

**SMARTPHONE INTRUSION AND WORK-LIFE BALANCE AMONG THE  
WORKING EMERGING ADULTS: THE MODERATING ROLE OF  
PERCEIVED SENSE OF CONTROL**

**By**

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## **ABSTRACT**

### **SMARTPHONE INTRUSION AND WORK-LIFE BALANCE AMONG THE WORKING EMERGING ADULTS: THE MODERATING ROLE OF PERCEIVED SENSE OF CONTROL**

**Chegne Shuh Ting**

Today, smartphone is more than just a device but as an extended version of oneself. With work, leisure and communication all done from one device, the borders of work and non-work has then become blurred, any undesired spillover may trigger an imbalance in the work-life of the working emerging adults. The purpose of this study is to determine the prediction of smartphone intrusion, perceived sense of control and work-life balance among the emerging adults. A non-probability, convenient and purposive sampling is used and self-administering questionnaires were distributed via online platform. A total of 224 responses were collected from working emerging adults. The data collected were then analysed with Multiple Regression Analysis and PROCESS Macro. The findings of this study shows that the increase in smartphone intrusion was able to negatively predict the work-life balance of the working emerging adults. The results of this study also shows that perceived sense of control moderates the smartphone intrusion for personal leisure during work. However, the moderating factor of perceived sense of control was not significant for smartphone intrusion for work during personal hours. This study was able to contribute to the growing literature on the working emerging adults.

*Keywords: smartphone, perceived sense of control, work-life balance, emerging adulthood.*

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## APPROVAL SHEET

This dissertation/thesis entitled “**SMARTPHONE INTRUSION AND WORK-LIFE BALANCE AMONG THE WORKING EMERGING ADULTS: THE MODERATING ROLE OF PERCEIVED SENSE OF CONTROL.**” Was prepared by CHEGNE SHUH TING and submitted as partial fulfilment of the requirements for the degree of Master of Psychology in Industrial and Organizational Psychology at Universiti Tunku Abdul Rahman.

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I understand that the University will upload softcopy of my dissertation in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

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## DECLARATION

I, Chegne Shuh Ting, hereby declare that the dissertation is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.



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Date: 20<sup>th</sup> May 2022

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## **LIST OF ABBREVIATIONS**

WLPL	Work Life to Personal Life
PLWL	Personal Life to Work Life
WLB	Work-Life Balance
PC	Perceived Sense of Control

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of Study

Smartphones are no longer a new technology in these modern times. Although there are other mobile devices, such as laptops and PC tablets, smartphones remain as one of the most widely used mobile devices due to their easy access and being highly portable compared to the other mobile devices (Melumad & Pham, 2020). Undeniably, smartphones have provided users with many distinct applications and features that allow its users to customise and personalise their smartphones, whether for work or personal use (Marchant & O'Donohoe, 2018). Hence, increasing smartphone use behaviour allow users to plan, engage and attend to multiple roles and activities simultaneously without needing to be there physically (Derks, et al, 2016; Li & Lin, 2019), which would be impossible in the past. The configuration of smartphone to fit and meet the users' needs has then made the item an essential tool for daily functioning (Lazim & Sasitharan, 2015).

In particular, smartphone has been more than just a communication device for the emerging adults. The personalisation of smartphone features empowers them to add values and purpose into their lives whilst navigating the journey of self-explorations and discoveries (Vanden Abeele, 2016). To the emerging adults, their smartphone has become a lifestyle, being “embedded into their daily lives” as an extension of themselves or an intimate helper (Marchant & O'Donohoe, 2018). Especially with the availability of mobile

data, the emerging adults tend to turn to their smartphones not just for their physical functions and applications, but also as an emotional and mental compensation while escaping from the stress of their physical environment (Melumad & Pham, 2020).

Being born into, if not alongside, the innovation and advancement of technology, today's emerging adults are also known as the digital natives . Not only have they witnessed the start of technology, but they also have been a part of its growth, growing together with its advancement and being familiar with its change and newest functions (Arnett, 2015; Kanafi, 2019). Emerging adults often interact with their smartphones with distinctive meanings and often have innovative ways of utilising the existing features (Marchant & O'Donohoe, 2018). In comparison to smartphone users of other age group who interacts with their smartphone for certain specific features it offers, the emerging adults tend to interact with their smartphones longer whenever they can and for specific reasons to render a purpose that will enhance their daily routine (Vanden Abeele, 2016; Sánchez-Hernández, et al, 2019). The way they interact and use their smartphones is also somewhat influenced by the people they meet and the feelings they experience while using their smartphone (Griffioen, et al., 2021).

At the age where tertiary education is a choice, for emerging adults who chose not to further their studies or those who have completed their tertiary education will then step into the work field (Hirsch, 2016). Upon entering the

work field, many employers have a certain expectations toward these emerging adults that they should already be well versed with the functions of smartphones as they are constantly attached to their smartphones in comparison to employees of other generations (Kilber, Barclay & Ohmer, 2014; Sánchez-Hernández, et al, 2019). As smartphone is one of the most common tool used in work to contact colleagues and clients quickly and for employers to convey tasks to their employees (Mellner, 2016). These expectations may cause them to respond to their smartphones' notifications impulsively. Halfmann & Rieger (2019) explains that these responses are no longer out of voluntary reactions but the case of feeling controlled by expectations and pressure. These involuntary reactions are caused by the lack of autonomy to suppress these impulses of checking the notifications on the smartphones (Berger, et al, 2018).

As the emerging adults use smartphones as their primary tool for leisure, work, social and communication, the boundaries of work and leisure are blurred along with the expectations from their employers regarding the knowledge of operating a smartphone and their quick response (Li & Yuan, 2018). Therefore, the work-life balance of the emerging adults are no longer defined by time and space but through the achievements of their work and the fulfilment they find in their personal time (Farrell & Hurt, 2014; Mastrolia & Willits, 2013; Wayne, et al, 2016).

As Arnett (2015) mentioned in his work, the emerging adults have surpassed the restrictions of adolescence, attaining more freedom than before and having lesser responsibilities than the future adulthood (e.g. parenthood, marriage and mortgage). Thus, emerging adults can freely explore new possibilities and gain different experiences that may help them to define and redefine who they are to gain a more stable identity in the near future (Benvenuti, et al, 2020). Throughout this journey of identity exploration and building the foundation of the future that they desire to achieve, it is crucial that the emerging adults must be able to balance their work and life to attain satisfaction in both work and personal life that contributes to a healthy lifestyle that leads towards a healthy well-being psychologically, mentally and emotionally.

Incorporating smartphone use into work is indeed very helpful in being efficient and effective (van Laethem, et al., 2018). The ability to clear task and get updates on information even though being physically away from the workspace allows the working individuals to make needed progress in their work without delay (Sarabani, et al., 2018; Derks, et al, 2016; Li & Lin, 2019). The same benefits of accessibility that smartphone offers also apply to their personal lives. Being able to post and receive life updates of friends and family helps the emerging adults to stay connected to their peers and loved ones. These social connections allow them to carry out the roles as a friend or a family member to give and receive support in different life aspects, granting them purpose and fulfillment in their private lives (Marchant & O'Donohoe, 2014).



Smartphone intrusion happens when the very benefits of smartphone are being exploited by the expectations and demands of the employers for work during the after hours that hinders them from paying attention to the needs of their personal lives and vice versa (Horwood & Anglim, 2019). When smartphone intrusions occur, it will disrupt the balance between work and non-work (personal life). When they are not able to regain balance between their work and life, it will potentially lead to health-related concerns, strenuous relationships and conflicts with people around them, dissatisfaction in work and life and absenteeism in roles and responsibilities (Foy, et al., 2019; Saim, et al., 2021). Thus, this dissertation aims to study the relationship between smartphone intrusion and work-life balance of the working emerging adults.

With the frequent incoming notifications from the smartphones integrating the needs of work and non-work and diminishing the boundaries of both domains can be distracting for its users to focus on their task at hand or offline needs at that moment (Berger, et al., 2018). Having the sense of control may help them to ease the overwhelming feeling that they must respond to these notifications immediately. A higher sense of control allows them to suppress the behaviour of immediate response and to exhibit behaviour that seems appropriate at that moment, helping them focus on the offline needs at hand (De Ridder & Gillebaart, 2017; Servidio, 2021). With the sense of control, they are able to permit how much work-related thoughts, behaviors and emotions flow over to their personal lives so that even if both domains are being integrated, it will not cause an imbalance between work and life.

Recent research focuses on how various technologies impact the work-life balance of different professionals (Cirianni, 2015; Duxbury et al, 2014; Githinji & Wekesa, 2017; Harris 2014; Mellner et al, 2014; Nam, 2014; Palvia & Brown, 2015). Nevertheless, the amount of focus on how the sense of control could affect the relationship between the use of smartphone and work-life balance remains unclear. Thus, this dissertation also aims to study the perceived sense of control as a possible moderator of the relationship between smartphone intrusion and work-life balance among the emerging adults.

## **1.2 Problem Statement**

Having and maintaining a work-life balance has always been an ideal lifestyle desired by many. Past study has shown that one's psychological well-being can improve when an individual has the autonomy to balance and achieve satisfaction in both their work and non-work domain (Fotiadis, Abdulrahman & Spyridou, 2019). In other words, a balanced work-life can increase one's well-being, allowing one to cope with the changes and demands one encounters in the society. Especially in today's society, where a smartphone is an everyday companion to many people, granting them flexibility and accessibility (Andel, et al., 2019; Li & Lin, 2019), it is no doubt that smartphone is a great tool to help increase that balance of work-life, bringing this desire closer to reality.

However, with the increase in flexibility and accessibility also comes an increase in expectations and demands (Palvia & Brown, 2015). Especially

these days, due to the Covid-19 pandemic outbreak in Malaysia, the government has implemented the movement control order to contain the situation and prevent further mass infection (Shah, et al, 2020). Since then many companies have had to close their physical offices, and their employees are required to work from home. When meeting colleagues, clients or supervisors face-to-face for meetings or work is seemingly impossible, smartphone becomes an essential tool to keep the communication going and constantly updated with the work progress (Wanga, et al, 2020). The same tool is also used for leisure or non-work-related activities, where people use smartphones for many purpose like keeping in touch with friends, shopping and watching movie because gathering in public areas has become prohibited.

Since the smartphone has become one of the essential tools for communicating and getting jobs done, employees also reported facing several difficulties and challenges. Ambikapathy and Ali (2020) mentioned that having the self-discipline to stay engaged in work while working from home remains one of the challenges most employees face. Besides that, “telepressure” has also become one of the contributing factors to an imbalance work-life. In their studies, van Laethem, van Vianen & Derks, (2018) found that employees who uses their smartphone for work-related use reported that they could not unwind psychologically to be detached from their work. The inability to recuperate from their work stress will eventually hamper their overall well-being, placing them at risk of physical and psychological health concerns (Chen, et al, 2017; Mellner, 2016; Li & Lin, 2019).

