CONFLICT IN HEALTHCARE: EXAMINING THE ROLE OF SOCIAL MEDIA AND SMARTWATCHES ON HEALTHCARE DELIVERY IN AMONG STUDENTS OF AFE BABALOLA UNIVERSITY, ADO-EKITI

Adeshina Iyanuoluwa, Omotayo (Ph.D)[1] and Damian Kehinde, Adesegha (Ph.D)[2]

[1]Email: omotayoai@pg.abuad.edu.ng

[2]Email: adeseghadk@pg.abuad.edu.ng

ABSTRACT: *Social media can be an instrument that fosters peace and wellbeing. It can also be used to incubate hatred and fan violence. A man's health can affect his peace and how he relates and function in the world. Social media ensures the swift flow of information between people irrespective of geographical borders. It is therefore pertinent that accurate information and data be corroborated swiftly so as to prevent misleading information dangerous to the health, peace and wellbeing from spreading to the general public. The research looked into how the social media and smartwatches impact on healthcare management and personal wellbeing. The study was conducted among the postgraduate students of Afe Babalola university Ado Ekiti, Nigeria. The selected sample size for the study comprised of 60 participants who were purposively selected and issued survey questionnaires. The study found out that the social media has led to the rise of false information about health practices among graduate students. The study also found that smartwatches has a positive significant effect on health management among graduate students in ABUAD.*

KEYWORDS: Social Media, Health, Personal Wellbeing, Smart Watch, Healthcare Management

INTRODUCTION

The World Health Organization emphasized that health as a state encompasses not merely the absence of illness but also complete physical and mental well-being (WHO 2018a). A Yoruba proverb says that *ilera loro* which means that health gives a man a functional and wealthy life. A persons state of health is relates to their daily health practices, such as consuming a balanced diet, regular physical activity, sufficient sleep, moderate or no alcohol intake and use of technology (Beh, Ganesan, Iranmanesh, & Foroughi, 2021). There is a link between social media use and psychological problems (Giustini, Ali, Fraser, & Kamel Boulos, 2018). Studies has shown the benefits of social media in enabling people to express their thoughts and feelings, and to receive social support (Lenhart *et al*., 2015). A man's health can affect his peace and how he relates and function in the world. The role the social media plays in the society makes it a 'double-edged sword', it allows information to travel wide and fast, either misleading or accurate. Personal Electronic devices such as smartwatches are now being used to manage health in ways such as step-tracking, heart rate monitoring, energy expenditure, and physical activity levels. The use of social media and personal electronic devices for health management practices calls for an inquiry on their reliability and effectiveness.

Research purpose/objective

This study aims to evaluate the impact of social media, smart watches on health management.

Hypothesis:

H_0: There is no impact of social media and smart watches on health management.

Scope of the Study

The study is situated in Ekiti State, Nigeria. The postgraduate students of Afe Babalola University, Ado-Ekiti were the participants in the study.

LITERATURE REVIEW AND CONCEPTUAL DISCOURSE

Social Media

Social media is a form of communication supported by information technology and it has arguably become the most pervasive (McCaughey et al., 2014). One of the advantages of using social media is it that extend past the traditional boundaries of place and time, while enabling immediate messaging with broad dispersion across hardware and platforms. (Keles, McCrae, & Grealish, 2020). Zeitzoff (2017), defined social media as a form of electronic communication and networking sites that allows users to follow and share content (text, pictures, videos etc.) and ideas within an online community. Social media platforms can be said to be online sites and services that host, organize and distribute user's content while connecting users together.(Poletti & Michieli, 2018).

LeFebvre (2017) posited that although social media are mostly used for keeping in touch with friends, it is increasingly common for people to use social media to get news and stay updated. According to Sun (2021), social media is different from traditional media in the past such as newspapers, radio and television. Its unique characteristics of information overflow, rapid

transmission and openness, communication and interaction have quickly become the main platform for information release.

