals and its relationship to utilizing artificial intelligence (AI) techniques in media institutions in Egypt, France, and United Arab Emirates (UAE); and to know the effect of the intensity of employing AI techniques in various media institutions on the professional future anxiety of the sample. A convenience sample was drawn from the three countries, with a total of 300 media professionals. It included 100 participants from each country, to whom the questionnaire and the professional future anxiety scale were applied. The methodology regarding data collection is quantitative research. Descriptive analysis was used to extract the results. Pearson correlation coefficient, ANOVA, and simple linear regression analysis to test the research hypotheses. The study revealed that there is a statistically significant direct correlation between the employment of AI techniques in media institutions and professional future anxiety among media professionals in Egypt, France, and UAE. It was also evidenced that there are differences in the degree to which media institutions employ AI technologies in favor of France, while no differences were found in the level of professional future anxiety among media professionals based on the variable of the country. The respondents' degree of professional future anxiety was moderate. The results also confirmed that media institutions' extensive employment of AI techniques contributes to effecting professional future anxiety among media professionals participating in the study. The most prominent technologies and applications employed by media institutions and were used by the respondents were techniques for verifying the accuracy of sources, information, and content, and techniques for increasing the efficiency of news coverage and processing, ChatGPT application.

Keywords: artificial intelligence, future anxiety, media institutions, media professionals, Egypt, France, UAE

INTRODUCTION

The modern technological revolution and the transformation to digitization and the control of computer technology and artificial intelligence (AI) have paved the way for the public's acceptance of new media forms and means and their aversion to traditional means. Through this development, digital media have begun to

increase and extended their influence on the public's interests in a way that made them an integral part of their daily life. This successive development in the technological work environment has put media institutions in a constant desire to develop and systematically employ technology in order to remain able to continue and compete.

Recently, discussions about employing AI in media and media institutions have increased. Starting from employing various tools in researching and verifying information, through journalistic writing according to the rules of search engines "SEO", and the full employment of AI techniques in producing media content are stages that have paved the way for the emergence of what has become known as AI media. Consequently, some developed countries, such as China, Germany, Japan, and the United States, and others have increasingly relied on (smart robots) in media and journalism institutions by photographing and editing the content, as well as dealing with the huge size of data, translation, and proofreading very quickly. Indeed, some media institutions and news agencies have relied heavily on the use of applied models of AI in carrying out daily tasks through the use of algorithms and merging data to generate automatic news without human intervention. In addition, they depended on automated responses to the public through automated conversation technology (chatbot) and verifying fake news (Beenish, 2020).

Further, institutions such as BBC, Guardian, Quartz, Reuters, Times, Washington Post, and Yahoo were quick to develop and use AI techniques in their newsrooms by using highly accurate software in automated writing and presenting stories accompanied by large data (Al-Bhairi, 2022). At the beginning of March 2023, Al-Jazeera network announced the launch of the first robot broadcaster in the world to conduct a half-hour dialogue with a guest on the "Al-Jazeera Live" channel (Al-Jazeera Mubashir Website, 2023), and it was immediately followed in April of the same year by the newspaper "Kuwait News" announcing the first female broadcaster working with AI technology in the State of Kuwait, whom they called "Fedda" (BBC News, 2023).

With the increasing of AI technologies within media institutions and among media professionals themselves, problems and questions are raised about the future of the communicator, the "human element," within these institutions, and the feeling of anxiety raised about their professional future as a result of the increasing reliance on AI. Besides, does the degree of effect and feeling of anxiety vary depending on the environment and capabilities in each country? Therefore, this study aims to examine the relationship between employing AI techniques in media institutions and the feeling of professional future anxiety among media professionals in Egypt, France, and United Arab Emirates (UAE), and to predict their professional future anxiety through employing AI techniques in media institutions in their countries.

LITERATURE REVIEW

Artificial Intelligence

Rapidly developing digital technologies over the past two decades have caused major changes in the field of media, whereby the increase of information has made traditional media decline, as opposed to digital media, which reached their apex as a result of the emergence of AI media (Fayez, 2022). Although the term AI has gained great popularity recently, AI is not new. Rather, its beginning dates back to 1955 when Professor John McCarthy used this term to describe the science and engineering of making intelligent machines. Over time, AI has developed until it has become a tangible reality in various areas of life (Mathias, 2022). AI refers to systems that mimic human intelligence to perform tasks that can improve themselves based on the information they collect. Besides, AI is associated with the ability to think superiorly and analyze data (Al-Bambawi, 2023).

AI is defined as a group of technical systems and machines that can simulate human logic and behavior with a kind of rationality (Russell & Peter 2021), and it is the process of manufacturing machines and computer systems that perform operations similar to human behavior and are capable of making correct decisions (Castro, 2016). It is also defined as a form of integration between man and machine, expressed by a group of machines and computer systems that mimic human action in decision-making and mimic the machine in its tremendous ability to absorb information (Bozdog, 2023).

