

**To Support or Not Support: Organizational Issues Faced by Nurse Administrators on
Nurses' Use of Smartphones for Work Purposes**

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Abstract

Studies show that nurses – the largest group of healthcare professionals – use their own smartphones for work purposes. While hospitals tend to have restrictive policies with the use of personal devices at work, nurse administrators are placed in a dilemma of either supporting or not supporting nurses’ use of smartphones for work purposes. This study aims to identify organizational issues faced by nurse administrators related to nurses’ use of smartphones for work purposes and examine its implications. Between June-July 2017, nine focus groups consisting of 43 nurse administrators (i.e., nurse supervisors, nurse managers, and charge nurses) were conducted in nine tertiary level general hospitals in Metro Manila, Philippines. Drawing from Organizational Support Theory, issues were classified as those that encouraged or inhibited nurse administrators to support nurses’ use of smartphones for work purposes. Issues that encouraged nurse administrators to support nurses’ use of smartphones for work purposes include problems with existing workplace technologies, absent or insufficient unit phones, insufficient unit phone credits, and unrealistic policies. On the other hand, issues that inhibited nurse administrators to support nurses’ use of smartphones for work purposes include smartphone use for non-work purposes and misinterpretation by patients. Overall, the findings show the role and implication of IT consumerization in hospital settings, especially to those situated in low-resource countries.

Keywords: BYOD, focus groups, IT consumerization, nurses, Philippines, smartphones

Executive Summary

IT consumerization is an organizational issue that is faced by most industries today. IT consumerization refers to a situation when employees use their own device(s) for work purposes. While some organizations implement a policy allowing the use of personal devices, some prefer to undertake a “wait and see” approach, while others may not take any formal action at all. Among several organizations, healthcare organizations are an interesting setting to understand the implications of IT consumerization considering that they are less likely to allow healthcare staff to use their own devices due to several privacy and security concerns. Previous works suggest that nurses – the largest group of healthcare professionals – use their own smartphones for work purposes. While hospitals tend to have restrictive policies with the use of personal devices at work, nurse administrators are put into a dilemma of supporting or not supporting nurses’ use of smartphones for work purposes. This study aims to identify organizational issues related to nurses’ use of smartphones for work purposes and examine whether such issues encourage or inhibit nurse administrators to support such behavior. Between June-July 2017, focus groups with 43 nurse administrators (i.e., nurse supervisors, nurse managers, and charge nurses) were conducted in nine tertiary level general hospitals in Metro Manila, Philippines. Drawing from Organizational Support Theory, issues that encouraged nurse administrators to support nurses’ use of smartphones include problems with existing workplace technologies, absent or insufficient unit phones, insufficient unit phone credits, and unrealistic policies. On the other hand, issues that inhibited nurse administrators to support nurses’ use of smartphones include smartphone use for non-work purposes and misinterpretation by patients. Overall, the study contributes to the understanding of IT consumerization in hospitals situated in developing countries where smartphones play a significant role in mitigating constraints in human and technological resources.

Introduction

Nowadays, it is common for employees to use their smartphones to accomplish work-related tasks. Scholars attribute this situation as IT consumerization or the “*adoption of consumer devices and applications in the workforce*” (Harris et al., 2012, p.99). This situation is not surprising considering that the portability of smartphones blurs the boundaries between personal and professional use (Ling, 2015; Stephens & Ford, 2016). Instead of using company-issued devices for work purposes, organizations recognize that employees prefer to use their own devices. For instance, Microsoft found that 67% of IT employees are using personal devices in the workplace (Jones, 2012), while Intel reported that the number of their employees using their own smartphones for work purposes increased from 3,000 in 2011 to 17,000 in 2012 (Buchholz et al., 2012). Although these organizations support their employees’ use of personal devices, there are others who would not support such an initiative (Maddox, 2016).

