

Health Professionals' Perspective in the Context of Social Media, Paranoia, and Working Autonomy During the COVID-19 Pandemic Period

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Cite this article as: Düzcü T, Demir Uslu Y, Yıldırım O. Health professionals' perspective in the context of social media, paranoia, and working autonomy during the COVID-19 pandemic period. *Arch Health Sci Res.* 2023;10(1):30-37.

30

ABSTRACT

Objective: The purpose of this study is to reveal the views of health professionals on social media use, paranoia, and work autonomy during the COVID-19 pandemic. For this purpose, a questionnaire was applied to the healthcare workers who accepted voluntary participation with the convenience sampling method, and the research data were collected.

Methods: In the study, a sample of 302 healthcare workers in 3 tertiary level foundation university hospitals and a secondary-level private hospital, who accepted to participate in the survey voluntarily, is included by convenience sampling. Data were collected using a questionnaire prepared according to a 5-point Likert scale consisting of 3 different scales. Structural equation modeling was done with the help of AMOS program.

Results: Data were analyzed statistically. The mediating role of Paranoia Scale sub-dimensions (F1 and F2) in the effect of social media utility and social media anxiety variables, which are Social Media Use scale sub-dimensions, on working autonomy variable was investigated. Cronbach's alpha values of the scales used in the study are at "high reliability level." In the combined reliability values, since composite reliability > 0.70 was found for all variables, the combined reliability condition was met. The necessary condition (average variance extracted > 0.40) was considered sufficient for the mean explained variance values (average variance extracted > 0.50) for all variables or for convergent validity when it was present in all variables (composite reliability > 0.70).


Conclusion: It was found that F1 variable, one of the sub-dimensions of paranoia Scale, had full mediating role on social media utility variable of working autonomy variable and that F2 variable had full mediating role in the effect of social media utility variable on working autonomy variable. It was also determined that the F1 variable did not have a mediating role in the effect of the social media anxiety variable on the working autonomy variable, and the F2 variable had a full mediation role in the effect of the social media anxiety variable on the working autonomy variable. Only healthcare professionals in İstanbul and 4 different private hospitals were included in the study. Expanding the study in public hospitals and with other private hospitals will provide more information on the subject. It is thought that this research will be an original study in terms of getting the opinions of healthcare professionals, especially during the COVID-19 pandemic process. There is no similar study in the literature using the variables and models which were used in this study.

Keywords: COVID-19, health worker, working autonomy, social media, paranoia

Introduction

The World Health Organization announced a pandemic due to COVID-19 infection caused by coronavirus 2 (SARS-CoV-2) which originated in China in December 2019. Many countries have taken a number of measures to fight this disease and continue to take further measures, although less stringent. At the early stages in particular, the hospitals increased their capacities and health professionals demonstrated active involvement in the field to combat this disease.¹ During this period, health professionals faced certain physical and psychological challenges. They were forced to cope with certain negative thoughts and behavior such as paranoia caused by increased workload and flexible working. However, the human factor is essential in the provision of healthcare services. Health professionals' communication with patients and their attitude toward patients as well as their general behavior positively affect patient satisfaction. To render this interaction positive, the healthcare institution must employ good

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Received: April 26, 2022
Accepted: October 3, 2022

number of healthcare personnel who are not only qualified in their field but also who work in a positive organizational climate with high level of job satisfaction, self-confidence, creativity, and most importantly, happiness. It is imperative that these professionals have high working autonomy and be free of any negative emotions including anxiety, paranoia, fear of job loss, distress, intimidation, or burnout to create this positive organizational climate.^{2,3} The purpose of the present study is to analyze the views of key people in this period of infectious diseases such as physicians, nurses, healthcare personnel, other healthcare workers, medical secretaries, and healthcare directors on working autonomy and paranoia as mediator variable and to assess these using 4 different scales from the international index to shed light on its social implications. It is thought that this study is authentic in its enquiry into the thoughts of healthcare professionals, especially through the COVID-19 pandemic. The literature lacks a similar study that uses the variables and models used in this study.

Throughout the pandemic, healthcare professionals had to continue to work, whereas professionals in other sectors were allowed to suspend work. The paranoia variable was included in the study with the assumption that the obligation to continue to provide services to patients, even when the cause of the pandemic was still unknown, might lead healthcare professionals to a series of negative thoughts, especially the fear of death. The concept of *paranoia*, which has different definitions in multiple sources, can be summarized in general as one's irrational thought that other people have a tendency toward committing destructive, ill-intentioned, humiliating behavior to one's self. These paranoid thoughts may manifest themselves in various psychopathological forms. These thoughts range from thinking that other people are talking about one's self to even causing actual distress, harm to the paranoid individual, and conspiracy theories. As these develop further, the level of paranoia also increases and may give rise to a set of negative thoughts including distrust, suspicion, and threat on the part of the paranoid individual and the people around him/her.⁴

Termed as organizational paranoia when it occurs in an organizational setting, this concept implies that employees may engage in paranoid behavior with their colleagues and supervisors as well as their customers and competitors. Such thoughts and behaviors will negatively affect the organizational climate of the institution, which will produce further negative results both in the internal and external sphere.⁵ It is likely that the death anxiety and the risk of infection caused by the COVID-19 pandemic have given rise to such negative emotions including fear of losing loved ones, anxiety, distress, and burnout.⁶