Artificial Intelligence Techniques

These are devices, digital systems, advanced software, and applications that are characterized by fast and intelligent processing in terms of communication, recognition, and simulation, and include machines that can learn through experience, and simulate human action in performing various tasks. In addition, they are capable of developing themselves automatically, relying on the information they collect, examine, and explore, as well as performing logical thinking processes that contribute directly to increasing cognitive ability and learning.

Artificial Intelligence in Media Institutions

Although individuals' interest in many advanced technologies in their early stages is less than their use of traditional technologies, over time, newer technologies and innovations dominate and become more widely used by individuals and institutions. The most prominent of these technologies is likely AI (Naidu & Sevnanayan 2023), and as a result of the rapid developments of AI, it is expected to have a significant impact on the future of media means, as AI technologies in media institutions perform several aspects, including:

1. **Automation and intelligent analysis:** AI improves content production processes through automation, standardization, and creating basic news reports and interviews. This saves time and effort for journalists. It also uses intelligent analysis to understand large data and analyze trends and interactions in social media to generate more accurate and useful journalistic stories.
2. **Improving the user's experience of digital media:** AI is employed within institutions to improve the user's experience while reading news and browsing journalistic content. Smart algorithms can provide customized content for readers based on their personal interests and preferences. AI also analyzes the users' behavior and provides appropriate content according to their previous interests.
3. **Combating fake news and verifying information:** AI is an important tool in combating the spread of fake news and verifying information. AI also analyzes texts and content and identifies indicators of misleading or fake news. Smart technologies can be also used to verify the credibility of sources and news as a whole.

Perhaps these tasks and many others are what have made many media organizations successively resort to AI techniques. To realize the extent of this spread, we will list examples of this. The emergence of AI applications in the field of media was in January 2012, when the New York Times presented several documentaries using virtual reality technology. It provided an immersive three-dimensional experience surrounding the viewer (Al-Sharqawi, 2022). In the same year, BBC Lab launched a website that works via AI API tool and analyzes and archives various data, including texts, images, and videos, whether on websites or social media (BBC News Labs: Linked Data, 2013). In 2014, Associated Press used AP News Whop tool to create news content to produce sports and economic reports, track news, and engage the public through social media. During 2015, New York Times (2015) implemented its experimental AI project known as Editor as an experimental interface for text editing to explore how machine learning systems and journalists could collaborate in providing accurate annotations. In the same year, it also presented the film "The Displaced" as the first journalistic content enhanced with virtual reality (Virtual Reality, Advanced Technology, 2018).

During 2016, AI technologies were adopted by many media organizations in various ways. Likewise, the Guardian launched the first Facebook chatbot to search for news stories and share them daily via Messenger. In the same year, Reuters collaborated with the semantic technology company Graphiq to provide news publishers with a wide range of free interactive data visualizations across various topics, such as entertainment, sports, and news, and publishers can access the data via "Reuters Open Media Express". Besides, once it is included on publishers' websites, the data are updated in real time as it occurs. Breaking news can also be tracked, and journalists can be helped to collect data (Al-Sharqawi, 2022). In 2016, the production of approximately 1.5 billion news stories that were produced based on the "WordSmith" program was witnessed, which is one of the most powerful news writing algorithms (Andrey, 2018). During the period between mid-2016 and 2017, the "Heliograf" robot was able to carry out 850 newspaper articles, starting with 300 reports on the "Rio de Janeiro Olympics" (Washington Post's Robot, 2017).

In 2018, Reuters announced the world's first fully automated model that provided a summary of sports news with a character created by Synthesia (Reuters and Synthesia, 2019). In the same year, Forbes magazine

launched “Bertie”, that is a content management system based on AI, which can learn and develop itself with experience, and has the ability to suggest the main story, topics, headlines, and images appropriate to the topics (Al-Sharqawi, 2022).

At the beginning of 2019, a new stage of the use of AI technologies in media began with the Chinese “Xinju” News Agency for the first time employing an AI news broadcaster named “Xin Xiaomeng” (First AI News, 2020). By 2020, this broadcaster published 3,400 reports lasting for 10,000 minutes. This was followed by a South Korea News Channel in November 2020 introducing an AI news broadcaster, that is a replica of a human news broadcaster named Kim Joo Ha (Ni Made, 2020). In 2020, the BBC presented a voice generated by AI to read articles published on its website. Besides, in April of the same year, “Cairo 24” website launched its initiative to produce press news using AI without human intervention for the first time in the Arab world (First Artificial Intelligence Initiative, 2022).

In November 2022, Al-Ittihad Emirati newspaper presented the first fully automated article, and the New York Times announced that nearly a third of the content published by Bloomberg is achieved through automated systems without the need for humans. According to Associated Press, it is expected that AI will be able to write 90.0% of all news by 2025, and by 2027, it is expected that newsrooms will have a huge number of AI devices, and journalists will work to easily integrate smart machines into their work system. Consequently, machine intelligence can carry out more than just generating automated news reports (Journalism in the Data Age, 2021).

