THE IT WORKER SMART PHONE CONUNDRUM:
HOW WORK EMAIL ON SMART PHONES AFFECTS STRESS LEVELS OF
INFORMATION TECHNOLOGY PROFESSIONALS IN IT SERVICES

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ABSTRACT

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PHONES AFFECTS STRESS LEVELS OF INFORMATION TECHNOLOGY
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Information Technology Professionals can often be under a lot of pressure, especially in the
department of IT Services. Many IT Services employees have smart phones they use to
download work email so that they are available to provide support at any time. This may result in
high stress levels from expectations related to multitasking and better productivity. To explore
the impacts of using personal smart phones for IT work several IT Professionals were
interviewed about their smart phone usage. Interviewees were asked the same set of questions,
but they were prescreened and chosen as participants if they fit one of two profiles: whether they
like using their smart phones for work email or dislike using their smart phones for work email.
The results showed that how the IT Professionals used their smart phones and their reasoning for
using their smart phones appeared to be associated with their stress level. Overall, those who
dislike using their smart phones reported experiencing less stress than those that did those who
liked using their smart phone for work email.

Dedication

To my dad, who left me a with a family legacy;
To my mom, who taught me the value of education;
To my husband, who made many meals for us and never stopped supporting me.

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INTRODUCTION

THE PROBLEM

IT Services departments at large universities support many of the most important IT applications

and systems for the university. There are multiple teams within the unit, each having their set of

responsibilities for maintaining those applications and systems. These are the IT Professionals of

IT Services, including help desk, networking, and server staff. Many of these individuals are

given tasks that require them to be available not only during the workday, but outside of the

workday. They have different devices to keep them in touch with what is going on at work,

including smart phones. IT Professionals often have the latest and greatest technology, especially

when it comes to communication devices. Smart phones are one of the fastest growing

technologies and have been for several years. In order to support clients, IT Professionals need to

be available around the clock, which pushes them to get smart phones and configure their work

email on the phones. This allows them to check email and use other functions of their phone with

constant connectivity. They find it more convenient to multitask, leading to higher productivity.

When others in the university know people in the department have this device and ability, it can

become an expectation of coworkers and management, making it difficult to turn off. This leads

to the stress of always being accessible.

WHY THIS MATTERS

IT Services hosts many applications and systems that are available at all times, or expected to be.

That means that if something does fail, the IT Professionals are expected to be available to fix it.

Sometimes it is not a system failure, but something simple like a password reset. Either way,

there is usually a department employee available to assist with the issue. This might be expected

or assumed with clients of IT Services, but IT Professionals may not always want to be available, and can find it difficult to step away from work when their email is so readily available on their phones. This kind of stress can cause issues not only in their work life, but also in their personal life, pushing them to have work overload. This is very dangerous for any person, but having work email on smart phones may increase the chances of stress due to that strain. The employee, management, and coworkers should all be aware of this issue and supportive if they see it happening. Many other health issues can arise if a person is under too much stress for too long. IT Professionals in IT departments need to be able to get away from constant communication and work and understand that the tasks will be there when they return. Limiting the use of smart phones is important to encourage healthier employees. The question is does having work email on smart phones seem to influence the stress level of IT Professionals in IT departments. To examine this, six people volunteered for interviews to be asked a series of questions based on their smart phone usage.

LITERATURE REVIEW

WHAT OTHERS HAVE DONE

SMART PHONES

From back in the early 1980s, mobile penetration has grown significantly. In the late 1990s, half

the world still had never made a phone call (Jordan, 2012). In 2002, there were an estimated

15.57 mobile phones per 100 people worldwide (Gans, King, & Wright, 2005). Due to 3G

technology, phones have become more efficient for email services (Gans, King, & Wright, 2005)

and other functionality. This has lead to a widespread amount of smart phone ownership. In July

2011, there were 82.2 million smart phone subscribers in the U.S. (Yelton, 2012). More than

90% of adults between the ages of 18 and 46 own cell phones (Zickuhr, 2011), 67% of adults

between the ages of 18 and 24, 71% of adults between 25 and 34, and 54% between 35 and 44

own smart phones (Smith, 2012). It is no longer a matter of if someone will get a smart phone

but when. Yelton (2012) states the cost of a smart phone is no longer a barrier to device

ownership. People can get good prices or they really do not care about the price to begin with.

Ownership of mobile devices has increased dramatically over the years. In a study done by

Dearman and Pierce (2008), the average device collection was 5.96 per person. This represents

any mobile device with internet access. According to Jordan (2012), there are 5 billion mobile

phones for about 6.8 billion people. With all those phones, millions of people now have email

access instantly, and increased levels of stress. New technologies, such as smart phones, means

new stressors (Losyk, 2005).

Information Technology is a major part of everyday life, especially mobile phones. Years ago,

email capabilities became available on smart phones. This has led to interesting changes in our

behavior, specifically our amount of stress. Professionals that work in the IT field are some of

the most affected by this technology. Stress is lead by the presence of email (Price, 2010) and IT

Help Desk Professionals can often feel compelled to check work email. Smart phones increase

anxiety by the need to check email constantly (Allen & Shoard, 2005). Expectations have

changed for employers and employees on how often to communicate. Technology is driving in

new understandings and expectations including time, intimacy, productivity, work, location and

choice (Jordan, 2012). Employees are now available at any time, and employers often expect

that. It is the responsibility of both parties to respect that even with the technology, time away is

still needed and required to reduce stress. Assuming that the majority of smart phone users have

email setup on their phone, checking it constantly or getting email constantly is a major source of

stress. According to a report done by King (2013), 44% of 250 million emails recorded opened in

June 2013 were on smart phones. Smart phones have created a fine line between when it is work

time and personal time. The devices have made an incredible impact on concepts of work and

working hours (Karlson, Iqbal, Meyers, Ramos, Lee, & Tang, 2010).

Any job can be stressful, whether it is enjoyable or not. IT Professionals often have a lot to

handle no matter what they do, so stress can become inevitable. Work related stress is estimated

to affect at least one-third of the workforce in any one year (Williams & Cooper, 2002). While

that might not seem like a large amount, it is more than it should be. Even those that take time

off, find that stress is a large factor in enjoying that time. When people are stressed, the period

before time off is taken, they are very unlikely to perform at their best (Williams & Cooper,

2002). Employees often find themselves in a routine between work and personal time. Because

of that routine, the exciting time is when it is broken, such as taking vacations. They think about

it for weeks in advance and when it comes close, they are so stressed they can feel that vacation has already started and consequently productivity is greatly decreased.

