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Domingos Soares [*] , Nursalam Nursalam , Lisa McKenna , Ferry Efendi , Caetano Gusmão , Edinha da Silva Pinto Baptista , Marni Marni , Jose Dionisio Ximenes , Nelson Martins

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Domingos Soares [1,3,9,*], Nursalam [2], Lisa McKenna [4], Ferry Efendi [2], Caetano Gusmão [1,3,6], Edinha da Silva Pinto Baptista [5], Marni [10], Jose Dionisio Ximenes [11] and Nelson Martins [6,7,8]

[1] Instituto Nacional de Saúde Publica Timor-Leste (INSP-TL) MoH, Dili, Timor-Leste; ahufuid2005@yahoo.com (D.S); wairisi@yahoo.com.au (C.G)

[2] Faculty of Nursing, Airlangga University, Surabaya-Indonesia; nursalam@fkp.unair.ac.id (N); ferry-e@fkp.unair.ac.id (F.E)

[3] Instituto Superior Cristal (ISC), Dili, Timor-Leste   (D.S) and (C.G)

[4] Dean, Nursing and Midwifery School of La Trobe University-Australia; L.McKenna@latrobe.edu.au (L.M)

[5] Hospital Nacional Guido Valadares (HNGV), Dili, Timor-Leste; edinhapb@gmail.com (E.P.B)

[6] Daslo Research and Development, Dili Timor-Leste; nmdasilaku@gmail.com (N.M), (C.G)

[7] Menzies School of Health Research, Darwin, NT- Australia (N.M)

[8] Universidade da Paz (UNPAZ), Dili, Timor Leste (N.M)

[9] DAJI's Research & Development Networking, Dili, Timor-Leste (D.S)

[10] Universitas Duta Bangsa, Surakarta, Indonesia ; marni@udb.ac.id (M)

[11] Universidade Nacional Timor Lorosaé, Dili, Timor-Leste ; josedionisioximenes@gmail.com (J.D.X)

* Correspondence: ahufuid2005@yahoo.com (D.S), Tel.+670 78371327

Abstract: Background: In digitalization era, health care system was conditioned with the health worker's ability to adapt media of digital technology. Digital technology media was used to strengthening and fasted the health care for patient and community. Aims: This study aimed to explore the accurate information of health professional utilization digital technology during doing the job at the health facilities in Timor-Leste. Methods**:** This study was used correctional study with 56 respondents was participated in the study. Was collected the data from 1 to 30 February 2023.   Was used questioner of google form based for data collection. Data collection was distributed via online with google form to social media as WhatsApp's, email and face book and twitter to completed by respondents. The inclusive Criteria are: health professional living in Timor-Leste, to able response the questioner. Was used descriptive analysis in this study. Finding**:** This study was indicated that majority of health professional was participated in the study as 54,2% man then women have 45,8%. About 100% health professional used hand phone to facilitate their daily activities including related with their work activities.   Other side indicated in digital technology tools use are able to use Microsoft word is 78,3%, able to use Microsoft Excel is 76,7% and able to use Power Point is 81,7%. E-mail use about 89,2%, WhatsApp's use 81,7%, About 74,2% was used zoom/webinars/Google meet application, about 72,5% sad that they were used computer in the work place until now. Around 96.4% need to improve or deepen their knowledge and skills in using ICT in the future to facilitate they are activity. Conclusion**:** Majority of health professional in Timor-Leste was used the computer, internet, hand phone in daily activities. Majority need to gate the training to improve their knowledge, attitude and psychomotor in the future.

Keywords: digital technology; health care system

1. Introduction

In digitalization era, digital technology media was utilized to strengthening and fasted the healthcare activities process in term the patient and community attendance. The global strategy has promoted the use of appropriate digital technology to support the process of overcoming major

health system challenges, achieving equitable access to digital resources to catch up   [1]. Whatever, aim to use the digital technology is to increasingly health professional's ability in the work place and then quality guaranteed to considered be important need for staff to facilitate they are information and communication technology for today [2]. In terms of digital technology using, other study reported that, the challenges in application normally caused by four aspects such as: data delays, data fragmentation, privacy security and data security vulnerabilities   [3]. In Timor-Leste, health professional is still faced with the constraints of using the internet through computers and mobile phones to facilitate communication and information in health services both in the national and regional areas. The other research finding was conducted in Timor-Leste mentioned that internet positively affects economic growth, so recommended to Timor-Leste Government need to encourage internet use by making it digital technology readily available across the country and affordable [4].