Social media platforms such as Twitter, Facebook and WhatsApp, among others, provide a space in which society can communicate freely and cheaply, articulating their divergent viewpoints (Lunga, 2020). According to Valenzuela, Piña, and Ramírez (2017), sharing news over Facebook, Twitter and other social media has become an everyday practice for online news users around the globe. Social media has now become a new marketplace of ideas needed by diverse groups of people such as politicians, diplomats, international institutions, civil society groups and citizens (Ünver, 2019).

Conflict

Conflict connotes different perceptions which may not necessarily result in hostility. Conflict has many meanings in everyday life. To some it refers to behaviour or action. There is conflict when a trade union goes on strike or an employer locks out its employees. It is also conflict when two states are at war with one another, and where battlefield events determine their relations. The term conflict was derived from the latin word *"confligere"* which means "to strike together" or "clash" (Barash & Webel, 2002; Oyinloye et al., 2021). This way, conflict simply means a different perception or view to an issue or situation. It may mean a different interpretation of a motive or a different worldview. Conflict could also be seen to mean the interaction of interdependent parties who perceive incompatibility and the possibility of interference from others due to this incompatibility (Folger, Poole, & Stutman, 2021).

Conflict according to a number of scholars has been described as an intrinsic aspect of human life that is inevitable, ubiquitous, and pervasive; thus can't be removed but kept in bounds (Barash & Webel, 2002; Fisher et al., 2000; Oyinloye et al., 2021). Interpersonal conflicts refer to conflicts that occurs during a project execution as a result of differences in goals, work ethics, personality types, beliefs, values or some other human resource behavioural patterns which makes it difficult for the project team to reach a collective consensus and agreement through compromise or sacrifices. Ross & Ross defined this type of conflict by referring it, as a conflict of psychology. Jehn describes this conflict type as "relationship conflict". While, Pelled, Eisenhardt, & Xin describes this type of conflict as emotional conflict.

One of the fundamental human rights recognised globally is access to health and treatment especially for children, women and the vulnerable. The World Health Organization (WHO) defines health as 'not merely the absence of disease or infirmity', but more holistically as a 'state of complete physical, mental and social well-being' – This in itself is peace and a safeguard for peace. (Arya, 2004; WHO, 2022)

A man suffering from a range of physical and mental health problems is devoid of peace. As ill health and disease are linked to war and violence, so also is health linked to peace. Peace and health have many parallels in definition, however, personal wellbeing includes being peaceable as an individual. To be a peaceable person, we have to first be at peace within ourselves and our personal wellbeing is a major factor to being at peace. More so, it is difficult and near impossible for us to contribute to peace and development in our communities if or when we are not at peace with ourselves or when our personal wellbeing is suffering (Oyinloye *et al.*, 2021).

Smartwatches

Smart technologies otherwise known as wearables or Personal Electronic Devices (PEDs) have been applied to provide a form of health care services to mobile users (Free *et al.*, 2013). Smart technologies are technologies that use electronic systems that can be connected to the Internet, used interactively and intelligently (Chen, 2020). For example, mobile guides such as Google Maps direct users after detecting their locations through the global positioning system (GPS) and also enables them reach their destinations as quickly as possible, thereby increasing their comfort and reducing their tiredness (Chen, 2020; King & Sarrafzadeh, 2018).

According to Chen and Chiu (2016), smart technologies suitable for supporting mobile health care include smart phones, smart watch, smart motion sensor, smart body analyzer, smart wig, smart wheelchair etc. Smart phones are the handiest and most prevalent smart technology for mobile health care. In addition to cameras and a global positioning system (GPS) receiver, a smart phone is equipped with a variety of sensors such as accelerometer, proximity sensor, compass, gyroscope, barometer, photometer and thermometer (Chen, 2020).

The smartwatch is a technology that combines the features of smartphones with continuous data monitoring that promote health, such as step-tracking, heart rate monitoring, sleep monitoring, energy expenditure, and physical activity levels. They can provide feedback to users that allow them to monitor their health, perform and timely interventions such as medication use based on symptoms, and direct communication with caregivers and physicians (King & Sarrafzadeh, 2018). The smartwatch is only limited by barriers such as cost, wearability, and battery life.