Stress can also lead to high turnover rates. If people are not happy or feel too much pressure, they are more inclined to leave the position or company. High rates of staff turnover is one of the clearest organizational signs of stress (Williams & Cooper, 2002). Losyk (2005) also mentions that stress takes a toll not only on the worker, but detracts from the health of the organization. In other words, this can be dangerous for both the organization and the employees. According to Losyk (2005), 40% of job turnover is from stress. It is a serious condition and needs to be handled at the source. Stress matters because it damages people (Williams & Cooper, 2002). It can cause other issues mentally, emotionally, and perhaps physically . There are many causes of stress and sometimes it may not just be one thing. Employees and employers need to be aware of signs of stress so it can be prevented as soon as possible. One thing that can cause stress often is pressure, such as checking email constantly. Pressure leads to stress and the demands placed upon people exceed our ability to cope (Williams & Cooper, 2002). This is why people need to be cautious when dealing with stress. We need to learn to not be available at all times and know it is okay to take time off. Smart phones often prevent us from doing this because of the connectivity and accessbility.

MULTITASKING AND PRODUCTIVITY

Past studies review the impact of not only smart phones, but also mobile devices. These studies have been done with large companies, small companies, IT and non-IT employees. The result is often that people become so involved with constant connectivity and having email on their smart

phones, they cannot focus on anything. One study questioned what was achieved by having

multiple devices instead of just one (Oulasvirta & Sumari, 2007). People often feel that having

email on smart phones is a good way to multitask and be more productive when, in fact, studies

have shown the opposite. There is an illusion of productivity when it is actually

counterproductive (Richtel, 2009). Even though we feel like we can do more, we may be doing

less. According to Clifford Nass, "the brain is fundamentally built to unitask" (Richtel, 2009). If

we are trying to be productive by multitasking, this can cause stress whether it works or not.

Multitasking

People use different devices and often switch between them for multiple tasks. In a report by

Oulasvirta and Sumari (2007), they reflect on employees switching between devices in intervals

of less than five minutes. Not only are people multitasking to be more productive, but they are

using multiple devices to multitask. This can be incredibly stressful, especially for IT

Professionals who often have three or more devices they use daily. Multiple devices can each

have their own purpose, sometimes crossing over into each other. This can often happen if

employees want to keep work and personal life separate. For multitasking, employees might

have one device for personal use and dedicate another for work use (Oulasvirta & Sumari, 2007).

These two devices might have the same functionality but they are used for different areas,

pushing an employee to multitask. While management might be a large factor in supporting this,

often times the employee pushes himself themselves towards it. According to Richtel (2009),

white-collar employees often self-impose pressure to multitask. Although it can be the

employee's fault at times, it is still a problem having multiple devices to multitask. Separating

work and personal life can be challenging. One study showed this is exactly what people try to

do and use their smart phone to get work done faster and multitask (Bomber, 2010). The intentions are good but people have difficulty doing so in practice (Dearman & Pierce, 2008).

Productivity

Multitasking is thought to be a way of being productive. Instead of doing one thing at a time, do multiple things at a time. While this might seem like a good idea, it might not produce as much in the end. When an employee is given more technology with the possibility to do more, that might lead management to expect productivity to increase (Kakabadse, Porter, & Vance, Winter 2007). Part of the issue is that if the technology is good enough, it should be able to keep the employee's attention long enough to complete one task. Technology facilitates immersion that a person can become so involved with a task that nothing else matters (Kakabadse, Porter, & Vance, Winter 2007). That does not really support multitasking, but it does support completing a task sufficiently. Another take on productivity is that increasing power and portability of mobile devices can boost productivity, but can also lead to pragmatic difficulties in management and resuming tasks across multiple devices (Karlson, Meyers, Jacobs, Johns, & Kane, 2009). While mobile devices can attempt to increase productivity, one still has to be able to manage everything to be productive.

Being productive and still being efficient can lead to higher stress levels for any employee. One study showed that even though email made it possible to do more work, the work was not done more productively (Mano & Mesch, 2009). A balance now needs to be found in order to do work well, still maintaining everything else, including emails. When we move from our "stretch" zone (doing just over what we are comfortable with) to the "strain" zone (signs of anxiety) our

productivity declines (Williams & Cooper, 2002). People who push themselves or allow themselves to be pushed will not only decrease their productivity, but may end up hurting themselves. Having a smart phone to increase productivity may seem like it is a good idea, but could also end up causing more stress. Not only does this impact the employee, but also the employer and people around the employee. Stress can adversely affect everyone's performance, not just the person experiencing it (Williams & Cooper, 2002). Email can be considered one of the most stressful things a person deals with at any time, especially if they have to be doing other things as well. Although employees often try to be as productive as possible, email can actually cause problems. Email abuse is one of the issues that hinders productivity (Dawley & Anthony, 2003). While employees might feel that it assists, it often does not, causing one to be more stressed out over not getting things completed.

CONSTANT CONNECTIVITY AND ACCESSIBILITY

Not only do IT Help Desk Professionals feel a need to check email, but not being able to check email can cause stress. If a user cannot check email, it can induce stress, causing the balance of work and life to erode (Price, 2010). This is often a major issue because IT Professionals can often feel that they never leave work, having emails come in on their smart phones no matter where they are. Due to the responsibilities they have during work hours, that feeling of constant connectivity follows them outside of working hours. This leads to email on smart phones affecting the quality of life (Price, 2010). We use our phones more than we actually need to, and we do not need them as much as we think we do (Richtel, 2009).

Constant Connectivity

Connected everywhere all the time is what makes smart phones so popular (Bomber, 2010). In addition, constant connectivity implies a person always being "available, reachable and able to process information" (Grauers & Wall, 2012). This can cause major stress for users. Grauers and Wall (2012) mention that constant connectivity has lead to health effects like stress. Despite these increases, smart phones are still a widely and heavily used mobile device. They are often used because of the ease of access, instead of other devices. In one study it was found that an employee preferred his smart phone over his laptop for viewing his calendar because the laptop was too much to setup (Oulasvirta & Sumari, 2007). It is not just about pressures of checking email when you have a smart phone but the constant connectivity. People feel pressure to always be "on" (Perlow, 2012). In a report by Bomber (2010), it was stated that smart phones lead to frustration and annoyance by always being connected. Separating work and personal life has become more difficult than ever with the constant connectivity. Because of technology we are always able to be contacted (Losyk, 2005). It no longer matters where we are, we are always connected. Working hours is no longer a term meaning eight hours a day. With smart phones you are available twenty-four hours a day. Below is a poll taken internationally regarding people checking their email outside working hours.

People that said they feel guilty if they don't promptly respond to work-related messages outside normal work hours	26%

Table 1: Not responding to work emails outside normal work hours
Poll from 10 Ways Mobile Technology is Changing Our World (Scherer, 2012)

Because the smart phone provides accessibility to email, not checking it at any time can be difficult. Of these respondents, 26% said they feel guilty if they do not check their email. For the remaining, it may be that they do not feel guilty, or they just do not check their email outside

working hours. Another study showed that 48% of employees check email on weekends and 51% check on vacation (Perlow, 2012). Although people get time off from their work, many still feel obligated to check email for whatever reason. Below is another poll from the same group on how they use their phone while spending time with others during a meal.