Many factors might influence one to choose to engage in their phones. Other than the external factors like company policies, “telepressure”, or the social comparison through social media that contributes to the use of smartphone (Derks, et al, 2015, Li & Yuan, 2018, van Laethem, et al, 2018, Vannucci, Flannery & Ohannessian, 2017); internal factors such as autonomy or the perceived sense of control over one’s own actions is also significant. With the perceived sense of control, knowing that they have the autonomy within themselves to control the number of activities that they engaged in their smartphones, thus deciding whether or not to respond to work-related calls, as well as being able to engage and maintain the self-discipline to focus on their work. With the immense increase in engagement of activities through smartphones, both for work and leisure, it is believed that its users’ work-life balance depends on their ability to set a mental boundary or dissociate themselves from activities regarding work during the after-hours and vice versa (Wayne, et al, 2016).

### **1.3 Research Objectives**

This study’s main objective is to identify the impact of smartphone usage for work during personal time and personal leisure during working hours towards the work-life balance of working emerging adults in Malaysia. Besides that, this study also aims to determine the role of the proposed moderating factor and its influence on the smartphone’s use on work-life balance.

1. To determine the prediction of smartphone intrusion for work during personal hours on the work-life balance among working emerging adults.
2. To determine the prediction of smartphone intrusion for personal leisure during working hours on the work-life balance among working emerging adults.
3. To determine the moderating role of the perceive sense of control on smartphone intrusion for work during personal hours and work-life balance among the working emerging adults.
4. To determine the moderating role of the perceive sense of control on smartphone intrusion for personal leisure during working hours and work-life balance among the working emerging adults.

#### **1.4 Research Questions**

Based on the research objectives stated above, this research study is done to answer the research questions listed below;

1. Does smartphone intrusion for work during personal hours negatively predict the work-life balance among the working emerging adults?
2. Does smartphone intrusion for personal leisure during working hours negatively predict the work-life balance among the working emerging adults?
3. Does the perceived sense of control moderates the smartphone intrusion for work during personal hours towards work-life balance among the working emerging adults?

4. Does perceived sense of control moderates the smartphone intrusion for personal leisure during working hours towards work-life balance among the working emerging adults?

### **1.5 Significance of Study**

With the increase of globalisation and competition in the society today, expectations towards the use of technology in overcoming these challenges are inevitably increasing (Mellner, 2016; Noe, Hollenbeck, Gerhart & Wright, 2014), especially among the digital natives because they are new to the working environment and while already being technology savvy. As the majority of their job, entertainment and leisure activities are carried out through their smartphones, the working emerging adults must be able to set a mental boundary between their work and their personal hours in order to minimise the risk of experiencing an imbalance between their work and personal lives (Holmgren, 2018, Li & Yuan, 2018).

Also, organisations in this modern era are looking for talented, self-directed and responsible employees to boost their performance, it is not only vital for them to recognise such talent, but it is also crucial that they can retain these talents within the companies (Larasati & Hasanati, 2019). As the working emerging adults of today place value on work-life balance more than their working counterparts of other generations (Walor, et al, 2020), encouraging and implementing work-life balance policies is one way that organisations can increase employee engagement and subsequently influence

the decision of their employee to stay with them (Mohd, et al, 2016). Thus it is essential for organisations to mutually understand their young employees' values and to offer support through implementing policies to achieve work-life balance.

Hence, this study aims to study the prediction of smartphone intrusion on the work-life balance among the working emerging adults to bring awareness to the emerging adults about how the amount of time they spend on their smartphone and the activities they engaged in their smartphones can impact their work-life balance.. As the emerging adulthood phase is about identity exploration, self-focus, instability, feeling in-between and open to possibilities (Arnett, 2015), they must have enough time and opportunity to explore possibilities and experiences in both domains and not being preoccupied in one that the other is being ignored. Secondly, the organizations could be aware of their unconscious norm and expectations that they might be implementing on their young employees, which might potentially cause an increase in the turnover rate. Regarding to the body of research, this study aims to contribute to the growing literature on emerging adults focusing on their view of work-life balance through smartphone.

## **1.6 Hypothesis**

1. The smartphone intrusion for work during personal hours does negatively predict the work-life balance among emerging adults.
2. The smartphone intrusion for leisure during working hours does negatively predict the work-life balance among emerging adults.
3. Perceived Sense of Control moderates the smartphone intrusion for work during personal hours and work-life balance.
4. Perceived Sense of Control does moderates the smartphone intrusion for personal leisure during working hours and work-life balance.

## **1.7 Conceptual Definition**

### ***1.7.1 Work-life Balance***

Work-life balance refers to the balance that an individual achieves between work and personal life when an individual can experience satisfaction and achievements towards their work and at the same time find fulfilment and satisfaction in their personal growth of life according to their priorities (Rife & Hall, 2015).

### ***1.7.2 Smartphone Intrusion for Work during Personal Hours***

The smartphone intrusion for work during personal time refers to the engaging in smartphone activities for work-related purposes such as responding to work email or calls, performing work-related task or



communicating with colleagues, clients or employers regarding work matters during the time that is not delegated to work for example after-hours, weekends or holidays that result in the needs and expectations in the non-work domain to be neglected or ignored. (Li & Lin, 2019; Mellner, 2016).

### ***1.7.3 Smartphone Intrusion for Personal Leisure during Working Hours***

Smartphone intrusion for personal leisure during working hours refers to the engagement in smartphone activities for personal leisure such as surfing social networking sites, online shopping and entertainment-related activities (e.g. watching movies) during office hours or time delegated for work that results in the negligence in work related responsibilities and unproductiveness (Fotiadis, et al., 2019).

### ***1.7.4 Perceived Sense of Control***

Perceived control refers to the belief that one has about whether or not he/she has the ability and important qualities that will influence his/her actions (Perry, et al., 2010).

## **1.8 Operational Definition**

### ***1.8.1 Work-Life Balance***

Work-life balance is indicated by the score of the Work-Life Balance scale. The scale's total score can range from 5 to 27, where the higher the score indicates a higher work-life balance.

### ***1.8.2 Smartphone Intrusion for Work during Personal Hours***

Smartphone use for work during personal time or after-hours is indicated by the score of the dimension Work-Life to Personal-Life Smartphone Intrusion (WLPL) in the Level of Smartphone Intrusion Scale. The total score in this dimension can range from 14 to 70, where the higher the score indicating a higher intrusion of smartphone usage for work during personal time or after-hours.

### ***1.8.3 Smartphone Intrusion for Personal Leisure during Working Hours***

Smartphone use for personal leisure during working hours is indicated by the score of the dimension Personal-Life to Work-Life Smartphone Intrusion (PLWL) in the Level of Smartphone Intrusion Scale. The total score in this dimension can range from 14 to 70, where the higher the score indicating a higher intrusion of smartphone usage for personal leisure during working hours.

#### ***1.8.4 Perceived Sense of Control.***

Perceived control is indicated by the Sense of Control score measuring the personal mastery and personal constraint that people believe in having. This scale's total score ranges from 12 to 84, where a higher score indicates a higher sense of control.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter's objective is to present, review and discuss the past findings of the research questions proposed in the previous chapter to provide a direction and deeper understanding of the research area. This chapter will begin with the literature review presentation that corresponds with the research objective in the previous chapter. Next, this chapter will also include the literature review of the view and definition on work-life balance and the emerging adults' view on this area. This chapter will then be followed by the theoretical framework that guides this research and lastly, the conceptual framework for this study will be presented.

#### **2.2 Smartphone and Work-Life Balance**

Smartphones are not something new. It plays a significant role in our everyday lives, evolving from merely a communication tool into somewhat of a lifestyle that we live in today (Lazim & Sasitharan, 2015). The smartphones' most prominent traits are that it blurs or diminishes the time and spatial boundaries; due to its wide range of features and portable characteristics, it allows its users to gain access to and engage in activities anytime, anywhere (Li & Yuan, 2018). Our daily routines are somewhat dependent on the smartphone that we own, reminders, schedule arrangements, or getting a task done to a certain extent. Today, all these functions that our smartphone

provides increase our productivity through flexibility (Derks, et al, 2015; Omar, et al., 2017).

Although the smartphone has brought many conveniences to its users, it has its fair share of adverse effects (Sowon, et al., 2019). One of the aspects that is, if not potentially affected negatively, is the area of work-life balance. As the boundaries of work and life become permeable, the risk of an imbalance of work-life also increases (Derks, et al., 2015). On one hand, flexibility could be the most significant benefit that a smartphone could offer; on the other hand, it could also cause of potential harm to one's imbalance of work and life (Sowon, et al., 2019). The permeable cause could go both ways, bringing workloads back to one's personal lives or bringing personal issues or leisure into the workplace (Omar, et al., 2017).

### ***2.2.1 Work-Related Use during Personal Hours***

Incorporating smartphones into work has always been an advantage because it allows employees to stay connected with work-related people and continuously update their work progress even when physically away from work. They could handle work-related tasks more efficiently eventually leading to higher productivity (Li & Lin, 2017; Li & Yuan, 2018). However, some disadvantages like always needing to be “on duty” to respond to work calls have been noted when smartphones usages are discussed (Rife & Hall, 2015). In a qualitative study done by Palvia & Brown (2015), employees who constantly experienced the urge to answer work-related calls explained that due

to the easy connectivity through these mobile devices, the higher management and clients often anticipate their employees should always be reachable. Moreover, employees with minimal responsibilities toward dependent family members are often assumed to have more free time (Kelliher, et al., 2018). These expectations will then hinder employees from detaching themselves from work to engage in leisure, rest, and family bonding to recover from work stress (Mellner, 2016). As a result, physically and psychologically health would deteriorate dramatically (Chen, et al., 2017; Li & Lin, 2019).

Lin & Yuan (2018) also listed the impression management as one of the factors for work-related smartphone use during after-hours. They explained that in organisations where the subjective norms of using a smartphone to engage in social connectivity with work-related personals existed, the employees would then feel pressured to conform and leave a good impression. People that are considered important in the organisation tend to exhibit these subjective norms (Derks et al, 2015). Although such behaviours could gain social approval or a potential opportunity at their workplace, the employees struggle to attend to the needs of their non-work domain (Li & Yuan, 2018).

Incorporating smartphone into workplaces is indeed an up-stepping play that boost work performance and productivity through flexibility and accessibility (Li & Lin, 2019). However, excessive use of smartphone for work during non-work hours can be seen as smartphone intrusion. This dysfunctional behaviour might cause negligence towards the users' personal growth or needs

in the non-work domain, significantly increasing the risk of developing physical and psychological health issues (Mellner, 2016). With this, the first hypothesis is proposed as

***H1:** The smartphone intrusion for work during personal hours does negatively predict the work-life balance among emerging adults.*

### ***2.2.2 Personal Leisure during Work Time***

Similar to using smartphones for work-related purposes during non-work hours, the use of smartphones for personal matters during work hours can also affect or contribute to individuals' work-life balance. Some studies show that using the smartphone for non-work activities, for instance, leisure (video watching, social media, and online shopping) and chatting with friends and family outside the workplace, can serve as a temporary break from work and avoid work overload and stress and to ease boredom in work (Andel, et al., 2019; Baturay & Toker, 2015; Pindek, et al., 2018).