A smartwatch is useful in the medical field because it combines features of smartphones in addition to providing prompt feedback and also allowing a fast communication process between patients and doctors. For the purpose of our study, we shall only be looking at Smartwatches as a form of PEDs.

Social Media and Healthcare Management

The Social media enables people to express their thoughts, feelings and to receive social support. It also ensures the swift passage of information. It is essential to ascertain the veracity of information shared on social media. Such information and data be needs to be corroborated swiftly so as to prevent misleading information especially information dangerous to health and peace. Since social media allows for the sharing of information, application of social media to healthcare management needs a great deal of attention (Brady *et al.*, 2017)

Skeptics of social media in healthcare cite the potential for misinformation, conflicting advice, and unprofessionalism as evidence that social media is not an appropriate medium on which to share healthcare information. Some argue that social media has no place in healthcare, while others claim that the open sharing of information enabled by social media would revolutionize accessibility to medicine (Pershad, Hangge, Albadawi, & Oklu, 2018).

A study by Mheidly and Fares (2020), surveying social media users found four primary reasons for health-related social media use:

(1)   To gain knowledge about their diagnosed disease;

(2)   To obtain advice from other patients with the same disease;

(3)   To receive social support; and

(4)   To communicate with a physician.

Despite high rates of misinformation, the increased accessibility of healthcare information on digital media has the potential to improve patient care and change the perception of individuals to health management. This accessibility is extremely desirable in medicine and healthcare as highly technical terminology can alienate patients and detract from their care (Cayton, 2006). Although the accuracy of health information from these informal sources may often questionable, the newly emerged social media–based health information dissemination offers a valid venue to promote accurate health information and educational resources to the public.

Twitter for example is estimated to be the most popular form of social media used for healthcare communication (Pershad *et al*., 2018). Twitter allows any medical expert to share their expertise by making an account. A recent study in the United States verified that over 2000 doctors are active on Twitter based on their National Provider Identifier. These doctors all tweet more than once per day and have at least 300 followers each (Meskó, 2013). Hence, by following the health-care professional's account, major news channels, medial societies' accounts, and other health information disseminators, social media users receive most updated health information automatically. These social media users were also exposed to health information and educational resources through "share" or "retweet" from their social media network (Huo *et al*., 2019).

Harmonious relationships between healthcare professionals and patients can be established as social media provide a place for patients to release negative emotions. However, the effect of harmonious relationships also comprises the fact that social media might empower individuals to follow doctor's recommendations, which reduces discussions during clinical interaction. (Smailhodzic, Hooijsma, Boonstra, & Langley, 2016)

When patients bring social media content to the consultation, this can lead to increased processes of sorting information, transforming the potential risk to the healthcare professional, and challenging the healthcare professional's expertise. Additionally, if the healthcare professional reacts negatively to what patient learned from social media, this might decrease the patient's subjective well-being (Smailhodzic *et al.*, 2016).

Moreover, the convenience of social media use by patients is that it reduces the information gap between healthcare professionals and patients and patients have a better understanding of the healthcare professional during consultations (Alshakhs & Alanzi, 2018). Social media can empower patients by giving them access to information and opportunities for discussions, which increases the patient's involvement in clinical interactions.

Hospitals can utilize social media to connect and interact with patients; provide education; perform certain administrative duties, like billing and scheduling; and develop a patient referral network (Huo *et al.*, 2019). Social media could prove to be an enhanced tool for promoting health care and developing health-care professional's (HCPs) knowledge if used wisely. (Alshakhs & Alanzi, 2018). Information and feedback from patients in real time can notify

hospitals of existing deficiencies, evoke policy changes, improve patient–provider relationships, reduce hospital readmissions, and enhance hospital revenue, among other things, and indirectly serve as a low-cost monitoring and evaluation tool (Greaves, Ramirez-Cano, Millett, Darzi, & Donaldson, 2013). Similarly, Ventola (2014)) is of the view that social media can provide considerable benefits in patients' care, education, and health programs, but there are some risks related to patient privacy and quality of information, among other issues.