Therefore, the Timor-Leste government through the Ministry of health has made efforts to provide various kinds of training and development for health professional related to management, clinics and including digitalization system establishment in the health facilities.   However, the efforts have not significantly affected the reality of the digitalization system and capability of health professional to use the internet, computer and other technology media is not solved in Timor-Leste. In addition, this kinds of research have not been carried out in Timor-Leste to solve the gap we are experiencing to answer the demands of globalization in the future.

About 51% of the world population has access to Internet to support they are daily activities, event in general aspect and the health sectors. Around 24% the population at East Africa access to Internet to gate the information and communication technology [5].   In Chile, around 2681 who use internet via mobile phone only about 20,8%, then increase to 41,5% in rural area and access internet via smartphones are 57% [6]. Based on the study finding were conducted by a Timorese persons mentioned that the ability to use computer poor level to facilitate them in conducting the information and communication health system with mean ± Standard Deviation about 54.0±5.2 for health worker in Timor-Leste [7].   Internet use have positive impact into the economical aspect and health services, because if health services are fulfilled properly, it will have a positive impact on people's economic activities indicated that for every 1% increase in internet user, economic growth will increase by 27.65%. [4].

Previous study was related that they were identified the indicated continued confusion surrounding informatics competencies and then hot they integration digital technology media into nursing curricula affects the professional nursing workforce [8]. The strategies how to improve health professional digital use skills was identified that can utilizing E-simulation become the innovative technique used to improve health workers is informatics competencies skills and the supporting the job implementation [8]. Digital media Internet technology, has become a communication tool needed by everyone in the era of globalization for survival around the world. Everyone regularly communicates and can get a quick response or answer whenever and wherever they are. Every communications of services, business, healthcare and others is inseparable from the use of internet through computer devices and mobile phones [9]. In the United States found that COVID-19 mobile apps are innovative tools in helping manage long-term facilities as well as can help provide new channels for real-time communication, promoting early detection of the disease [10].   Today is globalization terms, where we already entered to the industrial revolution 4.0 era, there is mean that now one any activities done without related to the digital technology aspect. Wetter, if we are not intended and using it, we never gate the success event on the professional work.   Health workers will always face the progress of developing a digitalized networking system in supporting health services both in hospitals and health centers. Given that in Timor-Leste academics began to develop a networking system for using computer connected to the internet at the engineering faculty, this is likely to be expanded or applied in health services [11].

Based on the above issues, researcher come with the new ideas to contribute the study with the Readiness of Health Workers to Face Digitization of Health Care system in Timor-Leste and considered such as good solution to solve above problem. After we detected any principal

information related with the readiness of health professional in digital technology use for facilitate their job, it will be gate any solution and respond to solve directly the problem.

2. Materials and Methods

2.1. Digital Technology

The Computer, Internet and Mobile Phones are the important part of the digital technology media to facilitate human for doing the work around the world in the industrial revolution 4.0 now. The internet is also one part to link to the mobile phone and computer for many people in the world, so that to entry to the digital system in the world we need use the smartphones to make access [6]. In large and developed countries also show the number of internet access through mobile phone is much greater than through computers, because mobile phone can be taken anywhere while accessing the internet compare with the computer. Digital technology literacy and efforts to access today's more modern technology products such as internet access have been indicated that it is very useful to overcome the lack of knowledge and skills. Through this model, it will have a tremendous impact on the services system of various sectors, including the health care system [12].

2.2. Study Setting

Current study was conducted in Timor-Leste territory. Timor-Leste located in the two neighbored country such as Indonesia and Australia country. The number of population based on the census about 1,340,434 persons. It a small country with 15,007 km^2 were divided into 13 municipalities. Health sector is one principal area where highest pay attention by government specially by Ministry of Health (MoH) Timor-Leste. Health facilities was constructed one national hospital, five referral hospital and 72 community health centers (CHCs) and 329 health post (HPs) and attended by about 3000 health workers in hold Timor-Leste territory for community servant........

2.3. Study Design

This is a descriptive quantitative study was used to determine a readiness of health professional in digital technology using to support they are daily activities related with the health care process in Timor-Leste and also to identifying the need in term the capacity building related digital technology use. Other side based in this study will be facilities researcher team to make deeply analysis   to capacity building need detection.