However, some researchers consider such behaviour as an act of cyberloafing, which could lead to unproductiveness in employees (Leonard, et al., 2018; Rehman, et al., 2019). Cyberloafing was first used to describe employees who used organisation-provided internet access to engage in personal matters unrelated to their work (Pindek, et al., 2018; Varghese & Barber, 2017). As time went by and technology advanced, the definition of

cyberloafing was redefined to provide a more accurate description of the modern state of concern, the term 'cyberloafing' now refers to the voluntary use of any computer or smart mobile devices in the workplace for personal matters by employees (Dmour, et al., 2020).

As a result of cyberloafing, procrastination happens, where the workload gets delayed and piled up. Rehman et al. (2019), explains that due to the increasing variety of smartphone features and application, employees are being drawn to their phone more often than before, ultimately neglecting their work and affecting their performances and productivity (Dmour, et al., 2020). For example, short video applications such as Tik Tok serve as a quick getaway from hectic work. However, due to the short length of the video, people eventually find themselves spending more time than intended on Tik Tok (Yang, et al., 2019), which cause them to spend lesser time on their work (Dmour, et al., 2020; Prakash & Kaur, 2018). Subsequently, they report having experienced depressed mood at the end of their workday (van Hooff & van Hooff, 2016). Hence, experiencing a somewhat imbalanced work-life through the spillover of depressed mood from work to personal life.

Besides, surfing social media networks (i.e. Facebook, Instagram, Tik Tok, etc.) for entertainment or staying connected with friends could potentially post a rebound effect on the emerging adults. Seeing posts of 'influencers' or friends may cause the emerging adult to fall into a negative social comparison, thinking that their peers' lives are more successful and happier than theirs



(Vannucci, et al., 2017). These social comparisons will trigger anxiety and depressive moods, reducing their self-esteem, which will show in their performances (Vannucci, et al., 2019). For example, if an the individual sees his or her friend posting about a celebration of high performance on social media, it will likely cause that person to compare what he or she sees with what he or she has. When this emerging adult believes that he or she cannot achieve similar success as his or her friends, the individual's self-esteem is reduced, which results in a decline of his performances and eventually leads to dissatisfaction with his work (Ozimek & Bierhoff, 2019).

In some cases, although the emerging adult may not be married or have children of their own that moment, some may still have heavy family responsibilities of caring for elderly parents or dependent siblings and relatives. Checking their phones or receiving notifications for updates regarding their family members' condition that requires their constant attention may be distract them from focusing on work and attending to the need of work (García-Cabrera, et al., 2018).

Although the smartphone use for personal leisure may be seen as a short getaway or a mini break from stressful workload (Andel, et al., 2019), the excessive and uncontrollable use of smartphone can be seen as form of smartphone intrusion on one's work. Such behaviour may cause psychological absenteeism. resulting in unproductiveness and dissatisfaction in work (Fotiadis, et al., 2019). With this, the second hypothesis is formulated as

***H2:** The smartphone intrusion for leisure during working hours does negatively predict the work-life balance among emerging adults.*

## **2.3 Perceived Sense of Control over Smartphone Intrusion**

Despite research that highlights the possible work-life imbalance of workers when using smartphones for work during personal time and vice versa, a handful of individuals have indicated that the use of smartphones for work (personal leisure) while in their personal time (working time) does not affect achieving work-life balance (Berger, et al., 2018; First Psychology Scotland, 2015).

The ability to gain and maintain a sense of control has been seen as an essential factor closely associated with one's well-being (Dijkstra & Homan, 2016). In their studies, Berger, et al. (2018) found that users with a lower sense of self-control tend to respond immediately to their smartphone notifications when received, such behaviours often rob their attention away from the task and needs that requires their primary attention at the moment. Another study by Griffioen et al. (2021), noted that users who immediately reached for their smartphones the moment they were left with nothing to do reported that they did so without thinking much and as a reflective action, whereas users who did not touch their smartphone at all during the study reported that they do so by consciously choosing to not reach for their smartphone.

Villadsen (2016), in his study, noted that many professionals voluntarily engaged in work-related smartphone use during non-work hours with the faith that they have the autonomy to control the frequency and duration of their smartphone use. However, supervisors, colleagues, and clients' expectations quickly increases as communications intensify, resulting in a decrease in control and subsequently inability to detach themselves from work. Conversely, Mellner (2016) found that individuals who believe and can maintain the boundary control over their smartphone use do not experience an adverse effect towards the intensity of work-related smartphone usage, allowing them to detach themselves from work during after-hours.

Regarding using smartphones for personal leisure during working hours, Koay & Soh (2019) in their study, found that individual that can limit their smartphone use for personal leisure during working hours to less than 12% of their total work time shows no impact on their overall performance in work and life. In this case, the use of smartphone for personal leisure is not seen as a form of cyberloafing (Mercado et al., 2017), yet serves as a temporary break from the hectic work so that employees may boost their productivity when they return to their work task. With this, H3 and H4 is formulated as,

***H3:** Perceived Sense of Control moderates the smartphone intrusion for work during personal hours and work-life balance.*

***H4:** Perceived Sense of Control does moderates the smartphone intrusion for personal leisure during working hours and work-life balance*

## **2.4 Work-Life Balance**

### ***2.4.1 Defining Work-Life Balance***

Work-life balance has always been a topic of interest in research and public concerns. Studies have shown that having a good and balanced work-life has indeed led to many positive outcomes, for example in work, a higher work performance, greater job satisfaction, and a more substantial commitment to the organisation (Cain, et al, 2017; Johari, et al., 2018; Oosthuizen, et al., 2016; Sirgy & Lee, 2017). As for personal life/family or non-work aspects, balance in work-life can result in better well-being, greater satisfaction in health, family and life in general (Cain, et al., 2017; Choi & Kim, 2017; Sirgy & Lee, 2017).

The concept of work-life balance was initially studied in the form of work-family conflict, where studies are often based on married employees and had dependent children (Rife & Hall, 2015). The women, in particular. Were traditionally known to be the primary caregivers to their dependent children while seeking paid employment (Gattrell, et al., 2013). However, as the time passes, the focus on work-life balance shifted to include all working employees with the argument that employees who are not married and those married but did not have dependent children also had the desire to balance work with other

non-work-related activities, which were essential to them (Kelliher, et al., 2018).

Nevertheless, the definitions of work-life balance still vary across the studies, depending on their topic and areas of interest (Powell, et al., 2019). For instance, Rife & Hall (2015) explained that an individual could achieve work-life balance when they experienced fulfilment where both the needs of work and non-work-related were met while experiencing minimal role conflicts between the roles of these two domains. Some studies view work-life balance as having an equal distribution of time, energy, and satisfaction. At the same time, some observe how an individual's multiple roles across the two domains enrich and compensate each other in areas and resources that are lacking through effective management between the roles (Sirgy & Lee, 2017). Despite the different definitions, the concept of work-life balance could be seen placing its focus on two main dimensions, namely having an active role engagement of multiple roles in the work and non-work domain and having to minimize the conflict between the roles of work and non-work (Sirgy & Lee, 2017).

#### ***2.4.2 Emerging Adults and Work-Life Balance***

One of the traits of the working emerging adults is that although they have surpassed the adolescent stage where they have outgrown the accountability to report themselves to their guardians or teachers, they still do not see themselves ready to settle down and take on responsibilities of adulthood. Because of this, most of the emerging adults tend to delay marriages

until later part of their adulthood (Arnett, 2015). In this phase of an extended identity exploration and absent responsibility towards a dependent family, they are often open to new possibilities that may come their way (Lapsley & Hardy, 2017). The insecurities they might face during the adolescent phase slowly fade away while being replaced with instability as the exploration and alteration continue (Arnett, 2015).

This modern era offers a vast diversity of job nature and arrangements compared to the traditional job employment. While each job's nature and arrangement affects the balance of work and life, the more important factor is why the emerging adults choose to engage in their job (Hirsch, 2016). For example, the emerging adult may choose a part-time job due to the shorter working hours as opposed to a full-time job, which it gives them more 'free' time to participate in other activities in their personal lives and will experience a better work-life balance than those who work part-time solely because they are not able to secure a full-time job (Kelliher, et al., 2018).

In this phase, the emerging adults often find jobs that will be the best fit for their identity, interest, and ability at that time of their lives (Arnett, 2015). They may start with jobs to finance themselves and make ends meet rather than building a foundation (Grosemans, et al., 2018). However, as time goes on, they tend to change or settle for jobs that are the best fit and able to express their identity and lay a foundation for their adult life (Chao & Gardner, 2017).

At that time, work is no longer merely a financial support but a pillar for their adult roles in the future (Arnett, 2015).

Despite their job-seeking at this phase, emerging adults highly emphasise on work-life balance (Arnett, 2015). They desire a sense of fulfilment, achievement, and happiness in their work as much as in their personal life. While they believe that the sense of achievement could be gained through their work, fulfilment and happiness are sought through other activities that they engage in during non-working hours to support their personal growth (Schwartz, 2016). Because during this phase of life, most of the emerging adults are yet to settle down and commit to long-term responsibilities such as starting a family (marriage) and children. Hence, they turn to activities and time they spend in the community, exercise, or with peers to promote the balance in their personal growth (Kelliher, et al., 2018; Rife & Hall, 2015).

Due to the instability of their work commitment at this phase, the emerging adults tend to place higher values on their family and personal life over their work (Grosemans, et al., 2018). To them, having a stable personal growth in life that leads to healthy well-being is crucial as it will enhance their self-readiness and confidence in their work, but not the other way around (Viola, et al., 2016).

In this study, the concept of work-life balance will anchor upon the life priorities of the emerging adult. Each individual has different life priorities. Some placed their importance and satisfaction on the result of their work, some on their family, while others may be on social activities and personal growth (Rife & Hall, 2015). Based on this conceptual definition, the emerging adult will find balance in their work-life domain when they can be effective and find satisfaction across the multiple roles and see that their work and non-work activities are compatible while promoting personal growth aligned with their priorities in that life phase (Wayne, et al., 2016). In other words, whether or not a work-life balance is achieved depends on the expected balance that they anticipate having between the two domains and is not necessarily based on equal time and effort (Adkins & Premeaux, 2019).

Nevertheless, their life priorities will change according to the different life events, such as marriage, parenthood, social, and life status changes (aging). Thus adaptation and adjustments are a constant requirement for these changes (Adkins & Premeaux, 2019). When individuals no longer perceive their work-life as balanced, they adjust their actions or behaviour to regain balance (Wayne, et al, 2016).



## **2.5 Theoretical Framework**

### ***2.5.1 Border Theory***

Border theory by Clark (2000) will be used in this study to serve as a guide to provide deeper insight to this study. According to border theory, although work and family/personal life are two separate domains in an individual's life, they are also inevitably interconnected with each other. Since the introduction of technology, many people have realised that work and personal life are no longer two separate domains that do not overlap (Derks, et al., 2016; Li & Yuan, 2018). The features and functions of a smartphone today have and are continuing to diminish spatial and time boundaries, allowing what was once a clear distinction become flexible and permeable (Li & Yuan, 2018).