Professional Future Anxiety

professional future Anxiety is considered one of the characteristics of the human psyche that changes a lot based on circumstances. Definitions of this concept vary; some consider it as a state of discomfort, tension, feeling of distress, and fear of the future related to the professional aspect (AL-Mahameed & AL-Safasfah, 2007), It is also defined as an unpleasant emotional experience that the individual feels and is accompanied by insecurity, fear, and negative thinking about the professional future (Hamoud et al., 2021). In addition, it is a condition that affects the individual and makes him feel uncomfortable when thinking about his professional future after graduating from the university, and it is accompanied by fear and tension, and is expressed in psychological, physical, professional, and social dimensions (Abu Ghaly & Abu Mustafa, 2016). Further, the professional future anxiety is considered one of the main characteristics resulting from economic and social changes and is increasingly occurring among young people (Hammad, 2016).

Anxiety of professional future occurs when the individual looks at the future with a negative outlook that prompts him to fear instead of hope, and is occupied by negative emotions (Shabahang et al., 2021). Most likely, anxiety about the professional future is related to social and political events and changes that make individuals expect a danger to their future. On one hand, a little anxiety is beneficial for the individual if it pushes him to plan for his future and develop himself. In contrast, high future anxiety may hinder the individual from thinking and push him to fear (Zaleski, 2017). Consequently, it is assumed that there is a relationship between the topic of the current study (media institutions’ employment of AI technologies and the levels of professional anxiety that may affect individuals working in these institutions. It can be also assumed that the extensive use of these technologies contributes to affect the level of professional future anxiety among individuals working in these institutions.

Reasons for anxiety about professional future

The reasons for anxiety about the professional future are varied; some of which are related to the individual himself, and some of them are related to other factors and the external surroundings. We will discuss the most important reasons, which are:

1. The rise in the standard of living and the multiplicity of its requirements and their transformation from simple needs to complex needs. Consequently, it was found that the family’s economic situation may lead to increased anxiety about the professional future.
2. Rapid life changes are accompanied by various feelings; most of which are negative, such as anxiety and a feeling of insecurity and instability that is one of the factors that push individuals to feel psychological disorder (Hamama, 2023).

3. Anxiety about the future is due to the wrong perception of possible events in the future, and the inability to adapt to the problems experienced, and the feeling of insecurity.
4. Lack of skills to perceive the future, and lack of personal goals, thus leading the person to lose the meaning of life, causing anxiety disorder, lack of planning for the future, and weak decision-making ability (Jabr, 2021).

Professional future anxiety & its relationship with media

Anyone who looks at the extent of the expansion in the use and spread of AI technologies and the rates of reliance on it within media institutions will realize that there is a connection between this expansion and the feelings of workers in those institutions about their future in light of these technologies performing many of their work tasks and the reason for their presence in those institutions.

Despite the challenges facing the use of AI technologies in the field of media and journalism, media professionals and editors now find themselves victims of layoffs from digital publishers and traditional newspaper chains alike. Nearly a third of the content published by Bloomberg News relied on AI technology (Keohane, 2017), and there is a growing trend to use these technologies widely in the media field, whereby newsrooms began to explore the possibilities of these new technologies.

For most media organizations, AI technologies are still in the experimental adoption stage. However, media workers are now interested in how AI technologies affect the workflow and nature of their work personally, and how new technological challenges or opportunities can contribute to influencing the media, as well as the form and ethics of news making in the age of AI (Salazar, 2018).

Because of the rapid and unprecedented transformations that media work is going through, resulting from AI technologies, questions arise about possible repercussions on the future of media professionals, especially with AI technologies enabling the production of content automatically. There are two main trends of the impact of using technologies of AI on the future of communicators in media institutions:

1. **Pessimists:** According to this trend, there are threats to the future of workers in media institutions that expand in employing AI technologies.
2. **Optimists:** Those who support this trend believe that despite the increasing use of AI in news organizations, these technologies will enhance the work of journalists rather than replace them (Graefe, 2017).

Study Purpose

This study aims to identify the nature of the relationship between professional future anxiety differences among media professionals and utilizing AI techniques in media institutions in Egypt, France, and UAE. Besides, it identifies the most prominent technologies used by institutions and media professionals themselves within these countries and predicts whether the intensive use of these technologies and increasing adoption by media institutions contributes to the feeling of anxiety about the future among workers in those institutions, and the extent of the variation in the degree of feeling of anxiety depending on the surroundings and capabilities of each country.

METHODOLOGY

This is a descriptive study that aims to analyze and evaluate the characteristics of a particular group, or a particular social situation, study the current facts related to a phenomenon, describe the phenomenon under investigation, and interpret it. This study is conducted through a quantitative questionnaire for media professionals working in various media institutions in Egypt, France, and UAE to collect data to achieve the objectives of the study and verify its hypotheses, via a Convenience sample was drawn from the three countries with 300 participants.

In addition to the research objectives, this study aims to test the following hypotheses:

- H1:** There is a statistically significant relationship between utilizing AI techniques in media institutions and the professional future anxiety among media professionals in France, Egypt, and UAE.