Respondents that said they check their phone at every meal regardless of whom they're dining with	17%

Table 2: Check email during meals
Poll from 10 Ways Mobile Technology is Changing Our World (Scherer, 2012)

These two polls show that many people put their phone at a higher priority than what is going on around them. Whether is it after hours or meal times, they feel that checking their phone is important for whatever reason. Being connected is one of the most important features of a smart phone, or any mobile device. In a study done by Karlson et al. (2009), one participant was recorded leaving for lunch at 11:30am, checking his email at 11:35pm and again at 11:43am, then had a web surfing and email triage until 11:53am. This occurred again from 12:04pm until 12:15pm when he returned to his desk (Karlson, Meyers, Jacobs, Johns, & Kane, 2009).

Survey for how long people can go without their phones (U.S.)			
1 hour	Several hours	1 day	1 week
11%	34%	29%	19%

Table 3: Time without a phone
Poll from 10 Ways Mobile Technology is Changing Our World (Scherer, 2012)

Above is another poll that reflects how long people can go without using their phones. There is quite a range of lengths, with 11% saying one hour, while 19% say one week. One would expect these numbers to go down as the time length goes up, but that is not the case. In another case done by Bomber (2010), people reported that if their phone was lost, they had a feeling of panic. This may depend on whether the phone is used for work or personal reasons.

Accessibility

Depending on the service provider, smart phones have a vast amount of coverage for service that allows email to be downloaded to their devices at any time. This encourages IT Professionals to check email at any time, increasing stress. Smart phone flexibility allows users outside working hours to add to existing drivers of stress (Price, 2010). Because the smart phone is so easy to use and has better accessbility than other devices, users can feel more compelled to check email outside their working hours. Another component for IT Help Desk Professionals is their customer base. Price (2010) suggests that the size of the organization may have a relationship with email-induced stress. For IT Professionals at a Big Ten university, that might be a factor for email use on smart phones. Not only do they have access with their smart phone, but also any other portable device provides them with access. Portability was reported as the "best thing" about working with multiple devices (Dearman & Pierce, 2008). The devices allow people to make every minute matter in terms of communication. Smart phones are incredibly useful during smaller portions of time, such as in between meetings, allowing a user to be more accessible (Perry, O'Hara, Sellen, Brown, & Harper, 2001).

Part of owning a smart phone is people like coworkers knowing you own a smart phone and have access to email. They will be more inclined to email you at all times. If you stop emailing, colleagues will still email you (Perlow, 2012). This might also cause problems with management emails as well. Often times, being accessible is a sign of responsibility and dedication to your job, which leaves a good impression on management. Many people are afraid of not being available because it could hurt their chances of promotion. Stopping long hours and being

accessible could allow others to pass you on the way to a better career (Perlow, 2012). Bomber

(2010) agrees with this by saying employees often struggle to keep up with their job and email

but do it at the risk of being unsuccessful or not getting promoted. Mills (2012) also mentioned

in a study that those employees not wanting to check their smart phones as often might appear

less committed to work. This can be a huge dilemma in any job market.

How often do people check their mobile device (U.S.)?				
Less than every 5 minutes	10 minutes	Every 30 minutes	Once an hour	Few time a day
4%	14%	19%	17%	38%

Table 4: Times mobile device is checked
Poll from 10 Ways Mobile Technology is Changing Our World (Scherer, 2012)

This poll demonstrates the frequency of smart phone checking for the respondents. The

percentages are smaller in the smaller intervals and then make a slight jump to 38% for a few

times a day. This could mean that people have other devices they check, especially for email, or

something else. One study showed that higher frequency of email checking increased work

effectiveness, but also showed higher stress levels (Mano & Mesch, 2009). Despite these

numbers, other studies have found that people find it faster and easier to check email on phones

even while sitting near their PC (Karlson, Meyers, Jacobs, Johns, & Kane, 2009).

Where people place their mobile device while sleeping at night				
In the car	Bedroom	Next to the bed	Different room than where they are sleeping	Other/varies
1%	16%	68%	13%	2%

Table 5: Locations of phone while sleeping
Poll from 10 Ways Mobile Technology is Changing Our World (Scherer, 2012)

Millions of people check email constantly throughout the day, leaving only time to sleep. The

above poll shows the different places people leave their phone during that time, with the majority

having it right by their bed. Smart phones allow instant accessibility so having their phone next

to them at all times is the best way to ensure that. Research done by Karlson et al. (2009) found

that the smart phone is the most valuable role for accessing email and that it was the first thing

people checked when waking up. About 90% of the younger generation, Generation Y, has been

reported to check their smart phone before they get out of bed (King, 2013). Another study

showed that 70% of workers check their smart phone within an hour of getting up, and 56% did

within an hour before going to bed (Perlow, 2012). Mills (2012) also reports that in a company

study, 70% of employees checked their smart phone right after waking up and 56% did before

going to bed. In addition, about 26% of those employees sleep with their phones (Mills, 2012).

Respondents that said they would take their wireless mobile device to work instead of their lunch	66%

Table 6: Take mobile device instead of lunch
Poll from 10 Ways Mobile Technology is Changing Our World (Scherer, 2012)

Many people work through lunch as it is, but according to this poll, many of them take their

phone to work over their lunch. It is probably easy for most people to order in or go out to lunch,

but this poll shows how much more important a phone is than lunch.

WORK OVERLOAD

Many IT Professionals have work email on their smart phones so they can always know of issues

or information they need to be aware of. Users worry over what is being communicated which

leads to over checking of email and induced stress when not able to check email (Price, 2010).

Too much information can cause an information overload. This can be defined as email that a

person goes through to get it to a manageable level (Dawley & Anthony, 2003). Technology can

be useful to perform a job, but can also cause an employee to become overwhelmed. Despite

those that deny it, many professionals suffer from "email overload" (Bellotti, Ducheneaut,

Howard, Smith, & Grinter, 2005). Due to so many mobile technologies available, there is an

increasing amount of information at one's disposal (Allen & Shoard, 2005). Some do argue that

email capabilities on smart phones increases productivity. According to Dawley & Anthony

(2003), productivity increases but overload can still happen. Another argument is how smart

phones manage workloads. Using smart phones helps manage workloads and eases pressure of

work (Allen & Shoard, 2005). Overload can be dangerous if one is trying to be productive

because it can cause stress despite having the information needed.

Information and email overload covers many components. Email overload is more than the

quantity (Bellotti, Ducheneaut, Howard, Smith, & Grinter, 2005), but also quality. In a study

done by Allen & Shoard (2005), email was considered the primary cause of information

overload. Being able to access it through their smart phone, computer, or any other mobile

device can be overwhelming especially if one receives a lot of email. Messages pile up in the

Inbox and the time it takes to review it increases, causing a person to become easily

overwhelmed (Bellotti, Ducheneaut, Howard, Smith, & Grinter, 2005). Sometimes the

information received can be so overloading that the message does not matter. It may be that the

employee does not care about the email, but wants to make sure they get recognition for

checking the email and responding (Allen & Shoard, 2005). Getting recognized for checking

email, even outside working hours, can become more important than the dangers of overload.