Take the case of healthcare organizations. Although a 2015 survey found that 73% allowed their healthcare staff to bring their own devices (primarily smartphones) for work purpose, only 51% allowed their nurses to use personal devices for work as compared to 91% of medical doctors (Spok, 2015). Although much of the literature focused on medical doctors’ use of smartphones (e.g., Nerminathan et al., 2017), more studies are needed to understand the perspectives of nurses – the largest group of healthcare professionals in a hospital that tend to experience low support on using mobile devices (Brandt et al., 2016; McNally et al., 2017). Considering that IT consumerization in the healthcare setting is a current issue faced by several levels of hospital administrators, it is crucial to understand specific issues encountered by nurse administrators when their nurses use their smartphones for work purposes. Faced with this situation, would they support such use or not? A study conducted among nurse administrators is important because they are in the best position to provide insights on how they negotiate implicit or explicit “*bring your own device*” (BYOD) policies for nurses.

To answer the abovementioned question, this study aims to identify organizational issues related to nurses’ use of smartphones for work purposes and examine whether such issues encourage or inhibit nurse administrators to support such practice. The Philippines, a developing Southeast Asian country, provides an interesting context for this study since most hospitals there have insufficient health information technologies that can support healthcare professionals’ clinical work (Ongkeko et al., 2016). This study is another contribution based on a series of

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studies examining the communicative implications of smartphone use by healthcare workers in hospital settings (e.g., Bautista & Lin, 2016, 2017; Bautista et al., 2018). Overall, the findings of this study can help guide healthcare organizations in developing appropriate BYOD policies for healthcare staff.

Method

Study design

This qualitative study used focus group for data collection since it is a useful technique when uncovering insights of an organizational situation (Dürrenberger et al., 1999). Focus groups have been used to uncover issues and generate recommendations on several health information technologies, such as electronic health records (Simon et al., 2009), electronic medical records (Zarcadoolas et al., 2013), and mHealth applications (Parker et al., 2013). The Institutional Review Board of Nanyang Technological University gave ethical clearance to conduct the study. Moreover, the administrators or ethics committees of the nine hospitals where the focus groups were conducted approved the study. To maintain confidentiality, participants were assured that their identities and workplaces were confidential since only interviewee and hospital codes were used in the analysis and presentation of the results.

Hospital selection

The nine hospital sites for the focus groups were part of a larger pool of tertiary level general hospitals ($N = 19$) included in an earlier study on staff nurses' use of smartphones for work purposes (see Bautista et al., 2018). Hospitals were selected based on data from that study that includes the level of organizational support on nurses' use of smartphones for work purposes (as perceived by staff nurses) and the percentage of staff nurses provided with a unit phone (i.e. a hospital mobile phone). Figure 1 shows the randomly selected hospitals per quadrant and Table 1 shows their characteristics.

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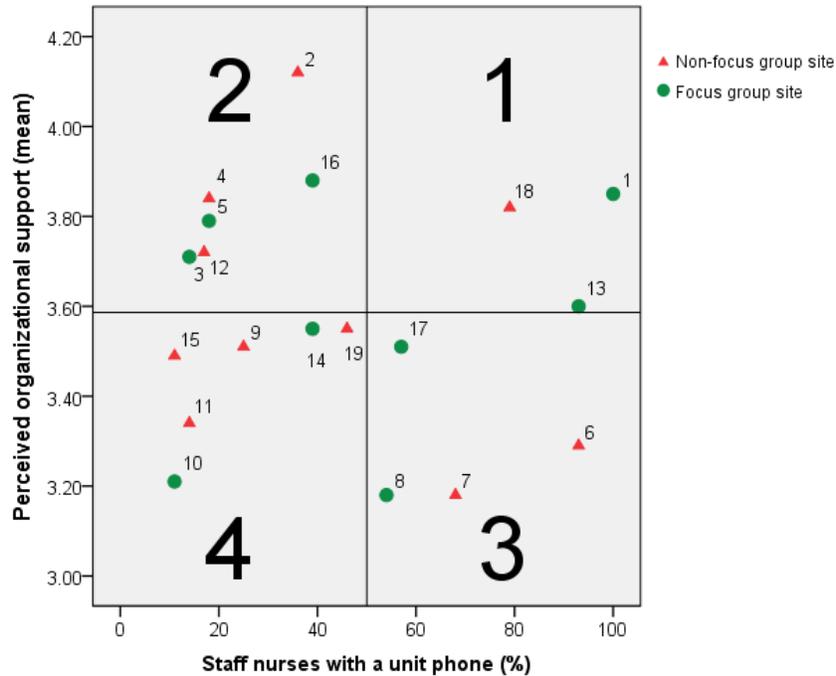