- H2:** There are statistically significant differences between the media professionals in both the degree to which their organizations employ AI techniques and their level of anxiety about their professional future according to the country variable (France, Egypt, and UAE).
- H3:** The intensity of the utilizing AI techniques in media institutions contributes to effecting anxiety about the professional future among media professionals in France, Egypt, and UAE.

Sampling

The sample included media professionals working in various media institutions in France, Egypt, and UAE. The sample consisted of 300 media professionals, including 100 from Egypt, 100 from France, and 100 from UAE, according to convenience sampling method. The three countries were chosen considering that each country represents a different continent so that we can compare the rate of use of AI techniques and the rates of anxiety about professional future among the respondents. Also, these three countries are considered the original homeland and place of residence for each of the researchers conducting the current study.

Table 1 shows that the percentage of males represents 72.7%, whereas the percentage of females represents 27.3%. Regarding the media institutions in which the respondents work, they were represented by satellite channels with a percentage of 30.7%, followed by electronic newspapers and news websites with a percentage of 29.3. %, then new media services and social networks with a percentage of 14.3%, followed by workers in public relations institutions with a percentage of 11.7%. This is followed by workers in news agencies with a percentage of 8.0%, then interactive radio with a percentage of 4.0%, and finally workers in advertising agencies with a percentage of 2.0%.

Table 1. Characteristics of respondents

Variable	Category	Frequency (n)	Percentage (%)
Sex	Male	218	72.7
	Female	82	27.3
Media organization they work for	Online journalism & news website	88	29.3
	Satellite channel	92	30.7
	Interactive radio	12	4.0
	News agency	24	8.0
	Advertising agency	6	2.0
	Institutions working in field of public relations	35	11.7
	New media services & social media	43	14.3
Qualification	University degree	151	50.3
	Postgraduate qualification (diploma, master's, & PhD)	149	49.7
Years of experience in media field	Less than five years	50	16.7
	From five years to less than 10 years	63	21.0
	10 years & more	187	62.3
Country	Egypt	100	33.3
	Emirates	100	33.3
	France	100	33.3
Total		300	100

The academic qualifications of the respondents included university qualifications at a rate of 50.3%, followed by holders of post-graduate degrees (master & PhD) at a rate of 49.7%. As for the variable of the years of experience, 62.3% of the research sample had more than 10 years of experience in the media field. This is followed by those with experience (from five to less than 10 years) representing 21.0%, then those with less than five years of experience representing 16.7%.

Data Collection Tools

The researchers designed a questionnaire to collect data. The questionnaire included various questions that aimed at identifying the degree of employment and use of AI technologies within media institutions in the three countries, and the most prominent technologies used, as well as the forms of their use.

The first part of the questionnaire is related to the basic data of the research sample, such as type, media institution in which the respondent works, educational qualification, years of experience, and the country to which the sample members belong.

The second part included questions aimed at identifying AI technologies used by individuals and institutions and their forms, the rate of their use, and the form of content produced through these technologies (questions 1-4), in a way that serves the objectives and hypotheses of the research, in addition to another question aimed at evaluating AI technologies (question 5).

The construction of the questionnaire was based on the main objectives of the research and review of previous studies (Abd Al-Latif, 2021; Abdel Hamid, 2021; El-Saman, 2022; Karnouskos, 2020). The third part included (professional future anxiety scale), which consisted of 23 statements based on a three-Likert scale (3=agree, 2=neutral, 1=disagree). The scale included three dimensions: (fear of the professional future), namely the items (1-7), (the ability to face pressures and difficulties), namely the items (8-17), and finally the third dimension (the attitude towards the profession and its future), the items (18-23). The researchers designed the scale based on several studies (Hamama, 2023; Jabr, 2021; Shabahang, 2021; Yu-Yin, 2022; Zaleski, 2017). To verify the validity and reliability of the questionnaire, the researchers applied the questionnaire to an exploratory sample consisting of 40 media professionals from outside the main sample. In addition to calculating reliability for the total sample.

Validity

The internal consistency validity was calculated using Pearson correlation coefficient as an indicator of the validity of the questionnaire and the scale of professional future anxiety. The significance values of the correlation coefficient of the questionnaire questions ranged between 0.78 and 0.86, whereas the correlation coefficient for the scale ranged between 0.88 and 0.93 regarding the degree of the correlation of the items with the total score of the scale. The value of the correlation coefficient between the degree of correlation of the first dimension with the total score was 0.81, the second dimension was 0.88, and the third dimension was 0.77. Thus, all correlation values indicate that the research instrument has achieved high validity.

Reliability

Cronbach's alpha was used to verify the of the questionnaire. The reliability values for the questionnaire questions reached 0.83, whereas the overall reliability score for the professional future anxiety scale reached 0.86, while the reliability value for the total sample (300) was about 0.90 for the questionnaire, and 0.89 for the professional future anxiety scale.