Simply responding and acknowledging might be what many people use their smart phones for,

rather than giving a detailed response. In one study, employees enjoyed the ability to look at

emails and decide whether they wanted to react right away or not (Bomber, 2010). This might be

an approach many people use rather than using the phone for a full email.

While it might not seem that information overload is dangerous, it can cause serious stress issues. Often the amount of data received exceeds an individual's cognitive ability (Allen & Shoard, 2005), and that person can become too overwhelmed to be effective. Employees need to be able to process information before they can use it efficiently. Even though avoiding overload is necessary, people still tend to check their email often. This may be that they feel they can handle more information, or they do not realize they are not actually processing it all. Either way, people should understand their limits because stress from anxiety is easily caused by overload. According to Allen & Shoard (2005), anxiety may be increased if one is continually checking their email.

MY APPROACH

This research focuses on IT Professionals within an IT department, looking at both users that like using email on their smart phone, and those that do not. My research aims to find out if using work email on smart phones can be stressful for IT Professionals, specifically at a university. The campus is operating 24/7, encouraging employees to be working within and outside their shift hours.

The interview questions attempted to obtain information about many aspects of the interviewees and usage of their smart phones. I wanted each question to identify ways their smart phones affected their stress level. Participants read an agreement prior to the interview, assuring that their identity was confidential and the information recorded was for a research paper under supervision.

Questions ranged from why the participant purchased a smart phone and how long they have owned one to how it the smart phone is utilized during and after work hours. Other questions asked about how their smart phone affected their work. Things like the ability to multitask, and increased or decreased productivity. There were also questions about stress and the impact that smart phones had on stress levels. The different range helped to identify how each person handled the stress of their job and if their smart phone affected that stress.

The hypothesis is that having work email on smart phones can increase stress levels in both work and personal life for IT Professionals. People often buy smart phones to have constant connectivity, but what happens if a person starts feeling obligated to do that? What if owning a smart phone and having work email always available pushes people to higher stress levels? The point of the interview questions is to find out how some IT Professionals handle that pressure.

METHOD

SAMPLE TECHNIQUE

I collected the sample of interviewees in several steps. At first, I began to ask numerous people within IT Services if they had a smart phone. If they did, I asked if they had their work email configured on it. This helped to narrow down those I could ask instantly because I wanted employees that had both and I was able to eliminate several people in this process. The next step was to profile those that liked having their email setup and those that did not like having their email setup on their smart phones. Once I gathered a purposive sample list of about five or six per group, I sent an email to these employees and blind carbon copied all those that I had profiled, and emailed it to myself. This kept participation confidential and private -- no one knew the people asked to participate. Every person provides some type of IT support to his or her organization, such as server, desktop, or application.

LIKE AND DISLIKE SMART PHONE WORK EMAIL COMPARISONS

One goal of this research was to examine how feelings toward work email on IT workers' phones associated to their stress level. The hypothesis was if a person does not like using email on the smart phones, they are more inclined to have higher stress levels versus those that liked having it. One might feel more of an obligation to use the phone for work purposes. If they do not like doing it, that may be more of a stress factor. Asking the same questions to both groups developed an understanding of how each used the phone differently, and their stress level.

Characteristics of each group

Interviewee	Like	Amount of email use	Phone Ownership	Time at desk	Years Employed	Age (Years)
Chris	Yes	Heavy	3 years	Mostly	6	35-40
Charlie	Yes	Heavy	5 years	Even	30+	55-60
John	Yes	Heavy	6 years	Mostly	2	20-25
Bill	No	Light	3 years	Even	6	45-50
Mary	No	Heavy	5 years	Rarely	2	25-30
Alex	No	Light	1.5 years	Mostly	25+	35-40

Table 7: Characteristics of each group
For interpretation of the references to color in this and all other figures, the reader is referred to the electronic version of this thesis.

Figure 1 above shows different characteristics of each group. While some of them are very similar, the one major difference appears to be amount of usage between them. The employees that liked having email on their phones used the phone the most, while those that did not used it the least. I will define heavy use in more detail during the results section of this paper. Another interesting difference is that the group that like using their phone have, on average, had their phone for longer. In both groups, only one person had an iPhone, only one person did not push email automatically, and only one had more time that they did not check their email than just when sleeping.

QUESTIONS

The first set of questions was about why they purchased their smart phones (as opposed to a dumb phone or no phone at all). My intent was to identify the purchase motivation because this could have a significant impact on their usage and feelings towards the phone.

The second question related to how they used their smart phone at work, or during their normal shift hours. This helped to identify whether they felt compelled to use their smart phone in addition to their work computer or other devices, even during the workday.

The third question asked about their usage outside of their working hours. This is important because IT Professionals might often feel obligated (or not) to check their email even when they are not assigned to be working.

The fourth question investigated their multitasking predilections with the smart phone. This helped to identify if they not only used their phone during the workday, but how. IT Professionals may feel that if they are only doing one task, they are not being productive.

This leads to another set of questions on how the interviewees felt their smart phones affect their productivity. Any profession requires you to be productive and the smart phone has enough capability and functionality to complete many tasks. However, this can mean more tasks with less completed work.

Another set of questions focused more on stress and if they felt the smart phone impacted their levels of stress. This is especially important because if the phone itself causes stress, there is a desire to understand why they use the phone anyway.

The final question was about management of their smart phones and strategies each person had

for usage of their phones. This helped to understand how their phone affected them and how they

managed the usage of it.

RESULTS

QUESTION: Reason for buying a smart phone
The first questions are about your smart phone. What was the main reason you decided to get a smart phone?

SUMMARY

Interviewee	Get email	GPS	Internet	Other
Chris	X		X	Technology was changing
Charlie	X			Supposed to be cool
John		X		
Bill	X	X		Text
Mary	X			Always be connected
Alex				Old phone died

Table 8: Main reason for getting a smart phone

DETAILS

Two employees, John and Bill, responded that they got smart phones for navigational purposes, such as GPS. Chris responded that he upgraded because "technology was changing" and he wanted to keep up and have access to the internet and email, and have mobility. Charlie noted that he thought it was "supposed to be cool" to have a smart phone. He also wanted work email to be accessible. Alex reported that his flip phone died, so he just needed a new phone.

INSIGHT

Technology seems to be a big part of the response for this question. Not only did they want to keep up with the technology, but also see a value in having their work email accessible to them at any time.

QUESTION: Smart phone ownership
How long have you owned a smart phone?