In a 2020 study conducted with healthcare professionals in China, it was demonstrated that a significant portion of healthcare professionals in many regions of China suffered from symptoms of depression, anxiety, insomnia, and disturbance. The rate of these symptoms was found to be higher in women, nurses, residents of Wuhan, and actively working healthcare professionals.⁷ A 2021 study conducted with healthcare professionals reported that "burnout and depression scores in healthcare professionals in direct contact with COVID-19 patients are higher in comparison to healthcare professionals who did not work in contact with COVID-19 patients. And the level of job satisfaction was also found to be significantly higher in those working in direct contact with these patients."⁸

The COVID-19 pandemic has also naturally resulted in increased use of social media by people who were faced with a disease and the cause of which was yet unknown. It was assumed that the use of social media will lead to the circulation of information as well as misinformation among healthcare professionals, which also caused changes in their moods. It was observed that the pandemic has particularly led to

increased use of social media by healthcare professionals.⁹ The rate of *social media use* is rising in Turkey as it is in the rest of the world. In its annual report on the use of new media, We are Social Digital states that the increase in use of social media in Turkey is in line with the increase in the rest of the world and even higher than the world average in some aspects.¹⁰ A considerable body of literature involves the study of these social networks with a focus on the reasons why users value these networks, frequently used jargon used on these networks as well as reasons why these networks are used. Having first emerged in 1997, these social networks have continuously increased the number of their users to this day. Users of these networks engage in a 2-way communication among themselves.¹¹ Used in various forms in all demographic categories, these platforms are also widely used by healthcare professional today. Healthcare professionals are able to socialize, especially via groups for various professions and themes on platforms such as Facebook as well as on microblogs such as Twitter and on platforms such as Instagram for general use. Throughout the COVID-19 pandemic, these platforms have shown the effects of globalization in the event of a pandemic where country borders are irrelevant as well as the fact that such platforms can be used as mediums where healthcare professionals can communicate with each other and public sources of reliable information on pandemic and the ways to protect oneself from it.¹² Review of psychiatric studies on social networks revealed that these networks served as useful communication platforms for teenagers with psychiatric disorders, especially for reflecting the emotion of distress.^{11,13} Similarly, it is thought that posting on these platforms has proven helpful for healthcare professionals with negative emotions when they are not actively working in the field during the pandemic.

The Social Media Use Scale used in this study has 2 sub-dimensions. One of them is *social media anxiety* which indicates anxiety during the use of social media, and the other one is *social media utility*. Social media utility sub-dimension was chosen to assess active participation in social media instead of assessing the time spent on social media platforms which would indicate passive observation.¹³

As in all other sectors, COVID-19 led healthcare professionals to think of new modes of working. The isolated way of life necessitated by the COVID-19 pandemic was also being demanded by healthcare professionals. Working autonomy was included in the study as a variable based on the assumption that it can be thought of as a solution to address these demands. The literature provides various definitions of working autonomy. Considered as a significant external job resource, the concept of working autonomy signifies an employee's level of freedom, discretion, and independence when making decisions on work methods, time management, and other issues.¹⁴ Alternatively, it is defined as a way to increase motivation by means of allowing individuals' freedom in each stage of work management and appreciating them in return for their work.¹⁵ In other words, working autonomy means an individual's freedom to make independent decisions and use discretion in the planning, project design, execution, and other stages of any task.¹⁶ As per these definitions, the employees' independence and freedom to take action in their work environments is what underlies the concept of *working autonomy*. However, as teamwork is essential in the healthcare sector, freedom in its fullest sense is not possible in healthcare. It is essential that freedom is controllable in order to maintain team spirit and synergy. Therefore, it is helpful to determine the level of this flexibility depending on the type of profession and based on the contingency approach. Various studies show that high working autonomy positively affects work performance. Also, employees with high working autonomy are more creative as they can express themselves, their ideas, and their opinions more freely. This allows them to put forward original ideas and communicate their

experiences more effectively. In organizational climates where working autonomy is low, it is the exact opposite. Employees are more intimidated, passive, have lower self-confidence, and adopt more routine methods of working. This leads to a decline in performance and eventually has a negative impact on patient satisfaction.²

As in the present study, a number of studies conducted on nurses, a profession widely investigated in academic research, show that nurses' level of working autonomy has increased with the transition to modern nursing, as in many other professions. The individual with autonomy, which is one of the key attributes of a nurse, is responsible for his or her actions and decisions.¹⁷

One of the issues underlined in a study conducted in the context of remote/flexible working during the pandemic was working autonomy, which is one of the virtual modes of working. Autonomy is an important factor in improving the individual's internal motivation and self-efficacy and reinforcing positive impacts. At this point, it also plays a crucial role in encouraging proactive motivation in the individual's relationship with colleagues and superiors and reducing the feeling of loneliness.¹⁸ Thanks to self-motivation achieved through autonomy, the individual's level of commitment also equally rises. A study by Ilardy¹⁹ has demonstrated that there is a positive and significant relationship between employees' experience of working autonomy and their mental health. Thus, improved mental health will also positively affect working autonomy. To achieve this, it is of paramount importance to keep organizational communication clear and transparent, to make sure it is free of any elements that will cause paranoia, and in summary, to maintain a positive organizational climate.