Data Analysis

After verifying the validity and reliability of the questionnaire, it was revised and translated into French to be compatible with the French sample. Then the questionnaire was used in each researcher's country, and after collecting the data, it was coded and encoded so that the questionnaire items were coded according to their type, and the data related to the professional future anxiety scale was also coded according to a three-Likert scale. After completing the data coding process and entering it into the program, it was analyzed, and the statistical results were extracted using statistical package for social sciences (SPSS V. 28). First, a test was conducted to verify the normal distribution of the data, and it was clear that the data follow a normal distribution, in addition to Person correlation coefficients to calculate the validity of consistency and relationships between variables, and Cronbach's alpha to calculate reliability, as well as frequencies and percentages to describe the characteristics of the research sample. Mean and standard deviation were also utilized to verify the ranks of the statements. Besides, one-way ANOVA, post-hoc Scheffe test as well as simple linear regressions analysis were followed in this study. Before conducting the statistical analysis, the necessary tests were applied to confirm the presence of univariate and multivariate outliers. It was found that there were no univariate and multivariate outliers regarding the items of the questionnaire form and the scale in any of the forms that were applied.

RESULTS

We present results of the statistical analysis of the questionnaire items, the anxiety of professional future scale, and the verification of hypotheses, **Table 2** shows that 42.0% of the respondents' organizations employ AI techniques with a low percentage, 37.7% with a moderate degree, and finally with a high percentage 20.3%.

Table 2. Degree of employing AI techniques in creating media content

Alternatives	Frequency (n)	Percentage (%)	Ranking
High	61	20.3	3
Moderate	113	37.7	2
Low	126	42.0	1
Total	300	100	

While that **Table 3** shows that 34.3% of the respondents personally use AI technologies with a moderate degree, then those who use them with a low degree (34.3%), then those who use them with a high degree (21.7%), whereas those who do not use them at all reached 20.3%.

Table 3. Degree of using AI technologies

Alternatives	Frequency (n)	Percentage (%)	Ranking
High	65	21.7	3
Moderate	103	34.3	1
Low	71	23.7	2
Never	61	20.3	4
Total	300	100	

Table 4 shows that the most prominent AI techniques used within media institutions were techniques for verifying the accuracy of sources, information, and content, techniques for increasing the efficiency of news coverage and processing at a percentage of 61.0%, then the application of (ChatGPT) at a percentage of 59.3%, whereas in the final rank metaverse applications existed at a percentage of 10.7%.

Table 4. Most prominent AI technologies used within media institutions

Alternatives	Frequency (n)	Percentage (%)	Ranking
Techniques for verifying accuracy of sources, information, & content	183	61	1
ChatGPT	178	59.3	2
Techniques to increase efficiency of news coverage & processing	183	61	1
CopyAI technology	33	11	9
Chat technologies & automated responses	105	35	3
OpenartAI graphic creation technology	60	20	6
Visual story writing app TomeAPP	60	20	6
Kaiber video creation technology	92	30.7	4
Leiapix converter 3D image creation technology	47	15.7	8
Fliki reel creation technology	62	20.7	5
Writing notes using FireFlies technology	49	16.3	7
Runway video editing technology	105	35	3
Metaverse applications	32	10.7	10

Table 5 shows that the most prominent uses of AI technologies within media institutions were represented by detecting false content, verifying the accuracy of sources with an average of 2.29, then increasing the efficiency of news coverage with an average of 2.26, whereas in the last ranking was the automating processes of professional and routine news production with an average of 2.05.

Table 5. Frequency, mean, standard deviation, & ranking of most common uses of AI in media institutions

Items	M	SD	R	DS
Collecting data and accessing various sources of information	2.20	.78	4	Moderate
Verifying the accuracy of the information	2.24	.81	3	Moderate
Verifying the accuracy of sources	2.29	.77	1	Moderate
Producing various media arts & supporting them with appropriate backgrounds & details	2.29	.78	1	Moderate
Translating various news and information into several languages	2.17	.78	5	Moderate
Determining the appropriate audience for the media services provided	2.12	.83	6	Moderate
Automate professional processes and routine news production	2.11	.79	7	Moderate
Transcribing the content of the interviews and obtaining ready-made transcripts	2.05	.79	9	Moderate
Enhancing the quality of the institution's media production	2.10	.79	8	Moderate
Increasing its production capacity	2.20	.79	4	Moderate
Assisting in managing and organizing media content efficiently	2.17	.78	5	Moderate
Increasing the efficiency of news coverage	2.26	.77	2	Moderate
Average	2.18	.78		Moderate

Note. M: Mean; SD: Standard deviation; R: Ranking; & DS: Degree of satisfaction

As for **Table 6** it shows that 57.0% of the respondents believe that the use of AI technologies in the field of media work facilitated the process of producing media content and managing media institutions. This is

followed by those who believe that it does not have a significant impact so far at a percentage of 28.0%. Finally, those who believe that the introduction of AI made it difficult for media work and created a competition with people by 15.0%.