Figure 1. Hospital Quadrants and Focus Group Sites.

Note: Each dot or triangle represents the hospital code based on an earlier study. Green dots represent focus group sites.

Table 1. Characteristics of Hospital Sites for Focus Group (N = 9)

Quadrant	Hospital code	Ownership	Bed capacity
1	Hospital 1	Private	≥ 300
	Hospital 13	Private	< 300
2	Hospital 3	Government	< 300
	Hospital 5	Private	< 300
	Hospital 16	Government	≥ 300
3	Hospital 8	Private	< 300
	Hospital 17	Private	≥ 300
4	Hospital 10	Private	≥ 300
	Hospital 14	Government	≥ 300

Selection and profiles of participants

Consistent with qualitative research design, a purposive sampling method was used to select focus group participants (Sandelowski, 2000). The target participants for this study were nurse administrators, such as head nurses, nurse supervisors, and nurse managers. Selecting

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participants began by coordinating with each hospital's nursing department to request at least five nurse administrators assigned to various areas of the hospital. They should be at least 21 years old and have worked for at least a year in their current hospital. Having nurse administrators from various areas of the hospital ensured maximum variation sampling (Tracy, 2013).

This study was able to collect focus group data from 43 participants. They were scattered into nine focus groups and were composed of 22 head nurses, ten supervisors, nine nurse managers, and two infection control nurses (a supervisory position). Although most focus groups had five participants, two sessions only had four participants since these participants attended urgent work in their area.

Most of them were female (83.7%), and their median age was 45 years ($M = 45.88$, $SD = 8.98$), ranging from 28 to 64 years old. The median length of service was 16 years ($M = 18.69$, $SD = 9.92$), ranging from 5 to 41 years. Based on the areas of the participants, maximum variation sampling (Tracy, 2013) was achieved since participants came from several general (e.g., wards and outpatient department) and specialty (e.g., intensive care, operating theater, emergency department) areas.

Data collection procedure

All focus groups were conducted in a time and location arranged by each hospital's nursing department (e.g., during or after their shift in the hospital's nursing training office or vacant hospital room). Verbal and written consent to conduct and audio record the focus group was acquired from each participant before starting each session. Focus groups were held between June and July 2017.

The interview guide consists of 11 questions about their (1) demographics and work background, (2) perceptions and attitudes on nurses' use of smartphones at work, (3) perceived work outcomes of nurses' use of smartphones at work, and (4) organizational support on the use of smartphones at work. Although there were preset questions, follow-up questions were also asked whenever participants mentioned an interesting statement or when clarifications were needed. This provided the flexibility of asking more questions beyond the interview guide to obtain clarifications and explore more details. Excluding off-the-record discussions, each focus group lasted for an average of 40 minutes.

Data analysis

Audio recordings of each focus group underwent verbatim transcription right after each session. All completed transcripts and field notes were imported in *NVivo 11* for data analysis. To analyze the data, a primary-cycle coding was first conducted to break down the data into smaller pieces (Tracy, 2013). This was performed by conducting an extensive line-by-line open coding where codes were assigned freely to the data. After primary-cycle coding, a secondary-cycle coding was performed by immersing and reflecting on existing codes. Subsequently, related codes were categorized into conceptual bins (Tracy, 2013). It was also during this stage that new codes were created, and existing ones were transferred as needed.