2.4. Participant Recruitment and Data Collection

Participant in this study were health professional who work at every health facility in the Timor-Leste territory. They have same probability to participate in this study.   with online data collection in Timor-Leste territory on June 2023. The population of the study was involved all healthcare professional who work in Timor-Leste undetected the number of population.   The   sample   size was based on the accidental approach and then collected the data by 101 persons of health professional, were they gated the questioner by face book (fb) and WhatsApp's media. Researcher was distributed the questioner via fb and WhatsApp's used google form approach. Data was collected used questioner where already setup in google form.

2.5. Data Analysis

Data were analysis used SPSS version 20, descriptive statistic was used frequency and presentation model.

2.6. Ethical Consideration

This study was obtained ethical approval letter from the National Health Institute (*Instituto Nacional de Saúde*)-Health Research Ethical Committee, MoH, Timor-Leste on 2022.

3. Result

Based on the finding on this study is an interesting for our new reference to improve the next research project and then to be strengthening the system and policy rule at the Ministry of Health. However, result of the study was included bellow point: sociodemographic information, Digital Technology utilization experiences and then Capacity building need and readiness to use digital in Timor-Leste for the future health program assessing.

3.1. Socio Demographic

Based on the Table 1 above indicated that male more than women such as 65 (54,2%) of mane and 55 (45,8%) women. Was have threes profession was actively take part in this study such as nurses the most of participants in the study are 42,5%, midwifery 20,8%, medical doctor is 16,7% and other profession lest then 16% was participated in this study.   About 71,7% with bachelor degree in health education was participated in the study and 35% participants from Dili Municipality, it is Timor-Leste Country city. All participants is more then 64,2% is permanent staff who work at health facility in public and private sectors.

Table 1. Description of the respondents based on gender, profession, level of education, municipality and position by 120 respondents online survey from 14 to 30 June 2022.

No	Indicators	F	%
1	Gender		
	Male	65	54,2
	Female	55	45,8
	Total	120	100
2	Profession		
	Medical doctor	20	16.7
	Nurses	51	42.5
	Midwifery	25	20.8
	Public health	4	3.3
	Analysis laboratories	5	4.2
	Environmental health	6	5.0
	Nutritionist	9	7.5
	Total	120	100
3	Level of education		
	S3	3	2.5
	S2	8	6.7
	S1	86	71.7
	D3	15	12.5
	SPK	8	6.7
	Total	120	100
	Municipality	F	%
	Dili	42	35.0
	Baucau	10	8.3
	Viqueque	9	7.5
	Covalima	10	8.3
4	Ermera	7	5.8
	Ainaro	6	5.0
	Lautem	8	6.7
	Bobonaro	5	4.2
	Manatuto	4	3.3
	Manufahi	6	5.0

	RAEOA		7	5.8
	Aileu		6	5.0
	Total		120	100
5	Position			
	Staff work at health facility		77	64.2
	Graduated not yet work		43	35.8
	Total		120	100

Source: opinion poll survey on the readiness of Health professionals for the digitalization program of the health system in Timor-Leste, June 2022.

3.2. Digital Technology Utilization Experiences

Table 2. Description of the respondents based on digital technology use by 120 respondents online survey from 14 to 30 June 2022.

No	Indicators	F	%	Chi-Square Test (Asymp.Sig)
1	Hand Phone use			
	Yes	120	100	0,000
	No	0	0	
	Total	120	100	
2	Microsoft Word use			
	Yes	94	78.3	0,000
	No	26	21.7	
3	Microsoft Excel			
	Yes	92	76.7	0,000
	No	28	23.3	
4	Microsoft PowerPoint use			
	Yes	98	81.7	0,000
	No	22	18.3	
5	e-mail use			
	Yes	107	89.2	0,000
	No	13	10.8	
6	WhatsApp's use			
	Yes	110	91.7	0,000
	No	10	8.3	
7	Zoom/webinars/Google meet and others use			
	Yes	89	74.2	0,000
	No	31	25.8	
8	Have computer in work place			
	Yes	87	72.5	0,000
	No	33	27.5	

Source: opinion poll survey on the readiness of Health professionals for the digitalization program of the health system in Timor-Leste, June 2022.

Chi-square test all the indicator are significant relation between an others indicator. All 8 indicators more than 50% to upper.

Table 3. Result of Measure Mean, median, Average and Standard deviation.