According to border theory, individuals always cross from one domain to the other every day (Clark, 2000). In the central concept of this theory, the work and family/personal life are two sets of domains that differs from each other and have their own distinct set of culture and purpose; yet they are inevitably connected through the individual. One main difference between the two domains is the valued ends and valued means that the individual focuses on (Clark, 2000). Valued ends refer to the outcome or the ends product of a domain; while the valued means refers to the journeys or progress of attaining a specific result. For example, the emerging adults gain satisfaction that their work provides an end for them to be financially independent (Grosemans, et al., 2018) and simultaneously equip them with the means of attaining an identity

stability through establishing and extending relationships with other people of that domain (Schwartz, 2016).

Individuals often manage between the domains on the continuum of segmentation and integration (Clark, 2000). Segmentation refers to the extent to which one chooses to separate aspects of their work and non-work (life) apart from (Mellner, 2016). On the other hand, integration refers to a permeable influence of one domain's role into the other domain (Mellner, 2016). The spillover of thoughts, behaviours, and experiences is easily transferred from work to non-work and vice versa (Holmgren, 2018). Although some individuals view the complete segmentation of both domains as the ideal balance of work-life because the individuals can focus on the need of the respective domains, others argue that by integrating both domains allows them to have access to resources that can compensate for the lacking of the other domain, which constitutes a balance. However, in the border theory, there is no absolute state of integration or segmentation that will produce a balance in work-life. According to Clark (2000), because each domain contributes different values and needs to obtain a balance, a mixture of integration and segmentation according to the needs of the individual is crucial to reach satisfaction and achievement for both domains.

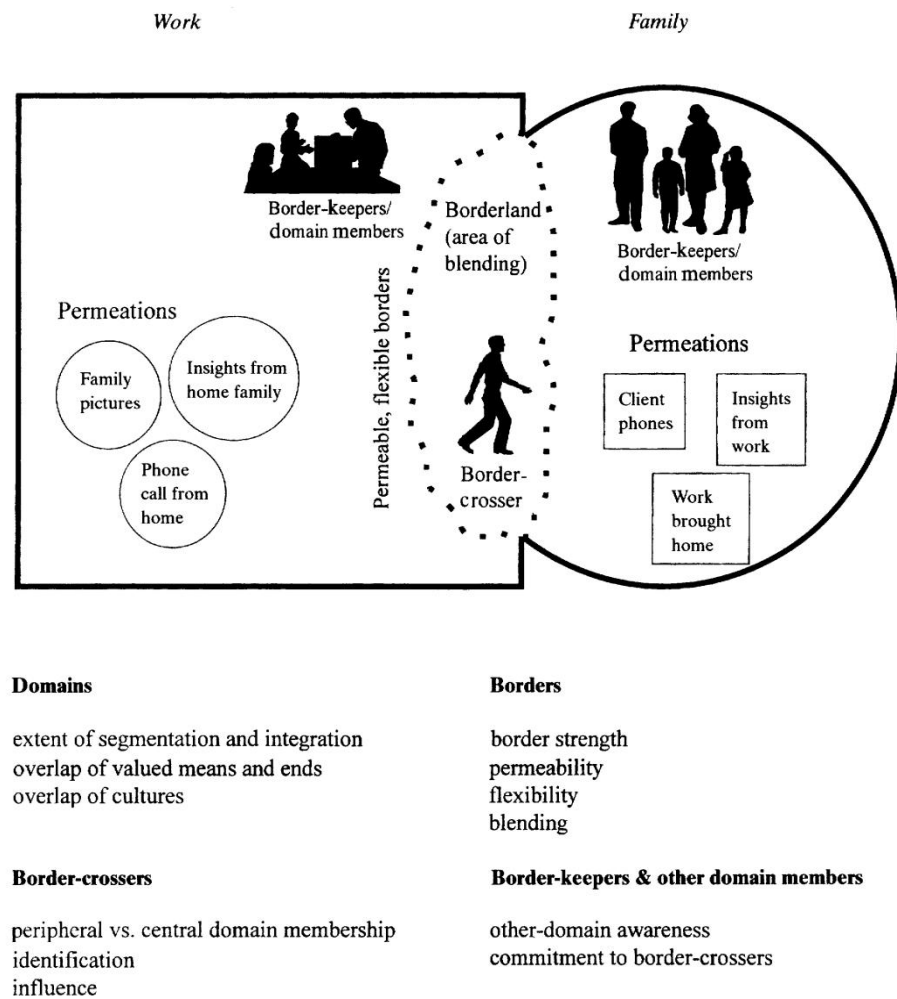
Because both the domains have their own sets of culture, purpose and rules, the individuals often have to shape and mould, manage and negotiate between these two domains to attain and maintain a balance (Clark, 2000).

They must know where the border ends and where the responsibilities and identity start for the other domain. Individuals often create and maintain mental borders between different aspects of their lives to separate work, home and the third places (e.g. commitments or engagement of social activities) (Holmgren, 2018). These borders are influenced mainly by the environment and social norms that they live in, and having these boundaries helps them to make sense of their surroundings, and to be more focused on their role in the domain that is currently salient over the others (Ezzedeen & Zickic, 2015; Holmgren, 2018). Nippert-Eng (1996), the author of boundary work, mentioned that people classify things and events to help create and prolong their culture and society.

When both the domains share similar cultures and values, the border strength between the domains is weak, where the border becomes flexible, allowing the thoughts, behaviours and emotions to spill over from one domain to the other, creating a blending area between the domains (Clark, 2000). These spillovers and blending are not necessarily disadvantageous for the individual. When both domains are similar, these spillovers and blending can help the individuals generate ideas and solution from one domain to the other, compensating the insufficient resources that are needed from one domain to the other (Clark, 2000). On the other hand, if and when the domains have significant differences, the individual are at greater risk of experiencing an imbalance in work-life due to the conflicting and demanding needs that arise in both domains.

However, Clark (2000) also further explains that despite the significant differences between the domains, if the individual can primarily identify with the more potent bordered domain, the risk of an imbalance work life is far lesser than for those who do not. In other words, when an individual places more importance on work than personal life and can identity himself as a central member of his workplace, he will still be able to have a balance work-life even though his work calls for a greater attention that distracts the needs of his personal life and vice versa (Clark, 2000; Rife & Hall, 2015). When an individual can identity himself with the responsibilities, cultures and values of a specific domain because of his competence, he will have yield more influence in negotiating and making changes around the domain and control over the borders to better adjust to the needs and demands (Clark, 2000).

Lastly in Border Theory, the border-keepers and the domain members also play a part in helping the individual reach and maintain a balanced work-life. Border-keepers are those who also share influential power with the individual in a certain domain, such as supervisors in the work domain and parents in the personal life domain. In contrast, domain members are those that shares a domain with the individual, for example colleagues, friends and other family members. Clark (2000) stated that an open communication between the individual and the border-keepers and commitment of other domains members to the individual can reduce the risk of conflicts that could cause an imbalance in the work-life. Open communication and commitment often generate understanding and support for the individual to obtain satisfaction and happiness (Gupta, et al., 2022; Procentese, et al., 2019).

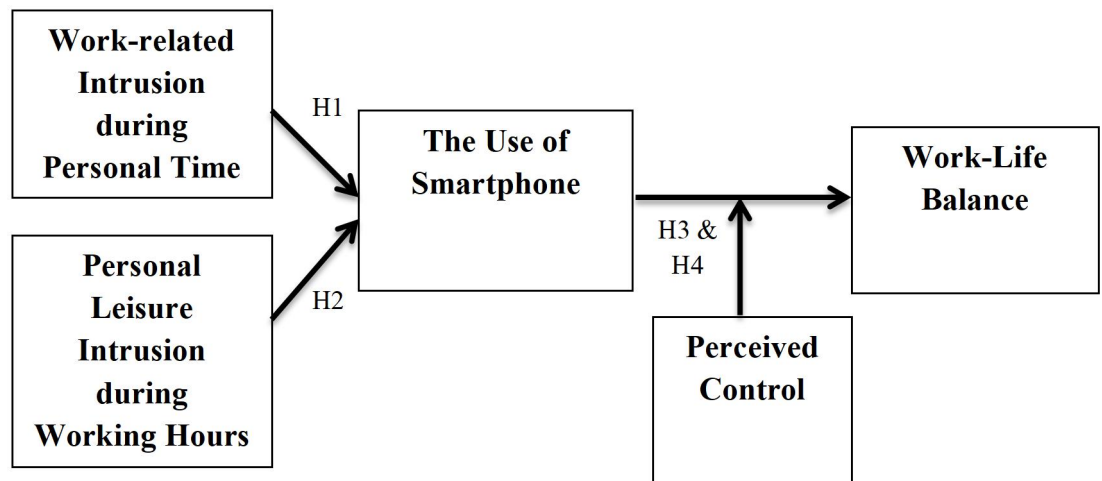


**Figure 2.1:** *Theoretical Framework for Border Theory as adopted from Clark (2000).*

## 2.5 Conceptual Framework

This study's conceptual framework was developed based on the border theory often used in measuring work-life balance. There are three variables included in this framework: the predictive variables, the dependent variable, and a continuous moderating variable. This study's predictive variable is smartphone use, further divided into work-related use during non-work time

(after-hours, weekends, and holidays) and personal leisure during working hours. The dependent variable is the work-life balance, while the moderating variable is the perceived sense of control. The control variables in this study consist of the age of the working emerging adults, their working status and gender. To conclude, this dissertation aims to study the prediction of smartphone use on work-life balance with the moderating effect of the perceived sense of control among the working emerging adults.



**Figure 2.2:** *The model of Expected Relationships between the Independent Variable and Dependent Variable with its Moderating Factor.*

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 Introduction**

This objective of this chapter is to present the research design, research sample, instrumentation used, pilot study, the research procedure and data analysis used for this study.

#### **3.2 Research Design**

This study is a quantitative study that target specifically on the emerging adults in Malaysia, using a self-administering questionnaire via an online survey as the main tool for data gathering. Participants were required to answer a series of questions on the smartphone use for work during their personal hours, smartphone use for personal leisure during working hours, the perceived sense of control over their smartphone use and work-life balance. Since the process of this data collection does not require a follow-up report from the participants, and this study is aim to predict the possible relationship between the smartphone use, perceived control and work-life balance, thus a cross-sectional design is implemented for this study.

### **3.3 Research Sample**

#### ***3.3.1 Sample Size***

This research has targeted working emerging adults in Malaysia as samples. The population for this study are emerging adults between ages 18 to 29 that have active employment at the time of the data collection, emerging adults who are engaged in full time tertiary studies are not included in this study. The sample size needed for this study is determined using G\*Power. Based on the statistical test of Linear Multiple Regression with an effect size of 0.15, alpha level of  $p = 0.05$ , power of 0.95 and two predictors, the sample size recommended was 107. However, to prevent possible incompleteness of questionnaire response, a total of 200 emerging adults were recruited as participants for this study. According to Israel (1992), a sample size of 200 to 500 is an adequate amount for Multiple Regression Analysis.

#### ***3.3.2 Demographical Information***

The sample size for this study consists of 200 participants, with a total of 81 (40.5%) males and 119 (59.5%) females. In terms of age, since the targeted samples are of the Emerging Adults, there are ranges from 18 to 29 ( $M = 24.39$ ,  $SD = 2.60$ ). The representing age includes 18 (2%), 19 (3%), 20 (3%), 21 (4.5%), 22 (9.5%), 23 (10%), 24 (18%), 25 (26.5%), 27 (4.5%), 28 (15%) and 29 (4%). Besides that, the work status was also recorded, where 157 (78.5%) of the participants were working full time and 43 (21.5%) were having part-time jobs. The full information for the participants' demography is presented in the table 3.1 below.