Methods

Study Design

In this non-experimental, cross-sectional survey study, data collection was performed between September 2020 and May 2021. The participating healthcare professionals working in secondary and tertiary healthcare institutions were contacted via online surveys. The study was approved by İstanbul Medipol University Ethics Committee for Scientific Research in Social Sciences under decision no. 43037191-604.01.01-E.41226 dated August 27, 2020.

Participants

The study population comprised 3000 patients in total from 3 tertiary foundation university hospitals and 2 secondary private hospitals in İstanbul. And the study sample comprised 302 healthcare professionals (age range, 18-65) who gave consent to voluntary participation in the survey from 1 tertiary foundation university hospital in the European side of İstanbul and from 2 tertiary foundation university hospitals and 1 secondary private hospital in the Asian side of İstanbul.

Data Collection Tools

The data were collected by convenience sampling using the online survey designed with a 5-point Likert scale. Convenience sampling is a method frequently used by researchers since it is easy to perform and comparably less costly than other methods. Researchers are free to include in the study whomever they want to. The underlying principle of convenience sampling is that the participants responding to the survey are included in the sample.

The survey involved 4 different international scales used in indexed publications in the literature with proven reliability and validity. These data collection scales were selected from journals indexed in Social Sciences Citation Index (SSCI), Science Citation Index Expanded (SCIE) and SCOPUS. "Social Media Utility Scale" developed by van Van Schalkwyk et al in 2017,¹³ "Working Autonomy Scale" developed by Ilardi et al.¹⁹ and "Paranoia Scale" developed by Gumley et al⁴ were

taken from the literature as data collection tools. Expressions in the original scales were translated and back-translated and the translations in Turkish adaptations were checked by 2 faculty members specializing in foreign languages. Turkish adaptations of these scales were reviewed. The question form comprises 54 items, excluding demographic data.

Statistical Analysis

Data collected through the survey were analyzed and interpreted using Statistical Package for Social Sciences for Windows 25.00 (IBM SPSS Corp., Armonk, NY, USA) and AMOS 24.0. AMOS software was used for structural equation modeling. Structural equation modeling is used to check for the presence of linear relations between latent variables and observed variables.²⁰

Confirmatory factor analysis was used as the measurement model for the scales used, which are Social Media Use (SMU), Working Autonomy (WA), and Paranoia Scale (PS). Reliability, convergent, and divergent validity analysis was carried out before the model test by calculating Cronbach's alpha, average variance extracted (AVE), and composite reliability (CR) values. In the study model, the mediating role of PS sub-dimensions (F1 and F2) in the effect of SMU and SMA variables, which are SMU scale sub-dimensions, on WA variable was investigated. Graphical representation of the study model is given in Figure 1.

Results

Demographic Characteristics of Participants

A sample comprising 307 healthcare professionals was contacted for the survey conducted in 1 tertiary foundation university hospital in the European side of İstanbul and in 2 tertiary foundation university hospitals and 1 secondary private hospital in the Asian side of İstanbul between September 2020 and May 2021. As the response rate for the 5 surveys was found to be low, these were not included in the analysis. The total number of participants in all analyses was 302.

Of the 302 participants, 19.5% were male and 80.5% were female. Distribution based on marital status showed that 68.9% of the participants were single, 31.1% were married. Distribution based on educational background showed that 16.2% of the participants were high-school graduates, 69.2% had associate or undergraduate degrees, and 14.6% had postgraduate degrees (Table 1).

Percentage of positions held by our participants was 1.7% as physician, 12.6% as nurse, 37.4% as healthcare manager, 3% as technician, and 45.4% as other personnel. Upon examination of job branches of our participants, we have found that the majority were under

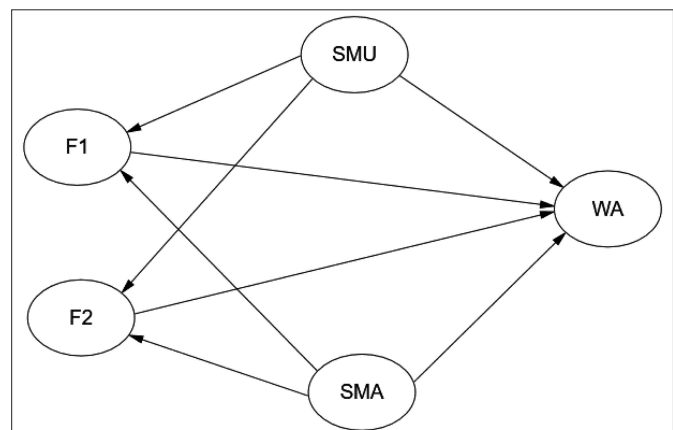


Figure 1. Graphical representation of the research model.