No	Indicators	N	Min	Max	Mean & S.D
1	Hand Phone use	120	1	2	2,00 ±0,00
2	Microsoft Word use	120	1	2	1,78±0,41
3	Microsoft Excel use	120	1	2	1,77±0,42

4	Microsoft PowerPoint use	120	1	2	1,82±0,39
5	e-mail use	120	1	2	1,89±0,31
6	WhatsApp's use	120	1	2	1,92±0,28
7	Zoom/webinars/Google meet use	120	1	2	1,74±0,44
8	Readiness computer in work place	120	1	2	1,73±0,45

Based on the above table indicated that all variable has mean more then 1,5 and S.D. no more then 0,5. It is near from point 2, mean that almost achieve point 2 or all used the digital technology media to facilitate their regular job every they in the work place.

3.3. Capacity Building Need and Readiness to Use Digital in Timor-Leste

Table 4. Description of the respondents based on: Do you need to improve or deepen your knowledge and skills in using ICT in the future?

No	Capacity building	F	%
	Do you need to improve or deepen your knowledge and skills in using ICT in the future?		
1	Yes	108	90.0
	No	12	10.0
	Total	120	100
	In your opinion, is it time for Timor-Leste to build a digitalization system in health care facilities in 14 municipalities?		
2	Yes	113	94.2
	No	7	5.8
	Total	120	100

Source: opinion poll survey on the readiness of Health professionals for the digitalization program of the health system in Timor-Leste, June 2022.

Regarding to the above table mentioned that 90% of participants was stated that health professional who work at health facilities in Timor-Leste for today is need to Improve or deepen health professional's knowledge and skills in using ICT in the future to best facility their regular working. Based on the above result indicated that all health professional was used hand phone for support their activities, in terms of the communication and coordination with others in work place and community area.   Mentioned that based on their observation and knowing in Timor-Leste still construct the ICT facility for supporting the health care system to achieving the objectives where already setting.

4. Discussion

4.1. Socio Demographic

In this study looking for the gender based indicated that male is majority involved to provide the information related with the question where distributed via google form about 54,2% and then women with 45,8% from hold Timor-Leste territory. Other side it is mean that man is more interesting than women. This result according with the several study were conducted indicated that   men and women are not equally interested or willing to participate in exercise and sport science research [13].

This result shows that men often respond more quickly to research issues and are always very interested in seeking knowledge and involvement in the processes.   Men often to ask for their contribution by expressing their own opinions and ideas. So they were happy too have expressed their opinions. The result was participated by seven health professional and majority are nurse's profession with among 42,5% then, secondly is midwife and thirty is Medical doctor involved in this study. Looking for education level majority 71,7% with bachelor degree level in health area such as (medical doctor, nurses, midwifery and others) compared with other level education. The most

participant in the study come from Dili Municipality around 35%. Staff work at health facility 64.2% it is mention that more health professional was worked event in public sector or private sector.

4.2. Digital Technology Utilization Experiences

Hand Phone use

Based on experience using digital technology media detected health workers in Timor-Leste, there are very varied experiences.   One example is their experience in using hand phone or mobile phone to support their daily communication with family members, health workers and the community in general. In this ability, the health workers who are the respondents indicate that 100% use the phone. In this reality we can imagine that in this era of modern globalization everyone automatically uses the hand phone every day to facilitate their activities to be faster and more effective and more likely to be successful.

This results are very relevant to the scoping review results from some scientists have shown that the use of m Health has great potential as a used tool to support health workers improve primary care and prevention of the population from various diseases. On the other hand, the use of telephones can strengthen training and recruitment of health promoters to support health services. It can also support to harmonious or strengthen the effectiveness and adequate health care of communities [14]. Therefore, in Timor-Leste we want to promote health workers how to hand phone more systematically, effectively and efficiently in their daily lives. The use of the hand phone can be systematic to support the learning process for those who have a great interest in continuing their studies, those who have a great interest in conducting research, writing articles and also facilitating them to promote health for the general population of Timor-Leste. Through these means, health workers will benefit better because of the use of hand phone. This will help the Ministry of Health to achieve quality health care goals in the future.

Computer use

Based on the finding of this research, 78,3% of health workers have experienced using special electronic MS Word technology to support their daily work at home and in the workplace. However, there are 21.7% health workers who do not access or use MS Words to support their work at home and in the workplace. The result is corresponding to the previous research by another scientist conducted that health workers in some parts of the hospital in Africa's majority of respondents explained that they used Microsoft Word to be very efficient with a total percentage of 63.4% [15]. Health workers working in hospital, community health center, central service the Ministry of Health and university throughout the territory of Timor-Leste is obliged to understand the use of Microsoft Word.   We also see that in this era of globalization everyone is always using digital technology media to add information to their daily work. The messages conveyed are always prepared in electronic models and often use words for preparation. It is time for all health workers to have enough skills to use the Microsoft word at any time so that they can support them to work more quickly, effectively and efficiently to ensure quality health services in Timor-Leste.