**Table 3.1**  
*Demographic Information of Participants (N=200)*

	Frequency	Percentage (%)	Mean	SD	Min	Max
Age			24.39	2.60	18	29
18 to 24	100	50				
25 to 29	100	50				
Gender						
Male	81	40.5				
Female	119	59.5				
Work Status						
Full Time	157	78.5				
Part Time	43	21.5				

### **3.3.3 Sampling Method**

This research has used a non-probability, convenient and purposive sampling to gather the sample size needed. The self-administering questionnaire is distributed online by sharing the questionnaire's URL through social networking platforms (e.g. Facebook, Instagram and LinkedIn) and Instant Messaging Application (e.g. Whatsapp, Facebook Messenger, and WeChat), these social-networking platforms and applications were chosen because as these were the most commonly used platforms by the emerging

adults for leisure (e.g. Facebook and Instagram), work (e.g. LinkedIn), and communication (e.g. Instant Messaging Applications); and also that the questionnaires can easily reach people within the criteria of this study. Taking into consideration that it is not possible to obtain the name list of all working emerging adults from every possible company in Malaysia, where the inclusive criteria are emerging adults with active employment at the time of data collection, and exclusive criteria are emerging adults who are full time student, therefore a non-probability, convenient and purposive sampling is seen as the most suitable method for this study.

### **3.4 Instrumentation**

The instrument that will be used in this research consists of demographic items, Level of Smartphone Intrusion Scale, Work-Life Balance Scale and Mastery Scale.

#### ***3.4.1 Demographic Items***

In the demographic section, participants were asked to provide basic information such as age, gender and status of work (e.g. full time or part time).

#### ***3.4.2 Level of Smartphone Intrusion Scale***

Level of Smartphone Intrusion Scale, developed by Harris (2014) was employed to measure the use of smartphone for work (personal use) during

personal time (working hours). Participants are asked to rate how much they agree or disagree with the statements using a 5 point Likert scale, ranging from (1) representing strongly Disagree to (5) representing Strongly Disagree. This scale consists of 2 dimensions, the first dimension measuring the Work Life to Personal Life Smartphone Intrusion (WLPL), items for this dimension are for example, *“I can control how often I use my smartphone, during my personal time for work”* and *“I feel my smartphone being used for work during personal time is overwhelming”*, this dimension consist of 14 items and with coefficient alpha score of .78. Items 1 to 6 of this dimension were negatively scored while 7 to 14 were positively scored. The second dimension measuring Personal Life to Work Life Smartphone Intrusion (PLWL), items in this dimensions are for example, *“I am happy with how much I use my smartphone for personal reasons during my work time.”* and *“I wish my smartphone did not have to be used for personal reasons during work time”*. This dimension also consists of 14 items, with coefficient alpha score of 0.81. The items 1 to 5 in this dimension is negatively scored and items 6 to 14 were positively scored. The scores of both dimensions are summed up where a higher scores indicating a higher intrusion of smartphone use of work to personal life and personal leisure to working hours respectively.

### ***3.3.3 Sense of Control Scale***

Perceive control will be measured using a two dimensional scale that was adopted from Pearlin and Schooler’s (1978) Mastery Scale (MS) by Lachman and Weaver (1998) and have further add in additional measures to

this Scale. The two dimensions in this scale include personal mastery and personal constraints. Personal mastery refers to the self-efficacy that an individual believe to possess and their effectiveness to achieve their goals; while personal constraints refers to the individual's believe to have restrictions or obstacles that is out of their control that is hindering them to achieve their goals (Lachman & Weaver, 1998). The personal mastery dimension has a total of 4 items, for example *"I can do just anything I really set my mind to"*, with a 7-point Likert scale where participants have to indicate how much they agree or disagree to that statement ranging from (1) strongly agree to (7) strongly disagree, with a coefficient alpha of .70. The second dimension personal constraint, have a total of 8 items, for example, *"There is little I can do to change many of the important things in my life."*, with 7-point Likert scale ranging from (1) strongly agree to (7) strongly disagree, with a coefficient alpha of .86. Reversed scoring was done for Personal Constraint, thus a higher total score indicates a higher sense of control.

#### **3.3.4 Work-Life Balance**

Work life balance will be measured using the Work-Life Balance (WLB) that was developed by Hill et al (2001) with the coefficient alpha of 0.83. This scale consists of 5 items, for example *"How easy or difficult is it for you to balance the demands of your work and your personal and family life"*. Item 1, 2, 3 and 5 are a 5 point Likert scale while Item 4 is a 7 point Likert scale, this scale requires participants to answer questions about their ability to balance the demands of their work and their personal/family life (Hill et al,

2001), whereby the response of a=1, b=2, c=3, d=4, e=5, f=6, and g=7. There is no reverse scoring in this scale. The total of the scores were summed up where the higher the score indicates a higher work-life balance.

### **3.5 Pilot Study**

A pilot study was done prior to data collection to test the validity and reliability of the scales used in this study. Baker (1994) suggested that the amount of participants for the pilot study should consist of 10% to 20% of the actual sample size for the study. For this pilot study, 24 participants which are 12% of the total sample size were recruited for the pilot study.

According to the pilot study, Cronbach's alpha of the Level of Smartphone Intrusion Scale is .839. The internal consistencies were .805 for work-life to personal life smartphone intrusion (WLPL) and .876 for personal-life to work-life smartphone intrusion (PLWL). The Cronbach's alpha of the Mastery Scale is .827, and the Cronbach's alpha of the Work-Life Balance Scale is .769. Pallant (2013) mentioned that the Cronbach's alpha of a scale above .70 to be deemed reliable and based on the scores, all scales indicate high reliability.

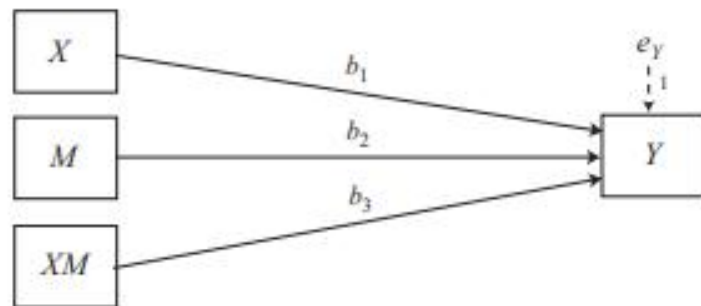
### **3.6 Research Procedure**

The research ethical approval (U/SERC/117/2018) was first acquired before the start of data collection. The questionnaire is then created through Google Form where its URL was then shared and circulated through online platforms of social networking sites (e.g. Facebook and LinkedIn), social messaging applications (e.g. Whatsapp) and email from the researchers personal contact and network and then forwarded henceforth. An implied consent was presented as the first page of the questionnaire, informing participants of the purpose of study, their participation rights as well as assuring them of their confidentiality in participating in this study. The implied consent then ended by providing the participants with the email of the researcher should they have any questions about this research.

### **3.7 Data Analysis**

The data collected was then analysed using the Statistical Package for the Social Science (SPSS). The demographic was measured in the form of descriptive statistics. The first (H1) and second (H2) research question were analysed using Multiple Linear Regression to predict the effect of smartphone usage for work during personal time and for personal leisure during working hours on work-life balance.

As for the third (H3) hypothesis and forth (H4) hypothesis, PROCESS Macro by Andrew Hayes was used to measure the effect of the moderator between the smartphone use and work-life balance. Hayes (2013), has presented 74 models templates in which mediation and moderator could be studied. For this study, model 1 has been selected. The statistical diagram for Model 1 is presented below (refer Figure 3.1).



**Figure 3.1:** Statistical diagram for Model 1

$X$  = Smartphone Use

$Y$  = Work-life Balance

$M$  = Perceived Control

Conditional effect of  $X$  on  $Y = b_1 + b_3M$

## **CHAPTER 4**

### **RESULTS**

#### **4.1 Introduction**

In this chapter, the analysis and findings of each test and hypothesis will be discussed. The chapter begins with providing the demographical information of the population included in this study by using descriptive analysis. Next, the assumptions for multiple regression analysis are tested before the multiple regression analysis is being carried out to ensure that the results are reliable and valid. Lastly, multiple regression analysis to test the hypothesis 1 and 2, followed by process MARCO is to test the hypothesis 3 and 4 of this study.

#### **4.2 Assumptions for Multiple Linear Regression Analysis**

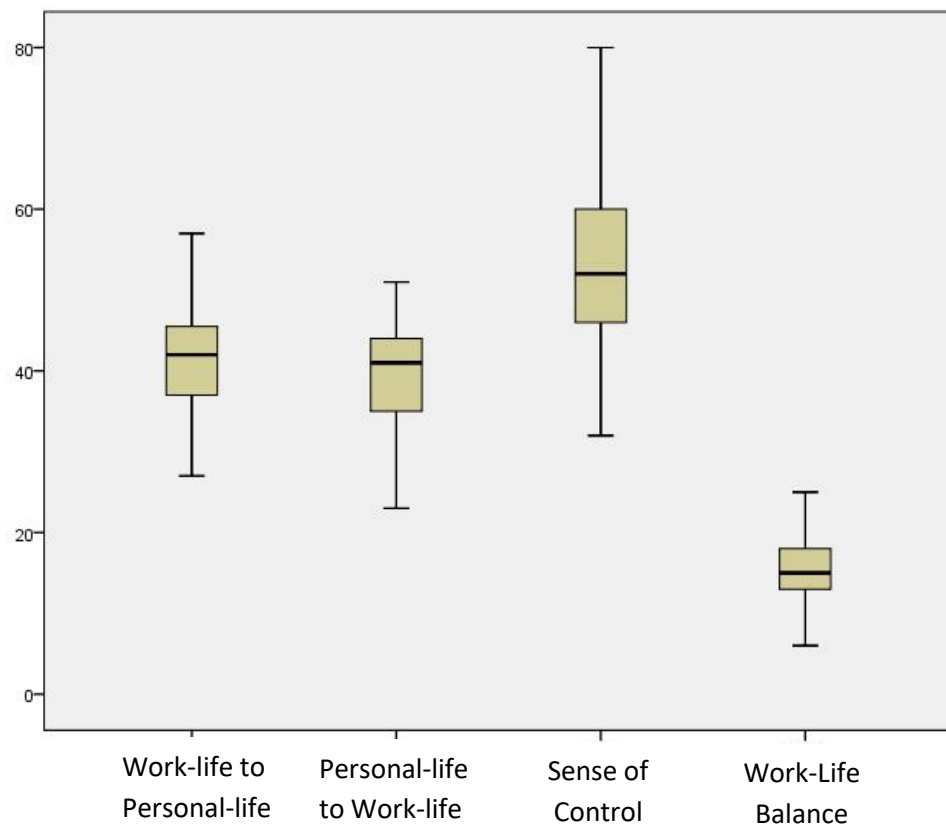
Before Multiple Linear Regression Analysis could be performed, a few assumptions needed to be met to ensure the results will reflect its true population as possible. These assumptions includes of outliers, normality, multicollinearity, linearity and homoscedasticity of residuals.