During secondary-cycle coding, it was also noticed that the issues derived from the data could be group together based on Organizational Support Theory (Eisenberger et al., 1986). This theory posits that the level of support that an organization or its members (e.g., nurse administrators) exert on the use of technology can influence employees' (e.g., nurses) degree of workplace technology adoption (Eisenberger et al., 1986; O'Driscoll et al., 2010). Accordingly, the issues faced by nurse administrators could determine whether they would support or not support nurses' use of smartphones. Considering the depth of results obtained from the analysis, focus group data from 43 participants could satisfy data saturation.

Theme 1: Issues that Encouraged Nurse Administrators to Support Nurses' Use of Smartphones for Work Purposes

This theme refers to issues that encouraged nurse administrators to support nurses' use of smartphones for work purposes. Simply, the presence of these issues encouraged nurse administrators to allow their nurses to use their smartphones, particularly for work purposes.

Problems with existing workplace technologies

Problems with landline telephones. Every private and government hospital had a landline telephone considering that it is one of the most fundamental communication technologies one would have. However, most participants reported that although their hospitals provide landline telephones, nurses cannot use them to call mobile phone numbers since they are limited for communication with other landline telephones within the hospitals.

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Hospital 8 was an exception since participants there can make mobile phone calls by using hospital landline telephones to connect them to mobile phone numbers through the operator. This is generally useful, but one from Hospital 8 noted that when operators are unavailable, nurse administrators would allow their nurses to use smartphones to contact doctors.

Problems with the intercom system. Participants from Hospital 3 and Hospital 5 described their intercom system as a localized two-way communication system where a microphone and a loudspeaker were installed in every nursing area. Although this was deployed to help facilitate communication among healthcare staff within the hospital, some of them noted several problems when using the intercom system that reduced its usefulness. For instance, in Hospital 3, Participant 3 (Nurse Manager) noted that “*it is difficult to use*” the intercom system and Participant 1 (Nurse Manager) shared that “*sometimes it is busy.*” Similarly, Participant 3 in Hospital 5 stated that such technology “*is actually good*” but lamented that it was also an inefficient form of communication.

Consequently, the problems experienced by the participants with their intercom system served as a cue for them to allow staff nurses to use their smartphones for work purposes. Several participants shared why nurses would prefer smartphones over the intercom system. For instance, one participant stated that they could “*directly call the doctors for a referral*” and they “*need not bother to press anything on our intercom.*” (Hospital 3-Participant 3, Nurse Manager). Similarly, when the intercom system was busy, one participant was relatively fine when her nurses “*made calls or texted*” (Hospital 3-Participant 1, Nurse Manager) using their smartphones just to contact their patients’ doctors.

Problems with the desktop-based text messaging software. Another workplace technology that was shared by the participants was a desktop-based text messaging software. Participants described that this software allowed nurses to send and receive text messages to and from mobile phones regardless of service provider. In most situations, nurses often used them to send patient referrals to doctors.

Despite being an alternative to mobile phones for sending text messages, a major problem with this technology is its difficulty in receiving replies. For instance, one participant shared that her nurses in the intensive care unit used *Infotext*, but they were bothered because “*the problem with Infotext is we cannot immediately receive the reply*” (Hospital 17-Participant 5, Head Nurse). She also noted doctors were familiar with this problem and “*it is not guaranteed that*

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they will reply [in the Infotext]” considering that there was a “*feedback problem*” (Hospital 17-Participant 5, Head Nurse).

The feedback problem associated with this technology was a strong concern since a patient’s life in the intensive care unit, especially during emergencies, depends on the speed of coordination among the healthcare team. Considering this problem, one participant shared that, instead of using Infotext, she allowed her nurses to use their smartphones when making referrals to doctors, especially during emergencies (Hospital 17-Participant 5, Head Nurse).

Participants in Hospital 1 also noted the feedback problem with Maxxtext and why it became unpopular among nurses and doctors. According to one participant (Hospital 1-Participant 4, Nurse Supervisor), *Maxxtext* was quite useful until it had such problem, and this led to the termination of the software and the deployment of mobile phones in their hospital.