Table 6. Perspectives of respondents toward using technologies of AI in media field

Alternatives	Frequency (n)	Percentage (%)	Ranking
Facilitated process of producing media content & managing media institutions	171	57.0	1
Made media work difficult & created competition with human element	45	15.0	3
It has not affected a lot till now	84	28.0	2
Total	300	100	9

Table 7 shows that the overall average of professional future anxiety was 2.21, which is a score that indicates an average level of professional future anxiety among the respondents. The statement (the presence of the human element is indispensable within media institutions) came in the first place with an average of 2.66, whereas the statements (I am afraid of failing to form successful work relationships, my view of my professional life has become more pessimistic) were with an average of 1.86.

Table 7. Frequency, mean, standard deviation, & ranking of professional future anxiety

Items	M	SD	R	DS
Professional future is uncertain as AI is used in media organizations	2.38	.77	7	High
I feel afraid of losing my job in the future due to technology use in media	2.06	.81	18	Moderate
I believe that artificial intelligence will replace the human element in the future	1.93	.80	21	Moderate
The presence of the human element is indispensable within media institutions	2.66	.63	1	High
AI technology has made it easier for humans to work and will not replace it	2.58	.64	2	High
I do not feel safe while thinking about my future career	2.02	.78	19	Moderate
My outlook on my career has become more pessimistic	1.86	.80	22	Moderate
I am not concerned about introducing artificial intelligence technologies to media institutions, but I am thinking about how to employ them to serve me	2.45	.74	4	High
I feel uncomfortable whenever I think about my career	1.98	.82	20	Moderate
My inability to face the difficulties in my professional career annoys me	2.09	.80	16	Moderate
The pressures and difficulties that workers in media organizations are currently facing deepen my anxiety about my future	2.22	.78	10	Moderate
I am afraid of failure to form successful business relationships	1.86	.81	22	Moderate
I am concerned that my income will decrease in the future due to the use of artificial intelligence technologies	2.12	.76	14	Moderate
I do not think about my future career; I just focus on thinking about present moment	2.18	.80	12	Moderate
Media work has become easier with the use of artificial intelligence technologies	2.43	.69	6	High
Many current media professions will disappear in future & will be replaced by AI	2.35	.72	8	High
The difficulties faced by workers in media institutions at present make me lose my enthusiasm and passion to continue working in the future	2.15	.76	13	Moderate
Current economic conditions make me more concerned about my career future	2.32	.77	9	Moderate
I get anxious when time passes without achieving my goals	2.41	.72	5	High
Working allows me to form effective working relationships within the community	2.51	.66	3	High
My specialty includes a large number of employees, which makes it difficult to continue and compete in the future	2.10	.77	15	Moderate
Work provides with what secures my income and my family in the future	2.20	.76	11	Moderate
Media work will change for the worse due to artificial intelligence	2.07	.77	17	Moderate
Total	2.21	.75		Moderate

Note. M: Mean; SD: Standard deviation; R: Ranking; & DS: Degree of satisfaction

The first hypothesis: There is a statistically significant relationship between utilizing AI techniques in media institutions and the professional future anxiety among media professionals in France, Egypt, and UAE.

Table 8 shows the existence of a positive statistically significant correlation between utilizing AI techniques in media institutions and professional future anxiety among media professionals in France, Egypt, and UAE. This means that the higher is the rate of media organizations in employing AI techniques, the more it will contribute to increasing the rates of professional future anxiety among the respondents.

Table 8. Pearson correlation analysis for relationship between utilizing AI techniques in media institutions & professional future anxiety

Variables	Utilizing AI techniques in media institutions		
	Correlation value (R)	Significance (p)	Type of significance
Professional future anxiety	0.518**	0.00	Statistically significant

The second hypothesis: There are statistically significant differences between the media professionals in both the degree to which their organizations employ AI techniques and their level of anxiety about their professional future according to the country variable (France, Egypt, and UAE).

Table 9 shows that there are statistically significant differences among the media professionals in the degree to which their organizations employ AI techniques according to the country variable. However, no differences existed among media professionals in their level of anxiety about their professional future according to the country variable. To determine the direction of the differences according to the country variable and to know which differences would be in favor of any country, a post-hoc comparison test (Scheffe Post Hock) was conducted, as shown in **Table 10**.

Table 9. One-way ANOVA in AI techniques & future anxiety

Variables	Source of contrast	Sum of squares	df	Mean square	F	Sig. (p)
Utilizing techniques of AI	Between groups	6.207	2	3.103	5.52**	0.010
	Within groups	166.710	297	.561		
Professional future anxiety	Between groups	265.820	2	132.910	1.45	0.236
	Within groups	27,166.060	297	91.468		

Table 10. Results of post-hoc Scheffe test

Utilizing AI techniques	Mean	Egypt	France	UAE
Egypt	1.73	-	-.250	.090
France	1.92		-	
UAE	1.64		.340*	-

Note. *Significant at a level of 0.05

After applying post-hoc Scheffe test, by checking the income averages, it will become clear that there are statistically significant differences among the media professionals in favor of the French sample. This means that media professionals in France believe that their institutions employ AI techniques to a greater extent compared with media professionals in Egypt and UAE. **Figure 1** shows one-way ANOVA among the respondents in Egypt, France, and UAE.