##### ***4.2.1 Assessment of Outliers***

Outliers refer to any data that lies in an extreme distance away from the other values that is within the sample of a study. The assessment of outliers in this study was done using a boxplot method and the outliers are denoted with a



circle and date file row number. The values of the offending outliers were winsorized to the unit of the highest or lowest of non-outlier to reduce its effects on the results. Figure 4.1 shows the boxplot of the data for this study after winsorizing.



**Figure 4.1:** *Boxplot for Outliers*

#### **4.2.2 Assessment of Normality**

According to Allen & Bennett (2012), each continuous variable in the data set should be normally distributed. The normality test of the continuous variables in this study will be determined through the statistical means using Skewness and Kurtosis and graphical means using the Normal P-P (Probability) Plot of Regression Standardized Residuals.

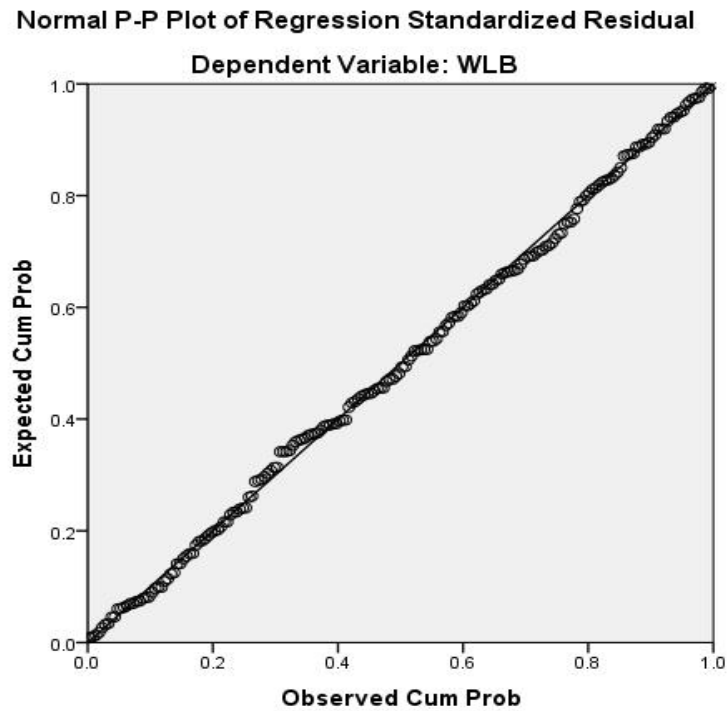
As presented in table 4.2 below, the Skewness value ranges from -.645 to .208, while the Kurtosis value ranges from -.22 to .14. According to West et al. (1996), the Skewness values that falls within the range of  $\pm 2$  and the Kurtosis values that falls within the range of  $\pm 7$  is accepted as a normally distributed data (as cited in Kim, 2013). Thus, the values of Skewness and Kurtosis in this data indicate a normally distributed data.

**Table 4.1**

*Skewness and Kurtosis for Work Life to Personal Life, Personal Life to Work Life, and Work-Life Balance*

	N	Mean	Skewness		Kurtosis	
	Statistics	Statistics	Statistics	Std. Error	Statistics	Std. Error
Work-life to						
Personal-	200	41.54	.03	.17	-.07	.34
Life						
Personal-						
Life to	200	39.34	-.65	.17	.14	.34
Work-Life						
Work-Life						
Balance	200	15.68	.21	.17	-.22	.34
Valid N						
(listwise)	200					

In the graphical means using Normal P-P (Probability) Plot of Regression Standard Residuals (Figure 4.2), it can be seen that the points are clustered tightly along the diagonal line, indicating that the residuals are normally distributed.



**Figure 4.2:** *P-P Plot of Regression Standardized Residual*

#### **4.2.3 Assessment of Multicollinearity**

Multicollinearity is the instances where two or more of the independent variable is highly correlated to each other besides the dependant variable. Such occurrence will cause confusion as to which independent variable is able to best predict the outcome of the dependent variable as well as indicating that these highly correlated variables consist of similar underlying factors (Allen & Bennett, 2012).

Multicollinearity can be assessed using the Tolerance Value and Variance Inflation Factor (VIF). According to Allen and Bennett (2012), any Tolerance Value lesser than 0.1 and VIF Value more than 10 indicated the

existence of multicollinear with two or more variables. In table 4.3 below, results shows the value of WLPL (Tolerance = .87; VIF = 1.16) and PLWL (Tolerance = .87; VIF = 1.26). Thus indicating that Multicollinearity is not a concern for this study.

**Table 4.2**

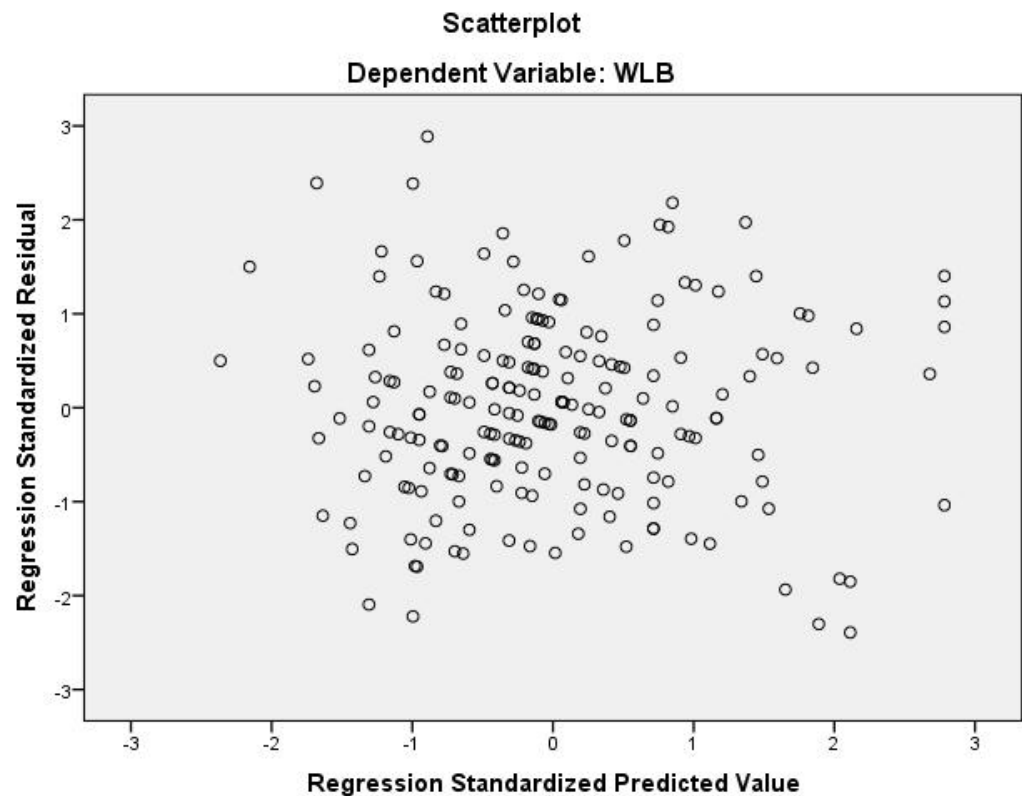
*Tolerance Value and VIF for Work Life to Personal Life and Personal Life to Work Life*

Model	Collinearity Statistics	
	Tolerance	VIF
Work-Life to Personal-Life	.87	1.16
Personal-Life to Work-Life	.87	1.26

*Dependent Variable: Work-Life Balance*

#### **4.2.4 Linearity and Homoscedasticity of Residuals**

Linearity and homoscedasticity of residuals is assessed to ensure that the dependent value has a clear linear on the independent values, and also that the residuals are homogeneous across the dependent variable. Scatterplot was used to assess the linearity and homoscedasticity of this study. According to Allen and Bennett (2012), the absence of a clear pattern in the spread points within the scatterplot indicates that the assumptions of linearity and homoscedasticity are met. In figure 4.3 below, all the residuals are randomly scattered along the  $x$ -axis and mostly centred around the 0 point with no clear pattern of any kind, indicating that the assumptions are met.



*Figure 4.3: Scatterplot for Homoscedasticity*

### 4.3 Multiple Linear Regression Analysis

Multiple Linear Regression Analysis was used to predict the work-life balance (WLB) among emerging adults based on their smartphone use for work during personal hours (WLPL) and smartphone use for personal leisure during working hours (PLWL). A significant regression equation was found ( $F(2, 197) = 16.24, p < .001$ ), with an  $R^2$  of .142, accounting for 14.2% of the variance. It is found that Work Life to Personal Life has significantly predicted the work-life balance ( $\beta = -.19, p = .007$ ), as well as Personal Life to Work Life on work-life balance ( $\beta = -.26, p < .001$ ). Indicating that both Work Life to Personal Life and Personal Life to Work Life negatively predicted the work-life balance of the emerging adults.

However, in terms of its effect size, Cohen (1988) suggested that an  $f^2$  value of .02 can be considered as a small effect size,  $f$  of .15 can be considered as medium and  $f^2$  of .35 can be considered as a large effect size. The formulae used to calculate the  $f^2$  is as follow

$$f^2 = \frac{R^2}{1 - R^2}$$

Thus, Cohen's  $f^2$  for this study is

$$\begin{aligned} f^2 &= \frac{.142}{1 - .142} \\ &= 0.17 \end{aligned}$$

Indicating that the smartphone use for work during personal hours and personal leisure during working hours yields a medium effect as the  $f^2$  value is .17. With this, it concludes that hypothesis 1 and 2 is supported with a medium effect size. Tables for the Model Summary, ANOVA and the Multiple Linear Regression are presented below in table 4.5, table 4.6 and table 4.7 respectively.

**Table 4.3**  
*Model Summary of Multiple Regression Analysis*

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	Durbin-Watson
1	.38 <sup>a</sup>	.14	.13	3.69	2.04
a. Predictors: (Constant), Personal-Life to Work-Life, Work-Life to Personal-Life					
b. Dependent Variable: Work-Life Balance					

**Table 4.4**

*ANOVA Statistics between Work Life to Personal Life, Personal Life to Work Life, Perceived Sense of Control and Work-Life Balance*

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	442.06	2	221.03	16.24	.000 <sup>b</sup>
	Residual	2681.46	197	13.61		
	Total	3123.52	199			

a. Dependent Variable: Work-Life Balance

b. Predictors: (Constant), Personal-Life to Work-Life, Work-Life to Personal-Life

**Table 4.5**

*Multiple Regression Analysis of Work Life to Personal Life and Personal Life to Work Life in predicting Work-Life Balance*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for $\beta$	
	$\beta$	Std. Error				Lower Bound	Upper Bound
1 (Constant)	26.39	1.91		13.82	.000	22.62	30.16
Work-Life to Personal-Life	-.11	.04	-.19	-2.71	.007	-.19	-.03
Personal-Life to Work-Life	-.16	.04	-.26	-3.66	.000	-.24	-.07

a. Dependent Variable: Work-Life Balance

#### 4.4 PROCESS Macro for Moderation

A moderation analysis was conducted to examine the moderating effects of perceived control on the predicted relationship between smartphone use and work-life balance among the working emerging adults.