Social media can be an ally but also a potential threat. High volumes of information compressed into a short period can result in overwhelmed HCPs trying to discern fact from noise. A major limitation of social media currently is the ability to quickly disseminate false information which can confuse and distract. For example, one misguided idea on Twitter urged Nigerians to drink excessive amounts of salt water to combat Ebola. However, this led to two deaths and more than 12 admissions to hospital (Chou, Oh, & Klein, 2018; Venegas-Vera, Colbert, & Lerma, 2020). It is pertinent to note that it is the responsibility of social media users to transfer the most trustworthy information and squash recognized

Ways of overcoming misinformation on Social Media

(Mheidly & Fares, 2020) proposed a 12-item Infodemic Response Checklist (IRC) to overcome the challenges posed by misinformation on healthcare management:

1.   Provide more exposure and airtime for medical professionals, scientists, and public health personnel to provide authentic, useful, and transparent information for the public.

2.   Promote websites of public health organizations via search engines. Engines like Google and Yahoo must promote websites of official public health organizations to those seeking information on preventive measures on the internet.

3.   Verify the accounts of public health personnel on popular social media platforms.

4.   Promote the posts of public health and medical professionals.

5.   Monitor engagement on social media platforms to control the messages being delivered.

6.   Establish programs that help people cope with stress and address their mental health concerns.

7.   Adopt an empathic style of communication to grab public attention and address health concerns.

8.   Promote dialogue to understand people's perceptions and the motives behind their practices.

9.   Share personal experiences on social media to combat misinformation.

10.   Direct health communication strategies towards minority populations and people of different classes, races, and ethnicities

11.   Develop educational material and speed the share of evidence-based science to address existing wrong perceptions, correct behaviors, and promote healthy practices.

12. Increase investment in the research and development of health communication to explore and understand strategic ways of targeting different populations.

Smartwatches and Healthcare Management

Health care and telemedicine have recently grown to rely on the use of smartphones and personal electronic devices to enable remote health monitoring of patients in the community. Examples of effective smartphone-based healthcare applications include those for the self-management of long-term illnesses, smoking cessation, family planning/contraception, and psychological therapies, among other clinical research applications (King & Sarrafzadeh, 2018).

Smart technologies present numerous opportunities for enhancing mobile health care and have the following benefits:

1. They can be applied to provide health care assistance to mobile users in both indoor and outdoor environments.

2. Some smart technologies can overcome the limitations of existing technologies.

3. Smart technologies are more effective in guiding a user to lead healthy lifestyles than in providing health care services or health care resource information to the user. (Chen, 2020).

Wearables and Smartwatches provide opportunities for frequent health data collection and symptom monitoring. Wearables, such as smart watches and activity trackers, provide opportunities for frequent monitoring of chronic diseases. Their sensors can record behaviors of interest at high temporal and spatial resolution (Beukenhorst *et al.*, 2020). Smartwatches have appeared as a significant tool that can help measure physiological parameters such as heart rate and arterial blood pressure to reach the final goal, which enhances healthcare efficiency. Jeong, Kim, Park, and Choi (2017), concluded that the determinants of smart watch adoption included affective quality, relative advantage, mobility, availability, and subcultural appeal.

A smartwatch is usually equipped with sensors such as compass, GPS, heart rate monitor, gyroscope, accelerometer, barometer, vibration motor, and photo plethysmography sensor. This device can be applied to track the energy expenditure (EE) (i.e., the calories burned), steps taken, distance traveled, and heart rate (HR) (Chen, 2020). Smartwatches undertake different medical tasks including carbohydrate, blood glucose, and insulin unit entry, viewing all required previously recorded values and the recording of required physical activities. Besides the ability to wear smartwatches to collect continuous sensing data such as heart rate and activity, smartwatches have many other practical features that make them ideal platforms for healthcare applications. (Al-Maroof, Alhumaid, Alhamad, Aburayya, & Salloum, 2021)

First, unlike smartphones, smartwatches are ubiquitous in that they are typically worn even when at home and during nighttime. Also, similar to smartphones, smartwatches are able to combine sensor information such as accelerometers, gyroscopes, compasses, and heart rate, with global positioning satellite (GPS) data. Health and fitness watches generally have the features of tracking users' calories, check heart rate and step count. The latest versions even have the additional features of tracking sleep patterns, stress levels, blood pressure and blood

oxygen saturation (SpO2). Measurement of physiological parameters, such as heart rate, arterial blood pressure and body temperature, are important to reflect an individual's physical health status.