Table 1. Socio-demographic Characteristics of Participants

Demography		n	%
Gender	Male	59	19.5
	Female	243	80.5
Marital status	Single	208	68.9
	Married	94	31.1
Educational background	High school	49	16.2
	Associate or undergraduate degree	209	69.2
	Master's degree or Ph.D.	44	14.6

Table 2. Occupational Status of Participants

Demography		n	%
Profession	Other healthcare personnel	137	45.4
	Physician	5	1.7
	Nurse	38	12.6
	Healthcare manager/healthcare management	113	37.4
	Technician	9	3.0
Experience in the workplace	Less than 1 year	53	17.5
	2-4 years	152	50.3
	5-10 years	81	26.8
	10 years and above	16	5.3
Professional experience	Less than 1 year	40	13.2
	2-4 years	132	43.7
	5-10 years	71	23.5
	10 years and above	59	19.5

the heading of "Healthcare Manager/Healthcare Management" and "Nurse" (Table 2). It is significant that these 2 groups constituted the majority of professionals actively working in the field during COVID-19 pandemic in terms of the results of this study. Moreover, as stated in the limitations of the study, it was difficult to contact physicians during the pandemic to conduct a survey, which is why the percentage of physicians in this study is low.⁸ Distribution of experience in the workplace showed that 17.5% had less than 1 year of experience, 50.3% had 2-4 years of experience, 26% had 5-10 years of experience, and 5.3% had more than 10 years of experience. Distribution of professional experience showed that 13.2% had less than 1 year of experience, 43.7% had 2-4 years of experience, 23.5% had 5-10 years of experience, and 19.5% had more than 10 years of experience.

Research Model

The mediating role of PS sub-dimensions (F1 and F2) in the effect of SMU and SMA variables, which are SMU scale sub-dimensions, on WA variable was investigated. As shown in the original scale, F1: *Survival Strategy* and F2: *Negative Beliefs*. Graphical representation of the study model is given in Figure 1.

Table 3. Reliability and Validity Values of Scales

Dimension	Average	Standard Deviation	SMU	SMA	F1	F2	WA
SMU	3.07	0.79	0.663				
SMA	2.92	0.85	0.468**	0.674			
F1	3.10	0.89	0.292**	0.134*	0.708		
F2	2.94	.85	0.324**	0.306**	0.606**	0.686	
WA	3.46	0.79	-0.099	-0.064	-.0341**	-0.429**	0.678
	Alpha		0.784	0.762	0.829	0.880	0.808
	CR		0.788	0.767	0.834	0.860	0.808
	AVE		0.440	0.455	0.502	0.471	0.461

** $P < .01$; * $P < .05$.

Comp, component; SD, standard deviation; alpha, Cronbach's alpha; CR, composite reliability; SMU, social media utility; SMA, social media anxiety; F1, paranoia Scale sub-dimension; F2, paranoia Scale; WA, working autonomy.

Hypotheses:

- H1: F1 has a mediating role in SMA's effect on WA.
H2: F2 has a mediating role in SMA's effect on WA.
H3: F1 has a mediating role in SMU's effect on WA.
H4: F2 has a mediating role in SMU's effect on WA.

Confirmatory Factor Analysis of Measurement Model

As the model fit indices of the confirmatory factor analysis are χ^2 (617,107), χ^2/df (1,972), GFI (0.865), CFI (0.906), SRMR (0.0675), RMSEA (0.0570) with ($P < .05$), the model is significant. The fit indices of the model are within the acceptable fit range. Two items from the WA scale, 3 items from F1 dimension of the PS sub-dimension, 1 item each from the variables SMU and SMA, which are sub-dimensions of SMU scale, were excluded from the analysis since the standard factor load values were found (FL [factor loads] < 0.50). The parameters and graphical breakdown of the model are given in Appendix Figure 1 and Appendix Table 1.

Combined reliability is within the acceptable range if found (CR ≥ 0.70).²¹ In order for the factors to have discriminant validity in a CFA model, $\sqrt{AVE} >$ must confirm the correlation values in the same column. Since the other parameters of convergent validity were higher than (0.70), AVE ≥ 0.40 was considered to be sufficient.²²

In the study model, the mediating role of PS sub-dimensions (F1 and F2) in the effect of SMU and SMA variables, which are SMU scale sub-dimensions, on WA variable was investigated.

The Cronbach's alpha values of the scales given to the participants are "fairly reliable" since the reliability values of the sub-dimensions of SMU scale were 0.784 and 0.762 for SMA. Paranoia scale is "highly reliable" as the reliability values of its sub-dimensions were (0.829) for F1 and (0.880) for F2. Similarly, WA was found (0.808); therefore, it was considered "highly reliable." Composite reliability values for all variables in combined reliability data were (CR > 0.70), therefore meeting the combined reliability requirement. The convergent reliability requirement was also met since the average variance extracted for all variables was > 0.50 or the convergent reliability requirement (AVE > 0.40) is considered to be met when it is CR > 0.70 for all variables (Table 3).

Path Analysis Model with Observed Variables

Using the model created in the study, average and standard deviations and correlations of all variables were examined in Statistical Package for Social Sciences 25.0. The model in Figure 2 was tested taking into account the path analysis using the observed variables with AMOS 24.0.²³ In addition, the Bootstrapping method was used instead of Sobel test in the model (using at least 5000 resampling for a CI of 95%).