##### 4.4.1 Hypothesis 3

For hypothesis 3, the moderating effect of perceived control over the relationship of smartphone use for work during personal hours and work-life balance shows that  $F(3, 196) = 13.19, p < .001, R^2 = .17$ , and the interaction term shows a result of  $b = .01, s.e. = .003, p = .123$ , indicating that perceived control is not statistically significant moderator for the smartphone use and work-life balance. Thus, hypothesis 3 is not supported. The model summary of the focal predictor is shown as below in table 4.8.

**Table 4.6**  
*Model Summary of PROCESS Macro for Hypothesis 3*

	R	R <sup>2</sup>	MSE	F	df1	df2	p
	.42	.17	13.19	13.61	3	196	.000

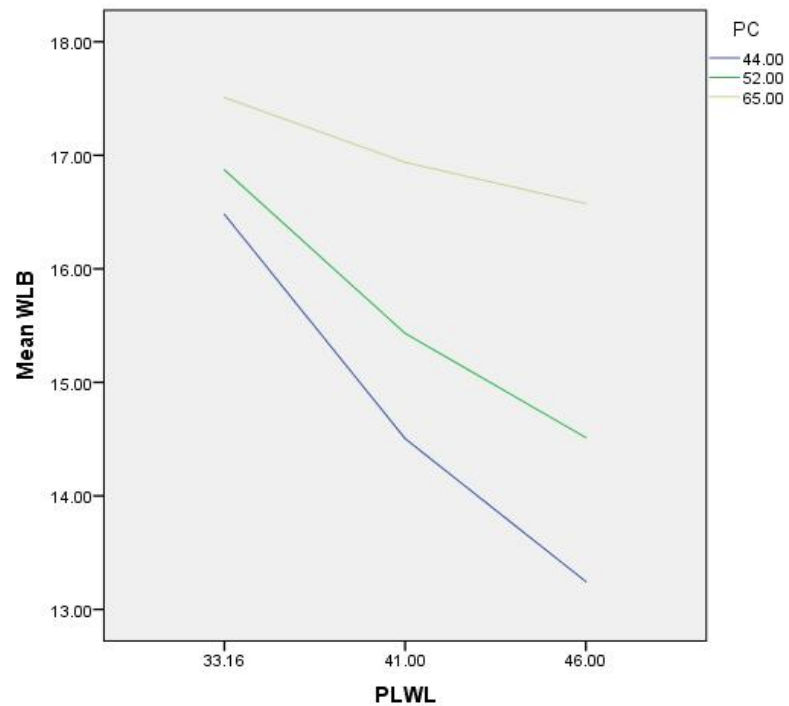
  

Model	Coeff	se	t	p
Constant	27.43	8.17	3.36	.001
Work-Life to Personal-Life	-.43	.19	-2.22	.027
Perceived Sense of Control	-.10	.14	-.72	.471
Int 1	.01	.00	1.55	.123



#### 4.4.2 Hypothesis 4

For hypothesis 4, the moderating effect of perceived control over the relationship of smartphone use for personal leisure during working hours and work-life balance shows that  $F(3, 196) = 15.37, p < .001, R^2 = .20$ , and the interaction term shows a statistically significant result ( $b = .01, s.e. = .00, p = .005$ ), indicating that perceived control was a significant moderator of smartphone use for personal leisure during working hours on work-life balance. In terms of the slopes for perceived control on predicting work-life balance at each level of smartphone use (refer to table 4.10) can be seen that at -1 standard deviation ( $SD$ ), on the perceived control variable (representing low perceived control), the relationship between smartphone use for personal leisure during working hours and work-life balance was negative and significant ( $b = -.25, s.e. = 0.56, p < .001$ ). Similarly at the mean of the perceived control variable (representing average perceived control), the relationship between smartphone use for personal leisure during working hours and work-life balance was negative and significant ( $b = -.18, s.e. = .04, p < .001$ ). However, at +1  $SD$  on perceived control variable (representing high perceived control), the relationship between smartphone use for personal leisure during working hours and work-life balance was not significant ( $b = -.07, s.e. = 0.49, p = .14$ ). The plot of interaction of personal life to work life smartphone use ( $X$ ) and perceived sense of control ( $W$ ) on work-life balance ( $Y$ ) is shown in figure 4.4 below. Thus, hypothesis 4 is accepted. The model summary and the conditional effects of the focal predictor at values of the moderator are shown in table 4.9 and table 4.10 respectively.



**Figure 4.4:** Plot of Interaction of Personal Life to Work Life and Perceived Sense of Control on Work-Life Balance

**Table 4.7**  
Model Summary of PROCESS Macro for Hypothesis 4

R	R <sup>2</sup>	MSE	F	df1	df2	p
.44	.19	12.90	15.37	3	196	.000

Model	Coeff	se	t	p
Constant	35.11	7.17	4.90	.000
Personal-Life to Work-Life	-.63	.18	-3.55	.005
Perceived Sense of Control	-.23	.12	-1.95	.052
Int 1	.01	.00	2.81	.005

**Table 4.8***Conditional Effects of the Focal Predictor at Values of the Moderator*

Perceived Sense of Control	Effect	se	t	p
44.00	-.25	.06	-4.46	.000
52.00	-.18	.04	-4.20	.000
65.00	-.07	.05	-1.50	.135

## **CHAPTER 5**

### **DISCUSSION**

#### **5.1 Introduction**

This chapter will consider the findings of this study. It will begin by discussing the results in sequence with the hypothesis and objectives of the research. Next, the limitations of this study and recommendations for future studies will be presented. Practical and theoretical implications will also be presented and examined.

#### **5.2 Smartphone and Work-Life Balance**

The findings of this study have shown that smartphone use for work during personal hours and smartphone use for personal leisure during working hours negatively impacts work-life balance, with a small effect size. In other words, smartphone use whether for work during personal hours, which includes after-hours, holidays or on vacation and the smartphone use for personal leisure during working hours does indeed cause employees to experience disruption of the effectiveness of their roles in the domain that they are physically in and hence, affecting their work-life balance.

##### ***5.2.1 Work-Related Smartphone Use during Personal Hours***

The result of this study shows that the intrusion of smartphone use for work-related matters during personal hours such as after-hours, vacations or

weekends does negatively predict the work-life balance among emerging adults. By way of explanation, the use of smartphones for work during the time that is not designated for work negatively impacts work-life balance as evidenced by past studies (Derks et al., 2015; Li & Yuan, 2018). This result can be explained by the Border Theory where the undesired constant use of smartphones for work-related purposes integrates into the blending area intruding into the non-work domain of the individual and therefore, causing a negative spill over into their non-work domain (Clark, 2000).

The incorporation of smartphones for work during after-hours or on off-days is becoming a common phenomenon in the current times (Piszezsek, 2016). Although many people have physically left their offices, they are still unable to leave their work behind because they are still receiving work-related tasks and communication from their employers, colleagues, or clients (Marcum, et al., 2018). Individuals who are constantly required to engage in work tasks while physically away from their workplace are less able to mentally disengage from their work (Mellner, 2016, Piszezsek, 2016). In a study done by Fauzi et al., (2020) it was found that among doctors, those who engaged in work-related tasks during non-working hours often experience acute fatigue and reported to have poor recovery from that fatigue, which in the long run turns into chronic fatigue. The constant spill over of thoughts, behaviours and experiences from their work into their personal hours hinders them from unwinding and recovering from the strenuous work-related stress and anxiety (Mellner, 2016). In the long run, this would dampen one's well-being and increase the risk of other detrimental consequences (van Leathem et al., 2018).

In addition, the continuous engagement with smartphones for work during non-work hours, be it due to a lack of time or energy, could cause the individual to neglect their personal needs, growth or other aspects that need attention in their non-work domain (Li & Yuan, 2018). This negligence will eventually generate dissatisfaction with the achievements that one experiences in their non-work domain (Wayne et al., 2016). When the expectations anticipated are not met and the satisfaction of goals in both work and non-work domains are not aligned, individuals will then tend to perceive their work and personal life to be imbalanced (Adkins & Premeaux, 2019).

Leisure is more than just free time outside work. Wood et al., (2018) explains that for emerging adults, leisure refers to the times that they can focus on themselves, and discover their preferences and interests by exploring the world around them and create unique experiences to further establish their identity. As mentioned earlier, emerging adults tend to find employment to gain financial independence. However, they often use leisure time to not only build their identity but also to seek job opportunities that will best fit their personality as they transition into stabler environments as their commitments increase (Layland et al., 2018).

### ***5.2.2 Personal Leisure during Working Hours***

The results of this study show that smartphone intrusion for personal leisure during work hours does negatively predict the work-life balance among emerging adults. However, the impact is much lesser compared to using

smartphones for work purposes after-hours, on weekends or on off-days. The negative effect of engaging in personal smartphone usage during work hours is the possibility of an employee's attention and focus being drawn away from the work task at hand (Rehman et al., 2019). Moreover, it is also seen as time-wasting behaviour that hinders the amount of work that could be completed if the employee is not spending time using their smartphones for personal leisure, which would eventually lead to counterproductive behaviour (Koay & Soh, 2018).

In contrast, there is the possibility that the individual finds no motivation at their workplace because of unfair treatment at work, boredom or a high workload. These reasons could in due course lead to them to engage in cyberloafing or spending excessive time on their smartphones for personal leisure during the work hours (Andel et al., 2019; Pindek et al., 2018), which could result in dissatisfaction in their work.

The findings of this study can be explained by the Border Theory. Similar to work-related smartphone intrusion during personal hours, the excessive use of smartphones for personal leisure integrates into the blending area causing undesired negative permeations into the work domain (Clark, 2000; Holmgren, 2018). Such spill over may cause the feeling of being overwhelmed by the activities that are being brought over to the other domain that disrupt them from doing what is desired. Such integration may cause a dissatisfaction towards work being brought back home and eventually, this

same dissatisfaction creeps into their non-work domain as well due to the inability to engage with people and events in that domain (Holmgren, 2018).

One of the key features of emerging adulthood is the extended identity exploration beyond adolescence. Emerging adults are often open to new possibilities and experiences in hopes of establishing their preferences, who they are or who they want to be and this acts as the foundation for their future self (Arnett, 2015). For emerging adults that do not choose to pursue tertiary education or for fresh graduates, the workforce is the next common platform for their identity exploration (Grosemans, et al., 2018). Work allows emerging adults to learn more about themselves, develop a stronger sense of agency and responsibility as well as prepare them for future adult roles (Cohen-Scali, et al., 2020), which is crucial to find a sense of belonging and social identity in the society that they reside in (Arnett, 2015). When they are not able to find meaning in their work or be productive at their workplace, the perception of dissatisfaction is generated towards their work and their role in the workplace (Sulman, 2017).

### **5.3 Perceived Control on Smartphone Use and Work-Life Balance**

Interestingly in this study, the perceived sense of control is not seen as a significant moderator for the use of smartphones for work during personal hours and work-life balance as it yields an insignificant result. However, the



perceived sense of control shows a significant result as a moderator for the use of smartphone for personal leisure during work hours and work-life balance.