SUMMARY
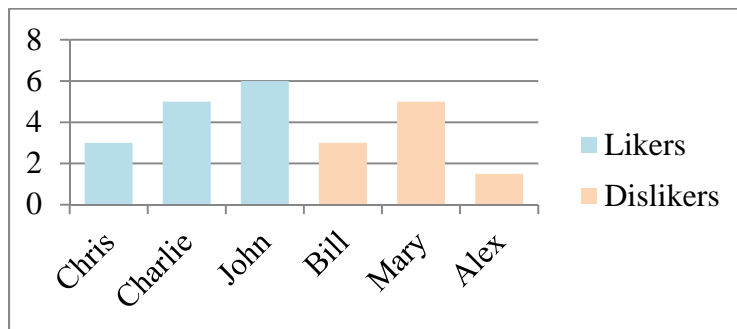
Figure 1: Ownership in years

DETAILS

Figure 3 illustrates how many years the employees have owned their smart phones. John seemed

most enthusiastic about when he purchased his phone. His response was "since the 1ˢᵗ iPhone in

2007." The other employee responses simply included them counting back and adding up the

years. The average years of ownership for the Likers is 4.7, the average for the Dislikers is 3.2.

INSIGHT

It was interesting to hear the differences in ownership, from John with 6 years, to Alex with only

1.5 years. Those that had their phone for several years seemed more inclined to use them. They

may have had more time to become familiar with their phone or it may be another reason. Those

that like their phones also seem to have been the first to purchase smart phones. Perhaps those

who waited did not want the email access to begin with and didn't like the concept from the

beginning.

QUESTION: Kind of smart phone
What kind of smart phone do you currently use?

SUMMARY
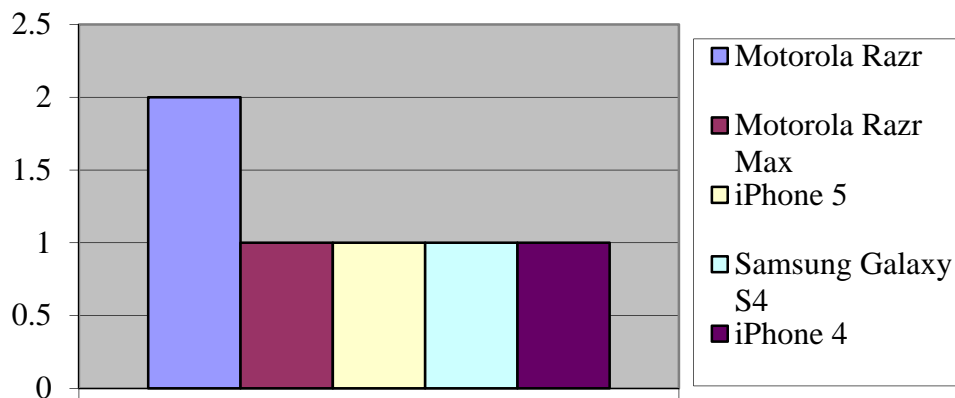
Figure 2: Kind of smart phone

DETAILS

Chris and Bill both had the Motorola Razr and Charlie had the Motorola Razr Max. John and

Alex both owned a version of the iPhone, while Mary had a Samsung Galaxy S4. While it seems

models of the Motorola Razr was most popular with both profiles, there does not seem to be any

definitive reason that any of these phones would affect the stress level of the employees. Every

phone is different so it may be that each employee chose a phone that they were most

comfortable with but it was not related to the email usage on the phone.

INSIGHT

While it is important for employees to choose a phone they can be comfortable with, it does not

necessarily affect their usage of email on the phone. The variation of models and manufacturers

just shows that everyone has their own style.

QUESTION: Smart phone importance in profession
Do you feel your smart phone is important in your profession? Why?

SUMMARY

Interviewee	Yes	No
Chris	X	
Charlie	X	
John	X	
Bill		X
Mary	X	
Alex		X

Table 9: Smart phone important in profession

DETAILS

All the Likers agreed that their smart phone and the email capabilities were important to their profession. Chris stated he needed "to be able to keep up with technology." Charlie and John both mention that work email on smart phones allowed them to know what was going on at any time. Charlie liked how his phone "extends availability" and John said he was rarely at his desk so he is "able to check email all the time" and that is important for him. Although Mary dislikes email on her phone, she had a similar response and said that she is "all over the place all the time" so it allows easy contact.

Bill and Alex were both in agreement that email on their smart phone was not needed for their profession. Bill mentioned he didn't use his email very much for his employer because it was not paid for by the employer. Alex stated that it was "not necessary, but helpful" for when something breaks and people need to get a hold of him. Although a smart phone is not needed, he likes that he can "take calls in a timely fashion."

INSIGHT

All three of the Likers said their smart phone was important in their profession, while most of the Dislikers said it was not. This indicates those that like their phones are more inclined to check emails and use their phone more frequently than those that dislike their phones. The other important point made by the responses is that many of the employees are away from their desk often making their smart phone their main device for contact. This may be related more to the job responsibilities than the employees just wanting to use their phone more often. Overall it appears that those that like work email on their smart phones feel it is more important for their job functions.

QUESTION: Check email on smart phone during work hours
Please describe whether you use your smart phone to check work emails during working hours. If you do not do so, why not?

If you do so, when, how often, and how do you decide when to use it?

SUMMARY

Interviewee	Yes	No
Chris	X	
Charlie	X	
John	X	
Bill		X
Mary	X	
Alex		X

Table 10: Checking email during work hours

DETAILS

Chris, Charlie, John, and Mary all checked their phone constantly throughout the workday. Chris uses it a lot if he is in meetings or out of the office during the day. He also tries to keep in touch using his phone if he knows his team is short-staffed. Charlie said he uses it all the time,

checking it "about every 30 minutes, 20 times/day." John has his smart phone setup so that he gets a notification pop up on his screen that tells him when new mail comes in, and he uses it all the time because of the amount of email he receives. Mary's job responsibilities require her to be away from her desk often, so her usage was more frequent then, but she still uses it "all the time."

Bill and Alex were the two that rarely used their phones during work hours. Bill stated that he used his "once in a great while" and if he was expecting something. His view was that his employer does not pay for the service, so he does not feel he should use it during work. Alex usually sits at a computer during the day, so he did not need to use his phone for work email.

INSIGHT

Those that like using their phone were much more inclined to use it during the workday. Only one of the dislikers, Mary, used their phones heavily during the workday. This might be attributed to their job responsibilities or it could be the likers just enjoy using their phones and therefore do it more.

QUESTION: When smart phone checks email
How often is your phone configured to automatically check email?

SUMMARY

Interviewee	Every hour	Every 5 minutes	Automatically push
Chris	X		
Charlie			
John			X
Bill		X	
Mary			X
Alex			X

Table 11: When phone checks email

DETAILS

Most of the interviewees had their phones set to synchronize their email automatically. The most infrequent was Chris even though he was a Liker. Bill was less infrequent with every 5 minutes. Alex stated he had two accounts setup for work email because one does not forward to the other. His departmental account is set to push automatically, but his university email is set for manual updates.

INSIGHT

In my experience, most users automatically synchronize email using the "Push" method, or as items arrive. Smart phones generally have settings to check email every five minutes to once a day, or completely manual. Based on these settings, there is a big variation between Chris and rest of the group, and those that dislike email on their phones do not seem to mind the frequent updates they receive. This could mean it is not how often emails are received, but how many there are received at a time that affects employees.