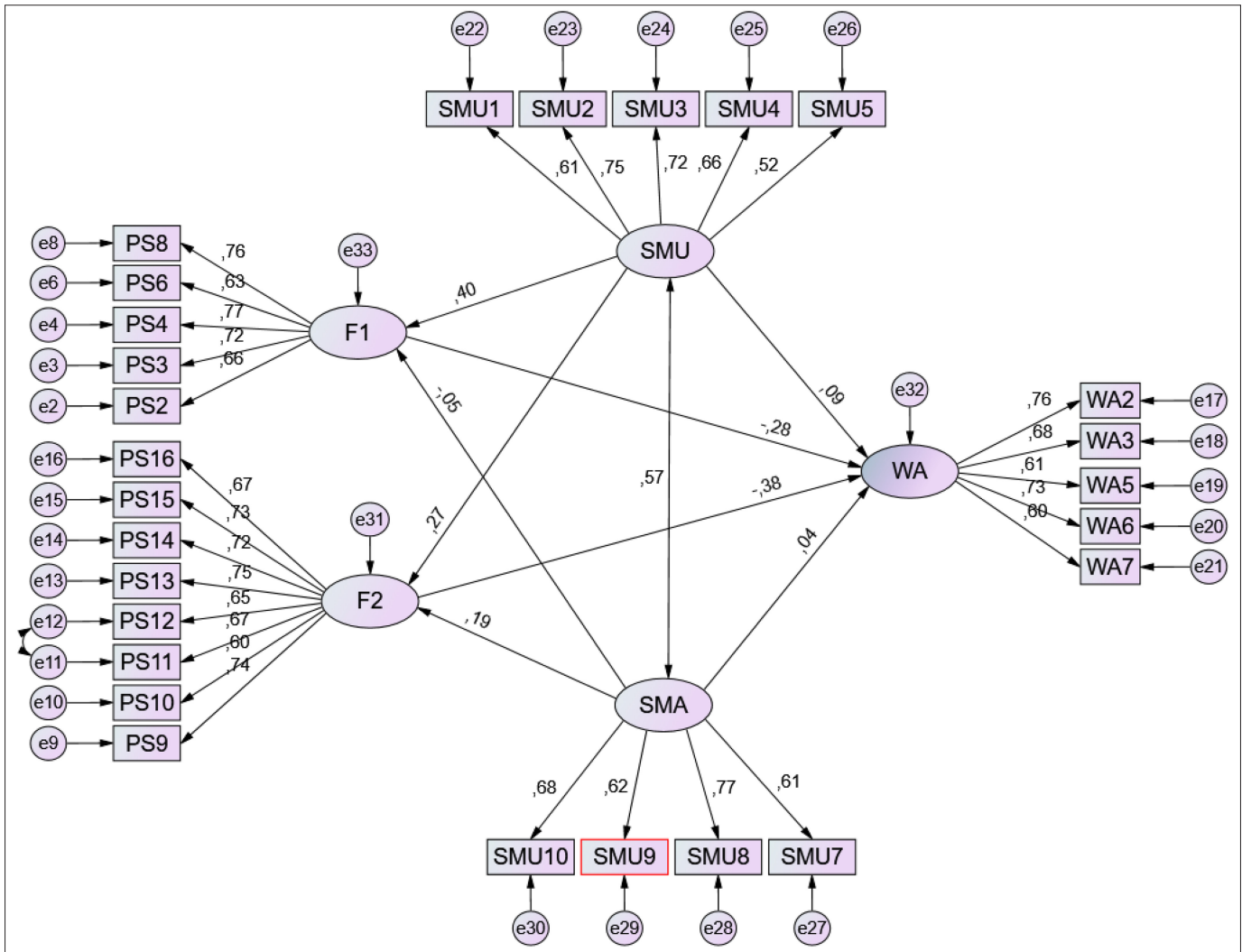


Figure 2. Mediator analysis with observed variables.

Data in Figure 2 are standard estimate values calculated from the model using the Bootstrap method (n = 5000). Test values of the path analysis with latent variables were ($P < .05$) $\chi^2(617, 107)$, $\chi^2/df(1, 972)$, therefore significant. As fit index coefficients (Goodness-of-fit Index [GFI] (0.865), Comparative Fit Index [CFI] (0.906), Standardized Root Mean Square Residual [SRMR] (0.0798), and Root Mean Square Error of Approximation [RMSEA] (0.0570)) were within the acceptable fit range, the model was found reliable. The results of the model estimates and relevant predictive values are given in Table 4.

In the study model, the mediating role of PS sub-dimensions (F1 and F2) in the effect of SMU and SMA variables, which are SMU scale sub-dimensions, on WA variable was investigated. The direct effect of SMU and SMA variables, which are SMU scale sub-dimensions, on WA

variable and the indirect effects of the sub-dimensions (F1 and F2) of PS and their significance levels are given in Table 4.

Table 4. Direct and Indirect Effects with Mediator Variable

Hypotheses	Direct Effect	P	Indirect Effect	P	Result
SMU → F1 → WA	0.093	.404	-0.095	.017*	Full mediation
SMA → F1 → WA	0.036	.727	0.012	.436	No mediation
SMU → F2 → WA	0.093	.404	-0.062	.027*	Full mediation
SMA → F2 → WA	0.036	.727	-0.086	.014*	Full mediation

* $P < .05$.

SMU, social media utility; SMA, social media anxiety; F1, paranoia scale sub-dimension; F2, paranoia scale; WA, working autonomy.