Absent or insufficient unit phones

Absence of unit phones. Focus groups with the participants revealed that all government hospitals (i.e., Hospital 3, Hospital 14, and Hospital 16) did not provide unit phones and a few private hospitals provided them (e.g., Hospital 1 and Hospital 13). Considering that most of the hospitals did not provide mobile phones to their nurses, participants from those hospitals shared that the smartphones of their staff nurses were very useful, and they allowed its use for work purposes. For instance, one participant shared that she allowed her nurses to use their smartphones “*to do research on the case of the patient*” since she believed that it is “*the fastest way for them to look for information regarding the case of the patient that they are handling*” (Hospital 5-Participant 1, Nurse Manager). Similarly, another participant shared that her area was not provided with a unit phone, thus she allowed her nurses to use their smartphones considering its usefulness for communication purposes (*Hospital 8-Participant 3, Head Nurse*)

Aside from its usefulness that made nurses become productive at work, some participants also shared that smartphones contributed to improving the quality of care rendered to patients. This occurred when smartphones helped nurses immediately cater to patient needs. As a result, this served as a cue for the participants to support their nurses’ use of smartphones for work purposes. For example, one participant stated that “*the patient benefits from it because they [nurses] can facilitate immediate interventions to the patient*” (Hospital 14-Participant 2, Infection Control Nurse).

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Insufficient Unit Phones. Among the focus group sites, only two private hospitals in quadrant one (i.e., Hospital 1 and Hospital 13) provided most of their nursing area with a unit phone. These phones were all feature phones that were limited to making voice calls and text messages. However, despite the presence of unit phones in these hospitals, some participants shared that there were instances that their nurses needed to use their smartphones because not all of them can use the unit phone at the same time. For example, one participant shared that she has more than 17 nurses in the telemetry unit and “*nurses could not use the unit phone at the same time. That’s why they use their personal phone*” (Hospital 1-Participant 1, Head Nurse). Likewise, another participant argued that nurses’ smartphones are much more accessible to use than unit phones (Hospital 1-Participant 2, Head Nurse).

Insufficient unit phone credits

Although Hospital 1 and Hospital 13 provided unit phones as a strategy to reduce nurses’ reliance on their own smartphones, participants from these hospitals noted that their hospitals do not necessarily provide them with sufficient credits to use the unit phone. In most cases, unit phones were under prepaid subscription and credits should be added if consumed completely. Without any credits, unit phones become useless to contact colleagues. As a result, nurse administrators from Hospital 1 and Hospital 13 allowed their nurses to use their own smartphones when their unit phones ran out of credits.

Similarly, another participant shared that since they are working in the emergency department, they need an immediate response from doctors. Unfortunately, their unit phone “*does not always have a load [credits]. It is seldom that it has a load. So, we use our own cellphone*” (Hospital 1-Participant 3, Head Nurse).

Participants noted that their hospitals only provided credits through prepaid cards every start of the month, and all of them expressed that this arrangement is not feasible since they can easily consume the credits within a couple of weeks. In most situations, some participants used their own money to purchase credits for the unit phone. One participant noted that she used her own money to purchase credits when their unit phone’s credits were depleted (Hospital 1-Participant 3, Head Nurse)

Unrealistic policies

All nine hospitals had policies on the use of mobile devices which were written in hospital memos. Accordingly, hospitals can be divided based on the level of restriction placed on mobile devices. The first group is composed of four hospitals (i.e., Hospital 5, Hospital 10, Hospital 13, and Hospital 17) that implemented a ban on the use of any mobile devices (whether for work or non-work purposes) during working hours. It is interesting to note that all these hospitals were private institutions and only Hospital 13 provided most of their nurses with unit phones. On the other hand, the second group was composed of five hospitals (i.e., Hospital 1, Hospital 3, Hospital 8, Hospital 14, and Hospital 16) where the use of smartphones is banned for non-work purposes but is allowed for work purposes.