QUESTION: Times when email is not checked
Are there hours of the day when you DO NOT check email?

SUMMARY

Interviewee	Sleeping	When at home	Weekends	Personal activities
Chris	X			X
Charlie		X		
John	X			
Bill	X	X	X	X
Mary	X			
Alex	X		X	

Table 12: Times email is not checked

DETAILS

Two out of three in both groups both mentioned they do not check email when they are sleeping.

Several of the interviewees said they do not check email while on personal time, like weekends.

Charlie and Bill said they do not check their email once they are home, and only check emails on

the phone when expecting something, respectively.

INSIGHT

There is definitely a mix of usage between the interviewees for when they do not use their phone.

The Dislikers do not seem to be any more or less likely to not check their phones than the Likers.

It seems that both groups have employees that do not mind checking their email at any time, and

employees that want to have time to themselves.

QUESTION: Check emails outside of working hours
Please describe whether you use your smart phone to check work emails outside of working
hours. If you do not do so, why not?
If you do so, when, how often, and how do you decide when to use it?

SUMMARY

Interviewees	Yes	No
Chris	X	
Charlie	X	
John	X	
Bill		X
Mary	X	
Alex	X	

Table 13: Checking email outside working hours

DETAILS

Everyone said they check email outside of working hours except for Bill. Chris stated that if he knows "there are important events" he will check his email. He will do it randomly and it "depends on what's going on." Charlie checks his email "all the time" and "if the phone is with me, I check it." John was even more enthusiastic and said he uses his phone all the time and is "usually able to respond" to any email that comes in. He uses his phone because it allows him to "see what's important and prioritize tasks" and that makes a difference in his job duties. Mary checks her email every 1 or 1.5 hours until going to bed. When she is gone, this lets her know "what will need to be dealt with the next day" and she is able to prepare better. Alex checks his email to know about problems at work or he gets help desk calls. He also stated that it is helpful when he is "alone for job duties" and his team members are not available.

INSIGHT

Using email on smart phones does not appear to stop once the workday is over. The majority of employees all check their email outside working hours, many until going to bed. This could have a significant impact on stress level as employees might feel more obligated to check email if they have easy access through a smart phone.

QUESTION: Use smart phone to multitask during work hours

Please describe whether and how you use your smart phone to multitask help desk work during working hours (in other words, using your smart phone for work-related tasks at the same time as you are doing other work-related tasks).

SUMMARY

Interviewee	Email during meetings	Look up information	Access all email	Email when helping other clients	Find location of meetings	Be available at all times
Chris	X					
Charlie	X	X				
John			X			X
Bill					X	
Mary				X		
Alex						

Table 14: Using smart phone to multitask

DETAILS

Those that like using their smart phones appear to use them much more to multitask. Both Chris and Charlie used their phones during meetings to be able to email, instant message or look up things if needed. Charlie also stated that he used his smart phone in meetings to email himself ideas and thoughts. He often used both his PC and smart phone to send two emails at a time. John used his smart phone for every feature he could, including email and text, and he always has his phone with him. He downloads all his email and stated his phone allows him to "check old email faster than the PC" so he prefers it when searching for older material. Mary said that if she is helping a client, she can still check email. This helps her "respond to other requests that have come in at the same time" especially if she knows no one else is available on her team.

Bill and Alex do not use their phone at all to multitask. Bill mentioned he would occasionally use it to "check locations of meetings only."

INSIGHT

All three of the Likers used their smart phones to multitask during the workday and only one of

the Dislikers used their phones. Overall, it appears that those who like using their smart phone

trend more towards using it for multitasking, while those that do not like using their phones do

not see the value or do not need to multitask.

QUESTION: Stress over work
Do you ever feel stressed about your IT Help Desk work?

SUMMARY

Interviewee	Yes	No
Chris	X	
Charlie	X	
John		X
Bill		X
Mary	X	
Alex	X	

Table 15: Feel stressed about work

DETAILS

Half of the employees admitted feeling stressed, with one employee feeling sometimes stressed.

Even though John seemed to be most enthusiastic about using his phone, he was not under stress,

and Mary who did not like using her phone but did anyway, felt stress. Chris and Charlie both

said they felt stress and use their phone often. Bill uses his phone infrequently and felt no stress.

INSIGHT

Even though Mary does not like using her phone, she uses it heavily and feels stressed about her

work. Bill and Alex both use their phone infrequently and stated little to no signs of stress. Chris

and Charlie both use their phone heavily, and feel stressed about their work. These responses could show that having a smart phone with email can increase chances of feeling stress. More detail of this stress is answered in the next question.

QUESTION: Triggers that cause stress
How often, and can you describe triggers that cause stress?

SUMMARY

Interviewee	Important events/systems go down	Management decisions	No email for a while	Team emails get no response	Absent manager	Juggling tasks
Chris	X					
Charlie		X				
John			X			
Bill						
Mary				X		
Alex					X	X

Table 16: Triggers that cause stress

DETAILS

These responses varied greatly. Chris felt stress over important events or systems going down, while Charlie and Alex felt pressure from management. Charlie did not like decisions made while Alex often felt "upper management wanting answers" and he had to give them. John felt more stress about his email and he felt it necessary to check if he had not received any in awhile. Bill reported no stress and no triggers. Mary often felt stress when she would see emails come in and no one would respond, forcing her to respond whether she was busy or not. Alex would get worried and feel stress when his supervisor was gone or multiple issues happened while at work. He felt pressure when having to juggle tasks and still be able to fix everything.

INSIGHT

Overall, despite the reasons, it seems that the majority of the employees felt stress at some point over their work duties. John and Mary both mentioned feeling stress over their emails, while others mention management and events causing stress. Although some of these might not be related to email on their phones, having the notification that something is wrong on their phones would probably affect their stress level as well.

QUESTION: Impact smart phone has on stress
What impact, if any, do you believe that your use of the smart phone has on the amount and nature of stress you experience related to IT Help Desk work? Why?

SUMMARY

Interviewee	Some	None
Chris		X
Charlie	X	
John	X	
Bill		X
Mary	X	
Alex		X

Table 17: Smart phone impact on stress

DETAILS

Although most of the employees reported little to no stress, many of them had comments on the actual stress they felt. Chris stated that he "would rather hear about issues, smart phone or not" and that having the smart phone available "can reduce stress." Charlie commented that it caused some stress because he checks email after hours and issues arise. He mentioned that he has had to go into work outside his normal hours and that raised his stress. John did not clarify whether he was stressed but said he felt "obligated to check email" because of his smart phone. He felt that there should be some type of compensation for all the work done outside working hours

because it is extra work. Bill had no stress because he did not use his smart phone often, and is

not the primary way he keeps in touch. Mary felt a "small portion" of stress and added it "does

put more stress on personal life." Alex stated his stress was minimal and not related to his smart

phone but his PC. Since his primary device is his computer, the smart phone is not a concern to

him.