- The direct effect of SMU, one of the sub-dimensions SMU scale, on WA variable is insignificant ($\beta = 0.093$; $P > .05$) and the indirect effect on F1 sub-dimension of PS is inverse and significant ($\beta = -0.095$; $P < .05$). This shows that *F1 variable* (survival strategy) has full mediating role in the effect of SMU variable on WA variable. While SMU variable has no direct effect on WA, its indirect effect through F1 variable is inverse, causing it to decrease (H1: accepted).
- The direct effect of SMU, one of the sub-dimensions of SMU scale, on WA variable is insignificant ($\beta = 0.093$; $P > .05$) and the indirect effect on F2 variable (negative beliefs) of PS is inverse and significant ($\beta = -0.062$; $P < .05$). This shows that *F2 variable* has a full mediating role in the effect of SMU variable on WA variable. While SMU variable has no direct effect on WA, its indirect effect through F2 variable is negative, causing it to decrease (H2: rejected).
- The direct effect of SMA, one of the sub-dimensions of SMU scale, on WA variable is insignificant ($\beta = 0.036$; $P > .05$) and the indirect effect on F1 sub-dimension of PS is insignificant ($\beta = 0.012$; $P < .05$). This shows that *F1 variable* (survival strategy) has no mediating role in the effect of SMA variable on WA variable (H3: accepted).
- The direct effect of SMU, one of the sub-dimensions of SMU scale, on WA variable is insignificant ($\beta = 0.036$; $P > .05$) and the indirect

effect on F2 variable (negative beliefs) of PS is inverse and significant ($\beta = -0.086$; $P < .05$). This shows that F2 variable has full mediating role in the effect of SMA variable on WA variable. While SMA variable has no direct effect on WA, its indirect effect through F2 variable is negative, causing it to decrease (H4: accepted).

Discussion

Perceptions, attitudes, and demands of employees including physicians, nurses, healthcare personnel, other healthcare personnel, medical secretaries, and healthcare managers on their work modes vary during a pandemic. Therefore, the present study is aimed at investigating the nature of this change in the views of employees such as physicians, nurses, healthcare personnel, other healthcare personnel, medical secretaries, and healthcare managers on working autonomy during COVID-19 pandemic. This was investigated using structural equation modeling in order to demonstrate that paranoia and its sub-dimensions are mediating variables in the effect of SMU by healthcare professionals on working autonomy. The fact that the vast majority of the sample comprises healthcare managers is significant in terms of investigating healthcare managers' perspectives on WA. In the context of healthcare administration, their opinions are decisive in order to understand how a positive organizational climate can be created and negative thoughts can be drawn away from the organization as well as how better crisis management can be achieved, especially in extraordinary circumstances such as a pandemic. This is because the confirmation that healthcare managers have high perception in this context indicates that, from the perspective of these variables, healthcare institutions can be managed more effectively and it will be possible to ensure organizational commitment in happier healthcare professionals and to create a sustainable work environment.

It was found that the F1 variable *Survival Strategy*, which is one of the sub-dimensions of PS, has full mediating role in the effect of SMU variable on WA variable. In other words, it was observed that the survival strategy sub-dimension of the PS has a mediating role in the effect of the utility of active involvement in social media on working autonomy. It was determined that F2 variable *Negative Thoughts* had full mediating role in the effect of SMU variable on WA variable, and F1 variable did not have a mediating role in the effect of SMA variable on WA variable, and F2 variable *Negative Thoughts* had full mediating role in the effect of SMA variable on WA variable. These results indicate that the negative thoughts of the participants affect the participants' active involvement in social media and on their SMA. While healthcare professionals use social media more actively because of their negative thoughts, they also have an increased level of anxiety about their own posts as well as posts by other people. This is because their posts and comments as healthcare professional are received with attention by the public.

As there are no previous studies on these 3 issues in the context of the COVID-19 pandemic, the present study can be considered original. It was found that the WA scale used in this study has also been used to measure the WA of employees in various other sectors including education and occupational health and safety. However, other scales in the present study have not been found to be used in any other study with healthcare professionals. In order to evaluate the results of the study, it would be helpful to carry out a chronological review of literature conducted with and without healthcare professionals. In a 2022 study conducted in China with 287 nurses, it was found that working autonomy positively affects the relationship between work-family conflict and job withdrawal.¹⁴ Another 2022 study investigated working autonomy and how it is affected by self-efficacy through the mediating role of job crafting of social resources. The study points to

the role of social resources in creating jobs as a mediator of organizational citizenship behavior when employees have sufficient working autonomy.²⁵ A 2021 study demonstrated that there was a significant relationship between healthcare professionals having low working autonomy and an increased risk of being in a poor state of health and of exhibiting signs of burnout in comparison to healthcare professionals with medium-level working autonomy. A good or very good work environment corresponds to about half or one-third of the poor health or burnout symptoms compared to healthcare professional who reported a moderate work environment.⁸ Therefore, it is important that healthcare managers maintain a positive organizational climate. Another 2020 study conducted with healthcare professionals points out that "job autonomy has a significant and positive effect on job performance and life satisfaction whereas it has a significant and negative effect on organizational cynicism." High job autonomy will reflect positively on job performance; therefore, it is important that healthcare managers work on job autonomy.² In a 2021 study conducted with public officers, it was found that "working autonomy levels are significantly higher in female public officers compared to male public officers and there is a weak but positive relationship between working autonomy and organizational silence."²⁶ A 2016 study showed that perceived job autonomy did not significantly predict the possibility of organizational commitment.²⁷ In a 2010 study, it was demonstrated that "job autonomy and marriage duration of employees increase the possibility of using behavior-focused strategies and natural reward strategies." In other words, this study pointed out that "personal variables of employees (age, gender, marital status, marriage duration, working experience, training on leadership, and the job autonomy) and their working autonomy affects their self-leadership strategies."²⁸