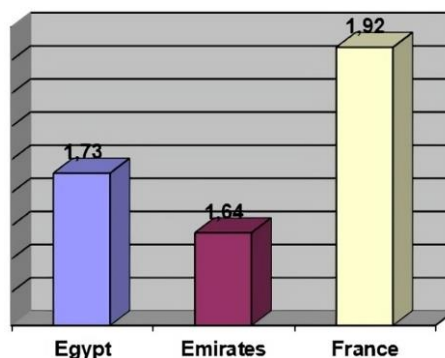


Figure 1. One-way ANOVA among respondents in Egypt, France, and UAE (Emirates) (Source: Authors)

Third hypothesis: The intensity of the utilizing of AI technologies in media institutions contributes to effecting anxiety about the professional future among media professionals in France, Egypt, and UAE.

Before conducting the regression analysis, the main regression assumptions of linearity, homoscedasticity, and multicollinearity were verified, and with regard to linearity, it was proven that there was a statistically significant linear correlation between the independent and dependent variables at 0.01 level and its value reached 0.51, proving the existence of linearity, which has also been proven by using simple scatter.

The condition of homoscedasticity and the absence of extreme values that prevent the analysis were also verified through Kolmogorov-Smirnov test and the value of kurtosis and skewness, which indicated the presence of homogeneity. Multicollinearity was also verified through the value of VIF, which reached one,

which indicates that there is no problem of multicollinearity, and thus the conditions for regression analysis were met.

Based on **Table 11**, the independent variable (utilizing of AI technologies by media institutions) contributed to the variance of the dependent variable (professional future anxiety), where the variance commitment (R) between the two variables reached 0.518, and the entire variance value (R2) was 0.495. Each of the value of the t-test and the F-test were statistically significant at the level of 0.01. Therefore, the concern about the professional future of media professionals in France, Egypt, and UAE is affected by the intensity of their institutions' use of AI technologies.

Table 11. Simple linear regressions of independent variable & dependent variable

Independent variable	Dependent variable	R	R2	B	Beta	F-value	t-value	Significance (p)
Utilizing AI techniques	Professional future anxiety	0.518	0.495	0.559	.518	17.54**	35.37**	0.00

DISCUSSION

The current study aimed to measure the relationship between the use of AI technologies in media institutions and professional future anxiety among a sample of media professionals in France, Egypt, and UAE. It also aimed to find out the extent to which their professional future anxiety can be predicted through the intensity of the use of AI technologies in the media institutions in which they work.

The study found that there is a statistically significant positive correlation between the intensity of employing AI technologies in media institutions and anxiety about the professional future among media professionals in France, Egypt, and UAE. This means that the higher is the rate of media organizations in employing AI technologies, the more this contributes to an increase in the rates of professional future anxiety among the respondents. However, the largest percentage of the respondents (57.0%) believe that the introduction of AI technologies has facilitated the process of producing media content and managing media institutions, which is consistent with a study by (Zomeño & Blay-Arráez, 2021). However, this did not prevent the existence of indicators of anxiety about their professional future. Their feeling of future anxiety about their jobs may be related to their perception of what AI technologies offer at present. With the many tasks that AI technologies perform for individuals and institutions at present, this may push institutions to rely on them increasingly in the future. This will be at the expense of the human element. Therefore, the ease associated with using these technologies may be linked to future fears by those working in institutions regarding the future of their profession and the nature of their jobs.

Therefore, the results confirmed the existence of a relationship between the expansion of the employment of AI technologies and anxiety about the professional future among workers in these institutions, The relationship was significant at the 0.01 level with a value of 0.518 according to Pearson correlation. This result is consistent with a previous study (Al-Makawi & Abdel Hamid, 2021), which confirmed the existence of a correlation between the level of anxiety of those in charge of communication towards AI applications and their attitudes toward their role in developing work in media institutions. This result also implicitly agrees with another study (Mansour, 2021), as well as a study by Oracle (2023), which indicated that 67.0% of French consider AI a direct threat to their jobs. In contrast, this result does not agree with other previous studies (Mousa, 2021; Muhammad, 2018), which reflected positive trends towards employing AI in media institutions.

The results also showed that media institutions have started employing AI technologies in the modern era, but in varying proportions based on each institution and country. The results indicated that France is the most employing AI technologies within its media institutions. This may be due to the tremendous technical and technological boom that France is experiencing as one of the leading countries in the field of technology. It is a European Union country and possesses a large number of media means and satellites. It also has a pioneering role in the field of AI compared with several European countries, and it seeks to be the leader in AI in Europe according to Artificial Intelligence in France Report (2023). Further, it will host the next session of the International Summit on Artificial Intelligence in Paris during the first six months of 2024 (Artificial Intelligence, 2023).

Egypt ranked second in terms of employing AI technologies in the media. Recently, Egypt has showed interest in employing technology in general in media institutions and has shifted significantly to digital

journalism and social media. Besides, it has been interested in establishing departments concerned with SEO and algorithmic journalism (Fayez, 2022). However, UAE ranked last although UAE has significantly transformed into a digital country in terms of infrastructure and construction and its interest in technology in recent years, according to the report of UAE Ministry of Economy on the reality of AI in UAE (Majid, 2018; Shelly, 2022).