INSIGHT

Many of the interviewees stated that they had little to no stress, however many did report some

stress depending on the situation. It may be that they do not see the smart phone itself being the

cause of stress but rather the knowing that it will give them more work to do. Every time their

phone rings indicating another email, means the chance of them having another task to complete

is a real possibility. They just need to check their email on their smart phone.

QUESTION: Strategies for using smart phone
What are some strategies that you have adopted related to how, when, and why you use your
smart phone for IT Help Desk work?

SUMMARY

Interviewee	Stay on top of things/stay in touch	Creates mobile office	Pushes safety	Urgent need only	Helps scheduling	Easy contact	Helps career
Chris	X						
Charlie		X	X				
John	X						X
Bill				X			
Mary					X		
Alex						X	

Table 18: Adopted strategies

DETAILS

This was an interesting array of answers. Some of their strategies were to use the phone more, and others just used it less. Chris mentioned he was often primary contact for important issues in his position so having the smart phone allows him to check on things. If he is gone, the phone allows him to follow up easily. Charlie stated that he forces himself to be safer using the phone. He takes fewer calls while driving, but still tries to be effective. He considers his smart phone a "mobile office" and it has helped him do more than he could do before. John agreed with Chris on being able to stay on top of things and keep in touch, but he also felt the phone helps with his career because he "appears dependable and reliable." He can acknowledge emails and then respond back with more information later.

Bill continued to mention that he only uses his smart phone when expecting something or he has an urgent need for email. As John stated in the previous question, Bill felt that if his employer wants him on standby, he should receive some type of compensation/be provided that means. Mary used her smart phone to schedule her day better, not just for emails. She can view her calendar and not be at her desk all the time. Alex focused more on the voice function of his phone and said that his strategy was to forward his desk phone to his smart phone. This allows easy contact and accessibility. He also liked the fact that his phone provides stress relief with other things like games.

INSIGHT

It appears that despite many people reporting stressful times with their phones, that they have also found a way to use the phones to their advantage. The most common factor among them all

was the phone allows them to keep in touch or stay accessible. While this may cause them stress,

it also relieves their anxiety about knowing what is going on without them.

DISCUSSION

The introduction of smart phones and having constant access to email continues to be a very popular use of mobile devices. Now billions of smart phones are available around the world, including in the IT community. More University IT Professionals are setting their phones up for work email, accompanied by an increase in stress levels. Smart phones have created an expectation of constant connectivity and accessibility, and IT Professional smartphone owners attempt multitasking in order to increase productivity. While this may seem like the perfect way to work every day, it may also cause higher stress levels

IT work is never done, it is a 24/7 job and IT Professionals are expected to respond at any time. Despite the attempts at being available, there are studies that show this is actually counterproductive and unhealthy. We are not on constantly, even though our phones might be.

The results of the interviews were not as expected, possibly because many users did not purchase their smart phones for email accessibility, but for other reasons as detailed in the results. The expectation was that the employees who did not like using their phone would have more stress than those that liked using their phones. Two of the three interviewees that liked using their phone and used their phone heavily also had higher stress levels. Two of the three interviewees who did not like using their phone and were not heavy users stated they rarely had stress over work email on their smart phone. In other words, frequent use of smartphones for work email was associated with more stress. We do not know whether the lower stress workers would have higher stress levels if they used their smart phones more or that the highly stressed workers

would have less stress if they reduced their smart phone usage. It does seem that frequent smartphone use certainly does not reduce stress.

Reviewing the answers, the research can show that if an employee has work email on their phone and uses it heavily, it can cause higher levels of stress. During interviews, each user described their definition of heavy use. Then they described how that use affected them. Many heavy users checked their email several times a day and responded often. Many were also more inclined to carry their smart phones with them for accessibility. For many of them, the only time they did not check email was while they were sleeping. Half reported higher stress levels because of the nature of their work and their smart phone usage. Two of the participants that liked having email on their phone had higher stress levels, and one participant who disliked having email on her phone had higher stress levels. Light users only used email on their phone if they were expecting something or there was an issue happening at work, and had lower tendencies to have stress.

Why Reducing Smart phone Usage Is Important

Employees who have higher stress levels can often perform poorly on the job or have severe medical issues. They may also have issues in their personal lives. Employees need to be encouraged by employers that work is not required at all times and constant connectivity may not be healthy. This can be difficult considering the nature of IT work and needing to be available, but a healthy employee is happier and can work better than an employee will with higher stress levels. Although the results of this research are not entirely conclusive, there was some interesting observations and outcomes found.

The research findings did not support the original hypothesis. It stated that IT Professionals would have higher stress levels if they used their phone for work emails, and disliked having work emails on their phones. From the group interviewed, instead of having higher stress levels from disliking the email availability, the results demonstrated that those who disliked having work email on their phone were less inclined to use it. The participants that liked having work email on their phones and used it heavily were more likely to report high stress levels. Perhaps if workers who used their smartphones to check work emails frequently, and were highly stressed could adopt more judicious and limited pattern of checking of work email, their stress levels may lower. Or perhaps those individuals are more prone to experiencing stress.

Thus, one thing learned from this research is that users who feel they experience more stress from their smart phones might want to consider reducing their usage. The impact on productivity and stress is not certain. It may help with reduced stress levels. Because IT Professionals can have high-pressure jobs and responsibilities, limiting smart phone usage for work email may help avoid unwanted stress. This applies whether one likes or dislikes their work email on their smart phone.

As an IT Professional who uses her smartphone frequently to multitask and check work email, I am wondering whether I should experiment with limited behavior, and pay attention to my stress and productivity. Perhaps I will do so gradually, at first limiting myself to once an hour.
IT Professionals need to keep in mind that no matter how important the job is, there is life outside of work. Ideally, managers will let employees know that taking time away is good and encouraged. The last thing an employer wants or needs are for an employee to have such high

stress levels that the job cannot be completely correctly and efficiently. Limiting smart phone

usage for work email could be a great way for IT Professionals to get away or avoid unnecessary

high stress levels.

APPENDICES

APPENDIX A: Interview Questions

1. The first questions are about your smart phone. What was the main reason you decided to get a smart phone?

   How long have you owned a smart phone?

   What kind of smart phone do you currently use?

   Do you feel your smart phone is important in your profession? Why?

2. Please describe whether you use your smart phone to check work emails during working hours. If you do not do so, why not?

   If you do so, when, how often, and how do you decide when to use it?

   How often is your phone configured to automatically check email?

   Are there hours of the day when you DO NOT check email?

3. Please describe whether you use your smart phone to check work emails outside of working hours. If you do not do so, why not?

   If you do so, when, how often, and how do you decide when to use it?

4. Please describe whether and how you use your smart phone to multitask help desk work during working hours (in other words, using your smart phone for work-related tasks at the same time as you are doing other work-related tasks).

5. Do you ever feel stressed about your IT Help Desk work?

   How often, and can you describe triggers that cause stress?

6. What impact, if any, do you believe that your use of the smart phone has on the amount and nature of stress you experience related to IT Help Desk work? Why?