Smartwatches have proven to be useful in a wide range of healthcare applications and their most common applications are focused on health and fitness monitoring (Tison *et al*. 2018). With their functionality of miniaturised biosensors and computing technology, smartwatches are designed to be portable, non-invasive and unobtrusive monitoring devices with the capability of continuously and automatically transmitting massive amounts of users' physiological data to other smart devices such as smartphones and tablets.

METHODOLOGY

The study is a descriptive cross-sectional study. This research design was used because the study evaluated the phenomenon of interest at a given point in time and without the researcher influencing it in anyway. Questionnaires were distributed among postgraduate students of the Afe Babalola University, Ado-Ekiti (ABUAD). The sample size was 60 participants of which 50 agreed to fill the questionnaire, indicating a response rate of 83.3%. Their perception toward the use of social media and smartwatches in health-care management and service delivery was sought and evaluated in the study. In analysing collected data, descriptive statistics (frequencies and percentages) were used in analysing socio-demographic characteristics of the respondents and multiple regression was used to investigate the effects of the two independent variables on the dependent variable. These were done via the aid of the SPSS version 20.

RESULTS

As seen in Table 4.1, out of the 50 respondents who participated in the study, 42% were male while 58% were female, implying that more female participated in the study than male. Concerning the respondents' age, none was under 21 years of age, 30% were within the age range of 21 and 30 years, 34% were within the age range of 31 and 40 years, while 36% were at least 41 years of age. From this analysis, it is seen that most of the study's participants were either 41 years or higher. With regards to marital status, 36% of respondents were single while 64% were married and none was divorced. This shows that the majority of respondents are married. Finally for this section, pertaining religion, 92% of respondents are Christians, 6% are Islam while 2% are of other religions. This shows that most of the respondents who participated in the study are Christians.

Table 4.1: Tabular Representation of Socio-Demographic Features of Respondents

Socio-Demographic Features	Frequency	Percentage
Sex		
Male	21	42.0
Female	29	58.0
Age		
Under 21 Years	0	0.0
21-30 Years	15	30.0

31-40 Years	17	34.0
41 and Above	18	36.0
Marital Status		
Single	18	36.0
Married	32	64.0
Divorced	0	0.0
Religion		
Christianity	46	92.0
Islam	3	6.0
Others	1	2.0
Total	**50**	**100.0**

Source: *Field Survey (2022)*

Test of Hypothesis

The hypothesis of this study states that social media and smart watches have no impact on healthcare management. In testing this hypothesis, multiple regression was used. As revealed in the tables below, the Model Summary shows the adjusted R square to have a numeric value of 0.503. This implies that 50.3% of the variation in the dependent variable (healthcare management) can be explained by the independent variables (social media and smartwatches). Moreover, the model was seen to be significant in the ANOVA since it had a significance level of 0.000. This means that the model has the explanatory power to explain the causal relationship between the variables. As a result, the model can be shown as $F (1, 49) = 25.829$, $p = 0.000$.

In coefficients table, it is shown that social media has a value of 6.806 and a p-value of 0.000 while smartwatches has a value of 0.168 and a p-value of 0.867. Due to the fact that the p-value of social media is lesser than significant level of 0.05, the null hypothesis would be rejected, implying that social media has a statistically significant (positive) effect on healthcare management. On the other hand, with the p-value for smartwatches being higher than the significance level of 0.05, the null hypothesis would be accepted, meaning that smartwatches have no statistically significant effect on healthcare management.

Concerning the collinearity statistics, for both independent variables, the tolerance and VIF values are seen to be 0.910 and 1.098 respectively. Due to the fact that the tolerance value of both variables are greater than 0.1 and the VIF values are lesser than 10, it can be stated that the data has no collinearity issues, that is, there is no multicollinearity. As a result, it can be concluded that the data is free from any disturbance and the statistical inferences made about the data is reliable.