Making exemption. Although Hospital 5, Hospital 10, Hospital 13, and Hospital 17 placed a ban on the use of any mobile devices, participants from these hospitals stated that they made an exemption by allowing nurses to use personal smartphones for work purposes. This is for the fact that such policy was unrealistic considering that their hospitals did not provide nurses with relevant work-related technologies, such as mobile phones. According to one participant, although their hospital banned the use of any mobile devices, she shared that *“you cannot avoid not to use it [smartphones] because it is a big help for nurses in terms of communication, especially when the doctors are not here”* (Hospital 13-Participant 1, Head Nurse). Similarly, another participant shared that *“we allow [the use of smartphones] if [it is] related to work, but it is not allowed if you would just use Instagram”* (Hospital 17-Participant 5, Head Nurse).

For most participants, a blanket ban on smartphone use is difficult to implement since these devices were useful and necessary at work. One participant emphasized this point by arguing that *“it is not absolute that we cannot use our phone”* considering that *“there is a need for us to use the phone [for work purposes]”* (Hospital 5-Participant 3, Head Nurse). Moreover, another participant shared that a blanket ban on *smartphones “is not realistic even there is a memo because it is difficult to enforce it”* (Hospital 17-Participant 2, Nurse Supervisor).

Ban on smartphone use only for non-work purposes. On the contrary, five hospitals (i.e., Hospitals 1, Hospital 3, Hospital 8, Hospital 14, and Hospital 16) had memos where the use of smartphones for non-work purposes is banned for non-work purposes but is allowed for work purposes. Of these hospitals, two are private (Hospital 1 and Hospital 8) and three are government hospitals (Hospital 3, Hospital 14, and Hospital 16).

Interestingly, although private ones, such as Hospital 1 and Hospital 8, provided most of their nurses with unit phones, participants noted that their policies still allowed nurses to use their smartphones for work purposes. Even though the participants described that their memos do not provide a definite list on how it should be used for work purposes, nurses could use their smartphones when there is an urgent need to communicate with colleagues (e.g., sending text messages or making calls to colleagues). For example, one participant noted that their hospital issued a “*Doctor’s Notification Protocol*” (Hospital 8-Participant 1, Head Nurse) as a basis for them to use their smartphones for work purposes. A colleague of that participant clarified that this protocol allowed nurses to use their smartphones to “*inform doctors thru text [messages]*” since the hospital revised the old protocol “*by including SMS messaging*” as part of the notification protocol (Hospital 8-Participant 3, Head Nurse).

Considering that government hospitals lack adequate technologies for nurses to use, participants from Hospital 3, Hospital 14, and Hospital 16 noted that their hospital allowed the use of smartphones work purposes and only prohibits its use for non-work purposes. Although some participants noted that this is not an ideal policy and is the result of their hospitals’ lack of budget for health information technologies, they noted that it is a policy that is meant for healthcare staff to properly perform their duties to their patients despite resource constraints.

Overall, restrictive policies on mobile devices in hospitals can only be implemented properly if there are sufficient work-related technologies that can be used by nurses. Unfortunately, the findings indicate that most of the hospitals in this study did not have sufficient technologies for nurses not to use their smartphones for work purposes, and a total ban on mobile devices is difficult for nurse administrator to implement. Although some hospitals enforced unrealistic policies, nurse administrators recognized that their workplace lack sufficient technologies and this made them circumvent unrealistic policies by allowing nurses to use smartphones for work purposes.

Theme 2: Issues that Inhibited Nurse Administrators to Support Nurses’ Use of Smartphones for Work Purposes

This theme refers to issues that inhibited nurse administrators to support nurses’ use of smartphones for work purposes. Simply, the presence of these issues acted as cues that made

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nurse administrators restrict their nurses to use their smartphones for work purposes. These issues include (1) smartphone use for non-work purposes and (2) misinterpretation by patients.