7. What are some strategies that you have adopted related to how, when, and why you use your smart phone for IT Help Desk work?

APPENDIX B: Research Questions and Answers

Table 19: Research Questions and Answers

Question	Answer		
	Chris (Likes)	Charlie (Likes)	John (Likes)
What was the main reason you decided to get a smart phone?	Technology was changing. To get internet, mobility, all email	To get email, work email. Supposed to be cool	Directions, finding places in unfamiliar locations
How long have you owned a smart phone?	3 years	Since 2008	Since 1st iphone in 2007
What kind of smart phone do you currently use?	Motorola Razr	Droid Motorola Razr Max	iPhone 5
How often is your phone configured to automatically check email?	Every hour	Automatically push	Automatically push
Do you feel your smart phone is important in your profession? Why?	Yes, he needs "to be able to keep up with technology"	Yes, let's you be aware of problems sooner. Extends availability	Yes, he is able to check email all the time. Never sitting by computer so it has convenience
Please describe whether you use your smart phone to check work emails during working hours. If you do not do so, why not? If you do so, when, how often, and how do you decide when to use it?	Yes, if in meetings, out of office during the day, or if he knows his team is shortstaffed	Yes, all the time, about every 30 minutes, 20 times/day	All the time, he gets lots of email and has a notification pop up on his screen that tells him when a new email comes in
Are there hours of the day when you DO NOT check email?	Sleeping, doing personal activities	Once he gets home, the phone is left in another room and after 8:30pm or so does not look or answer	When sleeping

Table 21 (cont'd)

Please describe whether you use your smart phone to check work emails outside of working hours. If you do not do so, why not? If you do so, when, how often, and how do you decide when to use it?	Yes, if he knows "there are important events" It's random and depends on what's going on	Yes, check all the time. If phone is with him, he checks it	Uses all the time, he is usually able to respond. He checks it all the time, allows him to see what's important and prioritize tasks
Please describe whether and how you use your smart phone to multitask help desk work during working hours (in other words, using your smart phone for work-related tasks at the same time as you are doing other work-related tasks).	If in meetings and need to check email or instant messaging	When he is in meetings, he can still answer email, text, and send emails to himself. Can look things up, often does two emails at a time using smartphone and PC	Gets emails, text and always have it. He is reachable at all times. Phone also allows him to check old email faster than PC and he is able to download all email
Do you ever feel stressed about your IT Help Desk work?	Yes	Yes	No
How often, and can you describe triggers that cause stress?	Important events or when systems go down	Bad management decisions, people micromanage	If he does not receive an email for a while, triggers him to check email anyway
What impact, if any, do you believe that your use of the smart phone has on the amount and nature of stress you experience related to IT Help Desk work? Why?	None, "would rather hear about issues, smartphone or not" "can reduce stress"	Some stress, because he checks emails after hours. He has had to go into work before and that raises his stress	Feel obligated to check email. Feel like they should be paid more for all work outside working hours because it is extra work
What impact, if any, do you believe that your use of the smart phone has on your IT Help Desk productivity?	Small percentage, other ways to access what is needed. "It's nice to have, more convenient"	It helps, allows him to stay on top of things. Makes him "more mobile, more productive"	Allows him to play games which hinders and helps

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Table 21 (cont'd)
Why?

What are some strategies that you have adopted related to how, when and why you use your smart phone for IT Help Desk work?	Stay on top of things. If primary person available, makes it easy to know to check on things. If he is gone for periods of time, allows him to follow up	Doesn't do as much on calls (voice) and tries to be safer (i.e. while driving) but still be effective. His smart phone is a "mobile office" and has helped him do more	Helps him stay in touch. Also helps with his career because he appears dependable and reliable. He is able to acknowledge emails without giving detail, and respond with more information later

Questions & Answers continued

Question	Bill (Dislikes)	Mary (Dislikes)	Alex (Dislikes)
What was the main reason you decided to get a smart phone?	Do email, maps, text. Have access to read and respond to email. Have primary personal and personal business email	Convenience of always be connected. Access to emails	Old one died, it was a flip phone
How long have you owned a smart phone?	3 years	5 years	1.5 years
What kind of smart phone do you currently use?	Motorola Razr	Samsung Galaxy S4	iPhone4
How often is your phone configured to automatically check email?	Every 5 minutes	Automatically push	Push exchange email, Manual for university email
Do you feel your smart phone is important in your profession? Why?	No, don't use it very much for employer-related work. It is not paid by employer	Yes, she is all over the place all the time so it makes it easier for her to be in contact	"Not necessary, but helpful" In case something breaks can get a hold of him, can take calls in a timely fashion
Please describe whether you use your smart phone to check work emails during working hours. If you do not do so, why not? If you do so, when, how often, and how do you decide when to use it?	Once in a great while. If he is expecting something, he will use it. Employer is not paying for service, he does not need to extend the courtesy	All the time, it is more frequent when she is away from her desk	No, usually sitting at a computer and don't need it

Table 21 (cont'd)

Are there hours of the day when you DO NOT check email?	Normally don't check unless expecting something	When sleeping	Sleeping and weekends
Please describe whether you use your smart phone to check work emails outside of working hours. If you do not do so, why not? If you do so, when, how often, and how do you decide when to use it?	Does not use outside working hours	Checks every 1 or 1.5 hours until going to bed. When she is gone, let's her know what will need to be dealt with the next day	Yes, to check for problems or when he gets help desk calls, or is on his own for job duties. He also forwards his desk phone to his smartphone
Please describe whether and how you use your smart phone to multitask help desk work during working hours (in other words, using your smart phone for work-related tasks at the same time as you are doing other work-related tasks).	Do not use, have used to check location of meetings only	If she is helping a client, can still check email, allowing her to respond to other requests that have come in at the same time	Not at all
Do you ever feel stressed about your IT Help Desk work?	No	Yes	Sometimes
How often, and can you describe triggers that cause stress?		Relatively often about 1-2/week. When she checks email and others haven't responded and should have	When the boss is away/multiple things going wrong. "Upper management wanting answers" and having to juggle tasks
What impact, if any, do you believe that your use of the smart phone has on the amount and nature of stress you experience related to IT Help Desk work? Why?	Doesn't add any stress, don't use often. Not primary way to keep in touch	Small portion, does put more stress on personal life	Minimal. Not related to smartphone but PC

Table 21 (cont'd) What impact, if any, do you believe that your use of the smart phone has on your IT Help Desk productivity? Why?	Little to none, doesn't help or hinder	Increases it, can leave desk and take care of issues but not lose connectivity to email. Gives her more freedom	Little bit more accessible, don't get voicemails so people can reach him instead of a queue. The "phone is just available"
	Only use phone if expecting something or there is an urgent need for email. If employer wants me to be on standby, they should provide that means	Allows her to schedule the day better. Can see her calendar and doesn't need to be at desk.	He forwards his desk phone to his smartphone for easy access/contact. His phone provides stress relief because he can do other things like play games

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