However, this development has not reached media institutions sufficiently, as AI is still in its infancy and is not receiving sufficient acceptance within Emirati media field, which is consistent with a study by (Al-Makawi & Abdel Hamid, 2021), which emphasized the weakness of the use of AI applications within Emirati media institutions, and the refusal of journalists as well as media professionals to accept a robot as a boss or a colleague at work (Abd Al-Latif, 2021; Abdel Hamid, 2021).

The results of ANOVA test indicated that there were no statistically significant differences in the level of professional future anxiety in favor of any of the media professionals in France, Egypt, and UAE, thereby reflecting similar levels of feeling of professional future anxiety among the respondents in different countries. The score on the professional future anxiety scale expressed a medium to high levels of anxiety among media professionals, which is implicitly consistent with a study by (Shabahang, 2021; Yu-Yin, 2022).

Besides, the results reflected the validity of the hypothesis stating that anxiety about the professional future among media professionals in France, Egypt, and UAE would be predicted through the extensive use of AI technologies by media institutions. This means that the use of AI technologies by media institutions in each of the three countries contributes to predicting an increase in the rates of anxiety about the professional future among the respondents. This is logically associated with the result of the basic hypothesis of the study.

The existence of a correlation between the intensity of organizations' employment of AI technologies was directly linked to the feeling of anxiety about the future. Accordingly, the regression analysis proved that there is a contribution of employing AI technologies within media institutions to the feeling of anxiety about the professional future among media professionals working in those institutions. This result is consistent with many studies that have linked between media and psychological variables (Boukes & Vliegthart, 2017; Shabahang, 2021; Shi et al., 2019).

Further, the results showed that the most prominent AI technologies used within media institutions were techniques for verifying the accuracy of sources, information, and content, and techniques for increasing the efficiency of news coverage and processing), then the application of (ChatGPT). Moreover, the most prominent uses of these techniques were detecting false content and verifying sources, and such findings are consistent with the results of (Al-Makkawi & Abdel Hamid, 2021), whereby techniques for detecting false content were the most widely used, and this is consistent with the study of Jarrah et al. (2023) and Naidu (2023), which confirmed the importance of applying ChatGPT and the increasing dependence on it in varied fields.

CONCLUSIONS

This study aimed to measure the relationship between employing AI techniques in media institutions and professional future anxiety among media professionals in France, Egypt, and UAE. The study also aimed to predict professional future anxiety among the respondents through the intensity of employing AI techniques in various media institutions at present. The number of the respondents was 300 media professionals, and the study listed several conclusions.

There is a statistically significant direct correlation between the use of AI techniques in media institutions and professional future anxiety among media professionals in France, Egypt, and UAE. It has also been proven that there are differences in the degree to which media institutions employ AI techniques in favor of France. In contrast, no differences have been proven in the level of professional future anxiety among media professionals based on the country variable. The degree of anxiety about the professional future among the respondents was medium, which was close to high. The results also confirmed that the extensive employment of AI technologies by media organizations contributes to predicting future professional anxiety among the media professionals participating in the study.

The results confirmed the availability of AI technologies in media institutions in the three countries, but in varying degrees, with France occupying the leading position, then Egypt, and finally UAE. The most prominent

technologies and applications employed by media institutions and used by the respondents were techniques for verifying the accuracy of sources, information, and content, and techniques for increasing the efficiency of news coverage and processing, ChatGPT application, Runway video editing technology, chat techniques and automated responses with the audience). The most prominent uses of AI techniques within media institutions were detecting false content and verifying the accuracy of sources with an average of 2.29, then Increasing the efficiency of news coverage, collecting data, accessing various sources of information, and verifying the accuracy of the information.

Recommendations

It is important to spread the culture of digital transformation and the use of AI within media institutions in Arab countries, specifically in UAE. Media institutions need to encourage their workers to employ technology in performing their tasks, while emphasizing the importance and value of the human element in a way that contributes to reducing workers' fears about their professional future. Developing programs and systems within newsrooms in the Arab region to be able to deal with AI technology tools and their constantly changing requirements. also It is important for media professionals to equip themselves with modern digital technology skills and to deal with AI aspect as a means to improve media production, and as motivation and incentive to develop themselves and enhance their skills. and It is necessary to include information awareness skills regarding technological innovations in the field of media within the training programs of all media institutions. It is also important to pay attention to the skills of dealing with AI techniques within academic qualification programs within media academic curricula, and A necessity arises for conducting more studies that address this modern and important field. The future of electronic websites depends largely on technical mastery and understanding of the nature and characteristics of the digital environment. Therefore, the future of digital media will depend on the awareness of the communicator in the press institution about recent aspects of this digital environment, which requires conducting further studies, The study also recommends conducting more qualitative research with experts in the field of digital media. To share their future vision about AI within media institutions.

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