Table 4.2.1:

Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.724ᵃ	.524	.503	1.60857

a. Predictors: (Constant), Smartwatches, Social Media

Table 4.2.2:

ANOVAᵃ

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	133.668	2	66.834	25.829	.000ᵇ
	Residual	121.612	47	2.587		
	Total	255.280	49			

a. Dependent Variable: Healthcare Management
b. Predictors: (Constant), Smartwatches, Social Media

Table 4.2.3

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.825	1.080		1.690	.098		
	Social Media	.488	.072	.718	6.806	.000	.910	1.098
	Smartwatches	.019	.111	.018	.168	.867	.910	1.098

a. Dependent Variable: Healthcare Management

CONCLUSION

The study was able to gather that a lot of people check their health information on social media and also make uses of personal electronic devices. The research found a lot of people use the social media for health purposes. Some persons follow influential personalities and communities on health to get updates, some watch videos in order to be able to manage their health better. It was also gathered that the use of social media in the provision of health services and health education can reduce the cost of healthcare and break the ignorance people have about health management. Social media influences the decision a lot of people take concerning their personal healthcare. It is hereby recommended that more healthcare professionals utilise social media to sensitise individuals about their health and wellbeing.

REFERENCES

Al-Maroof, R. S., Alhumaid, K., Alhamad, A. Q., Aburayya, A., & Salloum, S. J. F. I. (2021). User acceptance of smart watch for medical purposes: an empirical study. *13*(5), 127.

Alshakhs, F., & Alanzi, T. J. J. o. M. H. (2018). The evolving role of social media in health-care delivery: measuring the perception of health-care professionals in Eastern Saudi Arabia. *11*, 473.

Arya, N. (2004). Peace through Health I: development and use of a working model. *Medicine, Conflict Survival, 20*(3), 242-257.

Barash, D. P., & Webel, C. (2002). The Meanings of Peace. *Peace Conflict Studies*, 3-27.

Beh, P. K., Ganesan, Y., Iranmanesh, M., & Foroughi, B. (2021). Using smartwatches for fitness and health monitoring: the UTAUT2 combined with threat appraisal as moderators. *Behaviour, Information Technology, 40*(3), 282-299.

Beukenhorst, A. L., Howells, K., Cook, L., McBeth, J., O'Neill, T. W., Parkes, M. J., . . . Dixon, W. G. (2020). Engagement and Participant Experiences With Consumer Smartwatches for Health Research: Longitudinal, Observational Feasibility Study. *JMIR Mhealth Uhealth, 8*(1), e14368. doi:10.2196/14368

Brady, R., Chapman, S., Atallah, S., Chand, M., Mayol, J., Lacy, A., & Wexner, S. J. J. o. B. S. (2017). # colorectalsurgery. *104*(11), 1470-1476.

Cayton, H. (2006). The alienating language of health care. *Journal of the Royal Society of Medicine, 99*(10), 484-484.

Chen, T.-C. T. (2020). Evaluating the sustainability of a smart technology application to mobile health care: the FGM–ACO–FWA approach. *Complex intelligent systems, 6*(1), 109-121.

Chou, W.-Y. S., Oh, A., & Klein, W. M. J. J. (2018). Addressing health-related misinformation on social media. *320*(23), 2417-2418.

Fisher, S., Abdi, D. I., Matovic, V., Ludin, J., Walker, B. A., Mathews, D., . . . Williams, S. (2000). *Working with Conflict 2: Skills and Strategies for Action*: Zed books.

Folger, J. P., Poole, M. S., & Stutman, R. K. (2021). *Working through conflict: Strategies for relationships, groups, and organizations*: Routledge.

Free, C., Phillips, G., Galli, L., Watson, L., Felix, L., Edwards, P., . . . Haines, A. J. P. m. (2013). The effectiveness of mobile-health technology-based health behaviour change or disease management interventions for health care consumers: a systematic review. *10*(1), e1001362.