No other study was found where the scales in this study and other PS are applied to healthcare professionals. However, some studies report that certain paranoia-like negative emotions including anxiety, depression, and stress are more frequently seen in healthcare professionals actively working in the field in the pandemic.^{6,8} In the PS used in the present study, it was specified that a metacognitive approach for the conceptualization of paranoia as a strategy to manage interpersonal threat may be helpful to a certain extent.⁴ In a study conducted with 2076 healthcare professionals during the pandemic, it was reported that the major cause of the anxiety or stress among healthcare employees comes from the fear to contaminate the COVID-19 virus to their families (86.9%), the levels of depression, anxiety, and stress of female employees are higher than that of male employees and the highest depression, anxiety, and stress levels of healthcare employees come from the pandemic, emergency, and internal services.²⁹ Several studies show that healthcare professionals are drawn to negative emotions and a negative mood due to the said factors in the pandemic.

Social media use involves the platforms that are commonly used by public, not only during a pandemic, and have a growing use/popularity every day. In this period, where most people stayed at home and experienced a pandemic for the first time, social media as well as traditional media were used more actively than they used to be. Studies show that this applies to healthcare professionals as well. Healthcare professionals who exhibit increased use of social media in connection with the anxiety due to uncertainty and have easier access to negative news and conspiracy theories have increased levels of anxiety.⁹ As reported in these studies, healthcare professionals experienced increased level of burnout, paranoia, depression, and anxiety due to a number of negative circumstances including difficulties arising from medical devices, fear of being infected with the virus or of contracting the virus to their families and people around them, fear of death, excessive empathy or sympathy with patients, fear, uncertainty, anxiety, distress, social stigmatization, and excessive coverage in the

media. Healthcare professionals who appeared frequently on social media were victims of social stigmatization as well. This stigmatization was not only present in their daily lives but also penetrate in to their social media use. Since they were aware of their responsibility to provide the public with correct information in this period, healthcare professionals experienced negative emotions such as anxiety and paranoia for fear of causing the spread of misinformation.³⁰ The study which SMU scale of the present study made use of reported that adolescents with psychiatric illnesses described multiple ways in which social networking sites possessed unique utility as platforms for communication. Participants found that social networking sites allowed them to reach out to a broader audience and to “broadcast” feelings of distress without forcing any specific person into a supportive discussion. Social networking sites were also described as lower-stress means of communication that allowed responses to be carefully formulated. This led to participants sharing information that they would not have shared during face-to-face interactions. However, participants also described anxiety surrounding the pressure to be active on social networking sites.¹¹ In another study with adolescents with autism spectrum disorder (ASD), where the social media scale used in the present study is introduced, no associations were found between social media use, anxiety, and friendship quality in the controls. It was reported that social media may be a way for adolescents with ASD without significant anxiety to improve the quality of their friendships. The study also pointed out that these platforms provide significant utility for many adolescents. It was also stated that there was strong correlation between the sub-dimensions of SMU and SMA also used in the present study. The study further reports that the scale used can be a valuable tool to assess the anxiety experienced when using or thinking about social media as well as assess the ways in which social media can be used.¹³

It is one of the limitations of the present study that it comprises healthcare professionals only from 4 different private hospitals in Istanbul. Moreover, since it was difficult to contact physicians during the pandemic to conduct a survey at a time when physicians were actively working in the field, the percentage of physicians in this sample is low, as in other studies. Expanding the study to public hospitals and other private hospitals with a larger sample will provide more information on the subject.

It is important that healthcare professionals who were under heavier workload actively working to fight the pandemic are in a better mood and mental condition not only for effectively managing the provision of healthcare services but it is also important for healthcare professional to improve themselves and their institutions as individuals and employees. Therefore, ensuring autonomy in job branches and wherever necessary in healthcare institutions will improve the ways in which the pandemic is dealt with. It is necessary to take certain actions to ensure that healthcare professionals are in a positive mental state and to maintain working autonomy wherever necessary, not only during times of pandemic in particular but in general. In a world of rapid digitalization, the necessity to provide more flexible modes of work has become imperative with the pandemic. Therefore, healthcare managers should also ensure planning to render work conditions in line with the necessities of the time.

Since the literature lacks a similar study that uses the variables and model used in this study, it is thought that this study will contribute to the field and is authentic in its enquiry into the thoughts of healthcare professionals, and healthcare managers in particular as a majority, especially during the COVID-19 pandemic.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Istanbul Medipol University (date: August 27, 2020, number: 43037 191-604.01.01-E.41226).

Informed Consent: In this study, the questionnaire was applied only to health workers. Since there was no questionnaire applied to the patients, only ethics committee approval was obtained.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – O.Y., T.D.; Design – T.D.; Supervision – T.D.; Resources – T.D.; Materials – T.D.; Data Collection and/or Processing – O.Y., Y.D.U., T.D.; Analysis and/or Interpretation – T.D.; Literature Search – T.D.; Writing Manuscript – T.D.; Critical Review – O.Y., Y.D.U., T.D.; Other – T.D., O.Y.