Smartphone use for non-work purposes

Although participants allowed nurses to use their smartphones for work purposes, they were equally concerned that some nurses were abusing such considerations by secretly using it also for non-work purposes. As expressed by all participants, this was one negative aspect when nurses were allowed to use their smartphones at work. Although this issue was recognized by all participants, those from private hospitals were more serious about this during discussions than those from government hospitals. As noted by participants from private hospitals, they observed that nurses could take time to use their smartphones for non-work-purposes (e.g., accessing social media or making personal calls and text) since there are fewer patients to handle in private hospitals than in government hospitals.

Feelings of frustration and unprofessionalism. When participants discussed details on nurses' use of smartphones for non-work purposes, most of them showed a facial expression akin to frustration. This is expected since participants mostly shared statements that reflected frustration when discussing this issue. Aside from feelings of frustration, some participants felt that such behavior did not look what a nurse ought to be during the performance of his or her duty. As mentioned by one of the participants, although it is fine for nurses to use smartphones for work purposes, its use for non-work-purposes "*does not look professional*" (Hospital 14-Participant 1, Nurse Supervisor).

Negative outcomes. Concerns regarding nurses' use of smartphones for non-work purposes can lead to negative outcomes. As a result, some participants shared that there were times that they did not want their nurses to use their smartphones at all. One outcome that participants were concerned regarding the use of smartphones for non-work purposes is reduced work productivity. This concern was reasonable since all of them believed that smartphone use for non-work purposes is highly distracting and can result in productivity loss. For some participants, its use for non-work purposes also reduced the quality of care since smartphones take away the attention that should have been given to patients. One culprit for this is the use of social media during working hours.

Misinterpretation by patients

Most of the participants shared that they cautioned nurses when using smartphones in front of patients since there is a tendency for patients to interpret that nurses use their smartphones for non-work purposes. This issue was expressed mostly by participants from private hospitals since they cater to “pay patients.” Accordingly, pay patients tend to expect a higher standard of service than patients admitted in government hospitals where most patients are subsidized. This means that patients in private hospitals are relatively observant on how nurses conduct their work.

On the contrary, patients who are sick or in pain are generally sensitive and they may easily complain when they feel neglected, especially when nurses use their smartphones. For example, one participant shared that her patients in the delivery room “*are in labor...in pain, so they are really sensitive*” (Hospital 5-Participant 5, Nurse Manager). As a result, “*if they see that you are holding your cellphone and you did not immediately address their need, these result in complaints*” (Hospital 5-Participant 5, Nurse Manager).

Discussion

Issues that Encouraged Nurse Administrators to Support Nurses’ Use of Smartphones for Work Purposes

One of the key findings that are reflected by these issues is that a hospital’s lack of adequate health information technologies can drive (or force) nurses to be resourceful in using an existing technology that they can use in their work regardless of policy constraints. This is somewhat expected in most, if not all, hospitals in the Philippines since the deployment and implementation of even the most basic forms of health information technologies (e.g., electronic health records) there is lagging (Ongkeko et al., 2016).

In the context of the study, problems encountered by nurse administrators on existing hospital communication technologies served as a justification for them to allow their nurses to use smartphones for work purposes. For instance, landline telephones and intercom systems, although generally available in most hospitals, were perceived to be an inefficient and indirect means of communication than smartphones. In addition, although desktop-based text messaging software can be used for sending work-related messages to colleagues, this technology was perceived to be unreliable than smartphones, especially during emergency situations. As a result,

this led nurse administrators to support the use of smartphones for work purposes to overcome problems associated with existing workplace technologies. This is expected considering that nurses have a moral responsibility to take care patients and technologies, such as mobile phones, can serve as a bridge to address healthcare gaps (Hampshire et al., 2017).

Aside from problems with existing workplace technologies, the absence of unit phones, and its credits, served as another reason for nurse administrators to allow nurses to use smartphones for work purposes. This is expected as all nurse administrators found such devices to be useful and if this is not provided by their hospital, they tend to support the use of their nurses' smartphones. Similarly, when unit phones lack the necessary credits to be functional, nurse administrators have no choice but to allow their nurses to use their smartphones.