Giustini, D., Ali, S. M., Fraser, M., & Kamel Boulos, M. N. (2018). Effective uses of social media in public health and medicine: a systematic review of systematic reviews. *Online journal of public health informatics, 10*(2), e215-e215. doi:10.5210/ojphi.v10i2.8270

Huo, J., Desai, R., Hong, Y.-R., Turner, K., Mainous III, A. G., & Bian, J. J. C. C. (2019). Use of social media in health communication: findings from the health information national trends survey 2013, 2014, and 2017. *26*(1), 1073274819841442.

Jeong, S. C., Kim, S.-H., Park, J. Y., & Choi, B. (2017). Domain-specific innovativeness and new product adoption: A case of wearable devices. *Telematics Informatics, 34*(5), 399-412.

Keles, B., McCrae, N., & Grealish, A. (2020). A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence Youth, 25*(1), 79-93.

King, C. E., & Sarrafzadeh, M. (2018). A SURVEY OF SMARTWATCHES IN REMOTE HEALTH MONITORING. *Journal of healthcare informatics research, 2*(1-2), 1-24. doi:10.1007/s41666-017-0012-7

LeFebvre, R. K. (2017). Leveraging the Voices of Social Media for Peace and Security. *S&F Sicherheit und Frieden, 34*(4), 231-235.

Lunga, C. M. (2020). Social media: a space for dialogue or a tool for warfare? *conflict trends, 2020*(1), 22-29.

McCaughey, D., Baumgardner, C., Gaudes, A., LaRochelle, D., Wu, K. J., & Raichura, T. J. S. s. c. r. (2014). Best practices in social media: Utilizing a value matrix to assess social media's impact on health care. *32*(5), 575-589.

Meskó, B. (2013). Establishing a Medical Blog. In *Social Media in Clinical Practice* (pp. 59-70): Springer.

Mheidly, N., & Fares, J. J. J. o. p. h. p. (2020). Leveraging media and health communication strategies to overcome the COVID-19 infodemic. *41*(4), 410-420.

Oyinloye, O. B. A., Akinyoade, D., Badmus, A. I., Balogun, O. N., Aboyade, S. A., & Adedeji, B. O. (2021). *Peace and Conflict Studies: A General Introduction*. Afe Babalola University Ado-Ekiti: Department of Peace and Conflict Studies, ABUAD.

Pershad, Y., Hangge, P. T., Albadawi, H., & Oklu, R. (2018). Social Medicine: Twitter in Healthcare. *7*(6), 121.

Poletti, C., & Michieli, M. (2018). Smart cities, social media platforms and security: online content regulation as a site of controversy and conflict. *City, Territory and Architecture, 5*(1), 1-14.

Smailhodzic, E., Hooijsma, W., Boonstra, A., & Langley, D. J. J. B. h. s. r. (2016). Social media use in healthcare: a systematic review of effects on patients and on their relationship with healthcare professionals. *16*(1), 1-14.

Sun, J. (2021). Research on the Credibility of Social Media Information Based on User Perception. *Security and Communication Networks, 2021*.

Ünver, H. A. (2019). Internet, Social Media and Conflict Studies: Can Greater Interdisciplinarity Solve the Analytical Deadlocks in Cybersecurity Research? *St Antony's International Review, 15*(1), 101-124.

Valenzuela, S., Piña, M., & Ramírez, J. (2017). Behavioral effects of framing on social media users: How conflict, economic, human interest, and morality frames drive news sharing. *Journal of communication, 67*(5), 803-826.

Venegas-Vera, A. V., Colbert, G. B., & Lerma, E. V. J. R. i. c. m. (2020). Positive and negative impact of social media in the COVID-19 era. *21*(4).

Ventola, C. L. (2014). Social media and health care professionals: benefits, risks, and best practices. *Pharmacy therapeutics, 39*(7), 491.

WHO. (2022). The World Health Organization.

Zeitzoff, T. (2017). How social media is changing conflict. *Journal of Conflict Resolution, 61*(9), 1970-1991.