Declaration of Interests: The authors declare that they have no competing interest.

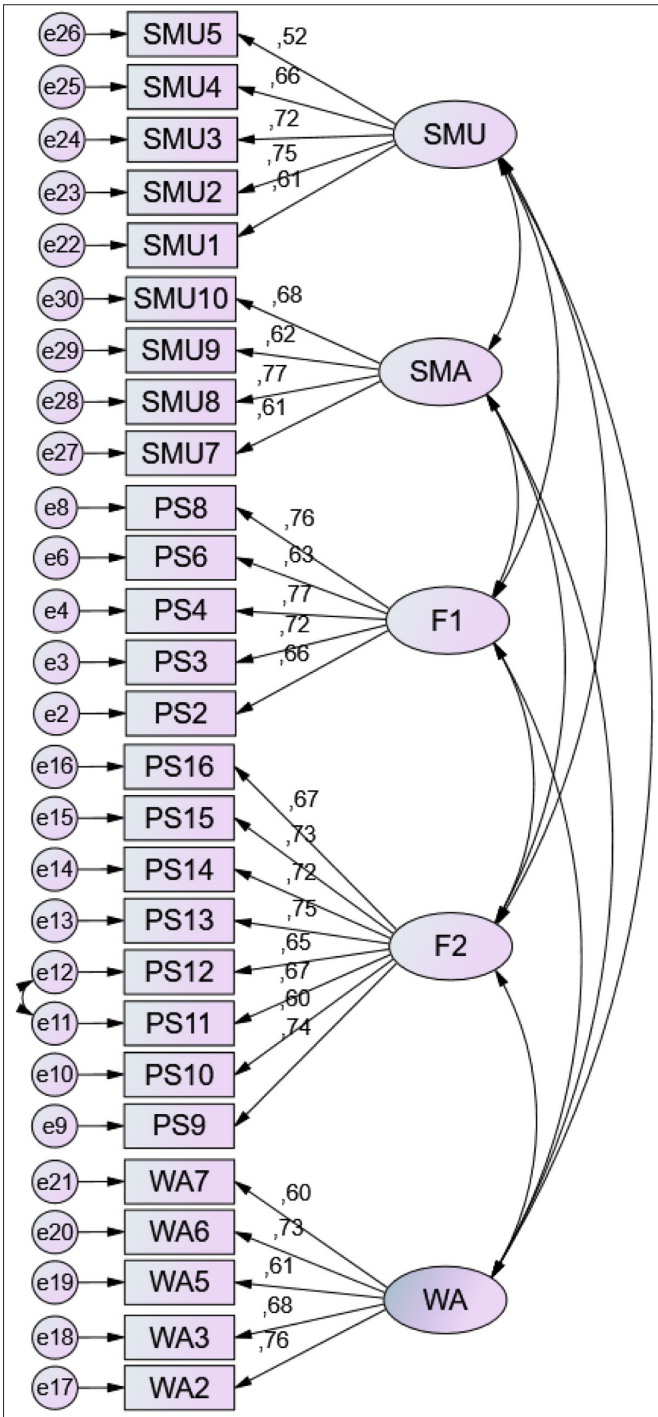
Funding: The authors declared that this study has received no financial support.

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Appendix



Appendix Figure 1. Table and Layout of Confirmatory Factor Analysis of Measurement Model.

Appendix Table 1. Detailed Parameter Values of Confirmatory Factor Analysis of Measurement Model

Dimension	Statement	Estimate	Standardized		CR	P
			Estimate			
WA	→ WA2	1.254	0.764		10.855	***
WA	→ WA3	1.000	0.681			
WA	→ WA5	0.975	0.607		9.038	***
WA	→ WA6	1.076	0.726		10.472	***
WA	→ WA7	0.752	0.597		8.912	***
F1	→ PS2	1.000	0.657			
F1	→ PS3	1.111	0.718		10.455	***
F1	→ PS4	1.211	0.771		11.039	***
F1	→ PS6	0.920	0.630		9.393	***
F1	→ PS8	0.982	0.756		10.883	***
F2	→ PS9	1.000	0.740			
F2	→ PS10	0.861	0.601		10.040	***
F2	→ PS11	0.893	0.671		11.240	***
F2	→ PS12	0.866	0.646		10.805	***
F2	→ PS13	1.073	0.746		12.578	***
F2	→ PS14	1.099	0.720		12.135	***
F2	→ PS15	1.082	0.730		12.294	***
F2	→ PS16	1.057	0.668		11.223	***
SMU	→ SMU2	1.000	0.750			
SMU	→ SMU3	0.918	0.723		11.073	***
SMU	→ SMU4	0.844	0.655		10.162	***
SMU	→ SMU5	0.657	0.516		8.080	***
SMU	→ SMU1	0.807	0.610		9.508	***
SMA	→ SMU7	0.835	0.610		9.243	***
SMA	→ SMU8	1.000	0.769			
SMA	→ SMU9	0.841	0.620		9.372	***
SMA	→ SMU10	0.957	0.683		10.154	***

SMU, social media utility; SMA, social media anxiety; F1, paranoia scale sub-dimension; F2, paranoia scale; WA, working autonomy.