Another key finding of this study is that a blanket ban policy on mobile devices did not deter nurse administrators' decision on allowing nurses to use smartphones for work purposes since such policy was perceived to be unrealistic. Contrary to previous studies where nurse administrators are unsupportive of nurses' use of smartphones (Brandt et al., 2016; Gilles-Smith et al., 2017; McNally et al., 2017), nurse administrators in this study were generally supportive of smartphone use as long as it is used solely for work purposes.

Although allowing nurses to use smartphones for work purposes contradict a hospital's blanket ban policy on mobile devices, the findings indicate that such policy can only be implemented if there is sufficient context that it can be implemented. Specifically, a blanket ban policy can only be implemented realistically if a hospital provides nurses with adequate technologies to the extent that there is no need for nurses to use their own smartphones at all. Unfortunately, this is not the case in most hospitals in the Philippines considering that investments in health information technologies there is relatively low (Ongkeko et al., 2016). Recognizing the limitations present in their workplace, the findings showed that nurse administrators tend to take a pragmatic approach to such policies by implementing the ban only for smartphone use for non-work purposes.

Issues that Inhibited Nurse Administrators to Support Nurses' Use of Smartphones for Work Purposes

The first issue that can inhibit nurse administrators to support nurses' use of smartphones for work purposes is nurses' use of smartphones for non-work purposes. Consistent with

previous works, it is inevitable that some of them would use it for non-work purposes, such as playing mobile games, making personal calls and text messages, and accessing social media (e.g., Brandt et al., 2016; Giles-Smith et al., 2017; McNally et al., 2017). Based on the findings, a typical reaction by nurse administrators to this issue is frustration. This is understandable since nurse administrators, especially those in private hospitals where there is a blanket ban on mobile devices, felt betrayed after placing their trust on their nurses that they will only use their smartphones for work purposes. On the other hand, some nurses also felt that such behavior is unprofessional. According to scholars (Brandt et al., 2016; McNally et al., 2017), the prospect of nurses using their smartphones for non-work purposes is unprofessional since it does not align with the ethical and legal standards that define the profession.

For nurse administrators, the use of smartphones for non-work purposes is an important issue since it is a prime source of distraction that can reduce productivity and the quality of care rendered to patients. Of the many ways that nurses can use it for non-work purposes, the findings are consistent with previous works where accessing social media and playing mobile games were deemed to be highly distracting and these can reduce work productivity (Brandt et al., 2016; McNally et al., 2017). Likewise, patients are also at risk because distraction due to non-work-related use of smartphones might lead to injury, thus reducing the quality of care to patients (Brandt et al., 2016; McNally et al., 2017). Given these negative outcomes, it is expected that nurse administrators are not supportive of nurses' use of smartphones when it is used for non-work purposes.

Limitation and Future Direction

Despite the novel findings of this study, insights derived were limited to focus groups with nurse administrators. Ideally, such insights should come from a variety of stakeholders (e.g., healthcare professionals, administrators, and patients). Although it was initially planned to include other members of the healthcare team (e.g., pharmacists, doctors, etc.) in the focus groups, several constraints during early research trips were encountered that prevented their inclusion. One of these constraints includes the lengthy process of acquiring permission from different departments within a hospital (again, this is especially true for researchers that are not affiliated with the hospital). As a recommendation, future studies can be geared towards

including other healthcare professionals when it comes to discussing policy insights on nurses' use of smartphones for work purposes.

Conclusion

Regardless of existing policy and technological status of the hospital, this study showed that nurses will use whatever technology at their disposal to facilitate their work and mitigate technological barriers in providing healthcare. In this study, nurses were willing to use their own smartphones for work purposes and nurse administrators are faced with several organizational issues that encouraged or inhibited them from supporting nurses' use of smartphones for work purposes. In the long term, healthcare institutions, most especially those in low-resource settings, should review their BYOD policies considering the growing importance of smartphones in the work of healthcare professionals.

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