The second skill is the use of MS Excel, according to the results of this study shows that health workers as respondents have 76.7% access and have used MS Excel to support their work related to making a count, at home or in the workplace. However, there are also 23.3% respondents who have not yet accessed or used MS Excel to facilitate their special work on the issue of contagion, at home or their workplace. This research was supported by research conducted in the hospital in Nigeria, indicated that the majority of the health workers in the hospital use of computers is inefficient using Microsoft Excel (ME) with the percentages 56.7% [15]. Health workers also have their daily health care-related work always calculate the count of medicines, work equipment, work schedule, budget calculation, work report, capacity building process and research results. Therefore, for those who do not have the opportunity to access the use of the ME in Timor-Leste, it is necessary to promote them to adopt the use of computer media for their daily work.

Based on the research results it shows that in 81.7% used MS PowerPoint to support their work at home or workplace.   However, there are still 18.3% who respond that they do not have access to

or use MS PowerPoint at home or workplace to support their work. This skill is linked to how to prepare a presentation slide in relation to their studies or work issues.

Email and WhatsApp's use

Based on the above result also indicated that majority of health workers in Timor-Leste was have ability and opportunity to access use e-mail and WhatsApp's on supporting their daily work is 89.2% and 91,7%. This result was according with the other several result study was mentioned that the ability in e-mail and WhatsApp use was efficiency is 76.4% and 73.3% [15]. Other study also was reported that in the South East Asia Region (SEARO) as only 5 countries was adapted the telemedicine guideline to support health workers during conducting the health care to the population, that is India, Bangladesh, Thailand, Indonesia and Nepal only [16]. On the other hand, some respondents have not yet accessed or used emails and WhatsApp to facilitate their daily work, with a percentage of 10.8% and 8.3%. Although the percentage is small, it is also very significant because it is a barrier to achieving a job goal, the staff will do a very manual job, which we all know will spend a lot of time and resources compared to those who do the job using digital technology. Previous research mentioned that email use a host of benefits for busy workers to support them how organized and deal their regular work in the a convenient and also one of the flexible way in the digital era [17]. Work outcomes always have a difference between one and the other. It is according with the previous research statement was mentioned that WhatsApp considered the most popular messaging services application around the world, it is more than 100 countries where over the 2.5 billion is the active user of WhatsApp [18]. Therefore, health professional including manager in Timor-Leste is very need to understanding and able to adapt in the digital WhatsApp use to facilitate their fast communication, and also need to help those who do not have access to these technologies to improve their future services.

Zoom/webinars/Google meet and others use

One part related to the capacity and opportunities of using a special technology medium for a zoom or a google meet was show that 25,8% of the study respondents that it is not used and is also strengthened by a significant p value of 0,000, although there are 74,2% that they always use the technology medium. It is according with the other research was mentioned that camera is the average transformation through the era of digitalization and it is inspired by high-scalability, flexibility and strength of the learning process and services in various areas. Compared to activities in conventional ways [19]. This research also according with the statement were mentioned that, the technology digital in healthcare system related to the information communication and technologies process to support the health care activities in the health facilities in the territory of the country. It is adapted by the health workers, managers, patients and family in the managing the illness and wellness based on the aim of the health facilities [20].

In fact, we are now living in an era full of activities facilitated by digital technology. Many people in this modern world are always very dependent on the technology media to support all the work in a timely manner within a few minutes, without having to finish a job. Everyone is very dependent on using media such as therefore in Timor-Leste we need health workers to make a good sense of how these media can be used to communicate quickly throughout the territory of Timor-Leste. This average will enable us to work quickly, effectively and efficiently to provide quality services to the population in Timor-Leste for the future. This is an obligation for Timorese people to know so that they can be able to compete with health workers in other countries in terms of doing work or even conducting quality research. Capacity building need and readiness to use digital in Timor-Leste is priority for the Timorese health workers in the any health facilities level in the country.

5. Conclusion

This study was indicted that majority of health professional in Timor-Leste was used the computer, internet, hand phone to support their daily activities. Event this reality, the majority of them still need to gate the professional training or capacity bulling related with the Digital technology media to improve their knowledge, attitude and psychomotor in the future to facilitate the activities day living.

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