The emerging adults of today are also known as the digital natives who are a group of individuals that were born into and grew up alongside the emergence of technology, which includes smartphones (Kanafi, 2019). As they are well equipped with the skillsets and knowledge surrounding smartphones, digital natives do not face the struggle of identifying 'how' to incorporate this form of technology into work and their personal lives (Nevin & Schieman, 2020). This know-how forms the autonomy within the individual and provides a stronger sense of perceived control in believing that they can act to bring about the outcome that they desire (Thompson & Schlehofer, 2008). In this instance, controlling the amount of time and activities to engage in using their smartphone for work during personal hours and vice versa does help in segmenting the unrelated activities in the specific domain (Mellner, 2016; Koay & Soh, 2019).

However, the results show that the perceived sense of control does not moderate smartphone use for work during personal hours and work-life balance. The reason for this result could be contributed to the desire of building a good impression of management with their colleagues or employers. Emerging adults often change jobs to find one that can best express and represent their identity (Chao & Gradner, 2017). They place high expectations in searching for such jobs, and when they do manage to land said jobs, they do so with the hope

that it would further establish their personality and better equip them for future adult roles and commitments while at the same time, contribute to their workplace (Arnett, 2015). The Border Theory also attributes this condition to an individual who places higher focus and importance on work while being able to primarily identify him or herself as a central member at the workplace. Such permeable spill over of work into his or her personal life is seen as permissible and acceptable by the individual.

Hirsch (2016) stated in his work that one of the key requirements that emerging adults look for in a job is the promise of being offered a leadership role in due time. Promotions are often associated with responsiveness and the responsibilities expected from an individual. Impression management is one way that emerging adults can secure the opportunity of a leadership role because it is often the driving force to create and manipulate the perception that other people have of the individual (Xue et al., 2015). The constant availability to respond to work-related communication would also create an impression of being highly responsive and responsible, which is aligned with the image that is eligible for the promotion. In a study by Halfmann and Rieger (2019), the pressure to maintain and be subjected to a certain impression diminishes the sense of control within the individual and would potentially cause the personal use of a smartphone during work hours as a symbol of externally controlled behaviour rather than a voluntary action. Additionally, in a study by Li & Yuan (2018), impression management is also the reason that the individual would choose to engage in social connectivity with work-related counterparts even after work hours. This behaviour would increase even more when staying

connected outside work hours is seen as a norm of the organization they work in.

However, the perceived sense of control is effective as a moderator when it comes to smartphone use for personal leisure during work hours and work-life balance. Impression management may also be used to explain this result. The continuous use of a smartphone for personal leisure or reason during work hours may seem to be cyberloafing. While some studies claim that the use of smartphones for personal leisure may serve as a temporary getaway to prevent cumulative work stress (Andel et al., 2019; Baturay & Toker, 2015; Pindek et al., 2018), companies claim such actions to be deviant behaviour as work hours should solely be dedicated to work-related tasks (Leonard et al., 2018; Rehman et al., 2019). Furthermore, the constant engagement in smartphone use for personal leisure may hinder work progress and productiveness. As such, the emerging adult may then choose to limit their smartphone use to focus more on work (Koay & Soh, 2019), to gain a sense of achievement in their work (Schwartz, 2016) and eventually establishing an identity that is perceived to be ready for more commitments and responsibilities (Arnett, 2015).

The Border Theory points out that individuals assign tasks, events, behaviours, and experiences to different domains to establish a mental boundary to prevent unwanted spill over that may hamper their work-life balance (Clark, 2000; Holmgren, 2018). As work-life priorities are based on

the individual, some place work as being more important than other life priorities and leisure, while others perceive it to be the opposite (Rife & Hall, 2015; Wayne et al., 2016). Thus, the conscious decision of segmenting unrelated emotions, behaviours, and thoughts of domains from entering the other while at the same time, providing permeable allowance of related emotions, behaviours and thoughts vary among individuals (Ezzedeen & Zickic, 2015; Holmgren, 2018). When the permeability of events, activities and behaviour is seen as permissible and under control, the interaction between work and life will not be perceived as an imbalance. In contrast, when the spill over occurs under social pressure where the individual perceives it as being beyond their control, such spill over will cause work-life conflict (Li & Yuan, 2018).

In this study, the perceived sense of control in emerging adults allows them to limit their smartphone use for personal leisure during work hours because it may present the negative image of slacking and being irresponsible or unproductive at work. However, for the same reason of not wanting to leave a bad impression, emerging adults may perceive that smartphone use for work during personal hours is beyond their control and would inevitably hamper their work-life balance. Nevertheless, the reason for this result still calls for further and more detailed studies to be conducted.

## **5.4 Limitations of Study**

There are a few limitations to this study. Firstly, emerging adults may have different priorities and values during early phases of life in comparison to those in a later phase. These differences are not explored in this study. During the early phase of emerging adulthood, the emerging adults may have set their values on exploring possibilities to develop their identity (Arnett, 2015). On the other hand, the emerging adults of the later phase may set their values on settling down and getting ready for more stable responsibilities and commitments (Arnett, 2015; Chao & Gardner, 2017). These differences may also influence the way they interact with their counterparts both at work and in their personal lives as well as their smartphone usage pattern.

Secondly, the nature of work among emerging adults is unknown in this study. The different natures of work might have dissimilar requirements and expectations of the use of smartphones for work during personal hours as well as restrictions and policies of using smartphones for personal leisure during work hours. These inconsistencies in policies and expectations may influence the way emerging adults use their smartphones at work and during personal hours. For example, emerging adults who work in marketing may have a separate set of expectations of response during after-hours as compared to those who are working in administration. The service sectors might also have a distinct set of restrictions on smartphone use at work as compared to those working in event companies, which therefore leads to differing results based on the distinct nature of work that the emerging adult is involved in.

Thirdly, the use of a one-tailed test is seen as more appropriate for this study as the use of PROCESS Macro is unable to best represent and explain the prediction of smartphone intrusion on work-life balance

### **5.5 Recommendation for Future Studies**

As aforementioned, the priorities of emerging adults may shift and change as they grow older due to different fulfilment and aspects desired as they begin to settle down. According to Arnett (2015), the process of settling down usually takes place at 25 years old when an individual seeks a job that best expresses their identity as the focus on personal growth shifts to laying a foundation to start a new chapter in adulthood while preparing for a family (Chao & Gardner, 2017). Future studies can place more focus on comparing these two groups of emerging adults to identify if there is a difference between the prioritized domain (work or personal) and whether this focus affects their view on work-life balance.

In addition, work-life balance is based on the priorities of the individual, and that shifts and changes throughout the phases of emerging adulthood. Future studies can use a longitudinal study in documenting the changes in life events for the emerging adult, and how they adapt to those changes. This would allow better understanding of the priorities of emerging adults and better insight of the reasons behind their choices. It could also help appreciate the requirements that they seek in their jobs and personal activities outside their

work as well as their perception of what is an ideal work-life balance. For this, the use of IBM SPSS Amos would be a more appropriate tool.

The nature of the work can also be a factor that will affect the requirements and restrictions of smartphone usage. Future research could investigate different job sectors and the requirements and expectations that they have over their employees' availability after work and the policy and restrictions on smartphone use during work hours.

## **5.6 Implications**

### ***5.6.1 Practical Implications***

The present study has a variety of practical implications. It has brought awareness to the possible factors that might affected or have affected the skewness of work-life balance. As mentioned in the study by Villadsen (2016), many people voluntarily use their smartphones to engage in work tasks during after-hours with the thought that they can control the amount of work that overflows into their personal time. They go on to eventually realize that this usage is out of their control as their employers and/or clients expect a response from them outside of work hours. The same can be said for current emerging adults or digital natives who place importance on the perception of control they can exert over the type, amount, and time they spend on their smartphones whenever they are in either domain. Although many young adults are highly proficient with the use of smartphones, they might unconsciously soon feel

overwhelmed by it. Organizations can help their young employees to exercise a sense of control by revising the policies of the organizations regarding after-hours availability and by restricting managers and supervisors from contacting their employees after-hours, or on holidays or day-offs. With these restrictions, young employees could be encouraged to put into action the perceived sense of control in deciding whether to respond to work calls during their personal time.

Moreover, organizations can be alerted of the culture that they are executing upon the employees on the expected availability during their personal hours and how such expectations could affect their employees' work-life balance. The informal norms of availability expectations may be a customary practice by many companies, causing emerging adults to conform to such norms that might cause them to experience work-life conflict. Policies can be established to protect the personal life of employees by preventing them from potentially working overtime while responding to work-related calls during after-hours. Managers and supervisors should also be trained and educated on the importance of work-life balance so that they will not just be aware, but also be equipped with the skills to implement these practices that promote work-life balance for their subordinates as well as for themselves.

Consequently, organisations could also take note of the possible or existing practice of cyberloafing or engaging in personal leisure smartphone usage during work hours. This would allow organizations to implement proper and effective policies or restrictions to reduce these actions. Since it is difficult



for the organization to constantly check or monitor the use of smartphones by employees during work, they can set a restriction on the access of social networking sites or video websites (e.g., Facebook, Instagram and YouTube) on the workplace wireless fidelity (Wi-Fi) server to prevent the potential cyberloafing among employees.

### ***5.6.2 Theoretical Implications***

The result of this study was able to contribute to the growing area of research on emerging adults. There have been past studies conducted in Malaysia regarding the problematic smartphone use among the emerging adults (Hong & Ida, 2018), as well as how using specific smartphone applications affect work productivity and work-life balance in Malaysian companies and universities (Mohamed et al., 2019; Omar et al., 2017). However, there have been no known studies conducted on the use of smartphone and work-life balance among the emerging adults in Malaysia. However, there is still a need for in-depth research and systematic review on this topic.

The results of this study have generated slightly different results compared to other studies regarding smartphone intrusion and work-life balance among the general working adult population. As smartphones are quite common tools in today's modern era, especially during the Covid-19 pandemic where almost all working adults are required to work and attend meetings from home, the use of smartphones for all these functions are no longer an option but rather a mandatory skill (Wanga, et al., 2020). However, the work stress

that is experienced tend to differ according to age. The stressors of availability expectations tend to be higher among younger employees as compared to older employees. Such reasons could be that the younger employees are new to the organization, thus the need for impression management is high as they try to find their place, whereas the older working adults are used to the working environment and have already established their working styles where impression management is no longer needed (Hsu, 2018).

In addition, this study was able to contribute to the literature gap on the proposed moderation of perceived control on the use of smartphones and work-life balance. Perceived control has been suggested by a few studies that might moderate how an individual chooses to engage and the amount that he or she would engage with smartphones for work during personal hours and vice versa (First Psychology Scotland, 2015; Dijkstra & Homan, 2016). The findings of this study proved that a perceived sense of control is a significant moderator for the use of smartphone for personal leisure during working hours and work-life balance. However, it did not support the proposition that perceiving a sense of control moderates the use of smartphone for work during personal time and work-life balance. Hence, the reason for this result still calls for further and more detailed studies to be done.

## **5.7 Conclusion**

The present study was able to achieve its objectives in determining the prediction of smartphone intrusion for work during personal hours and personal

leisure during work hours, as well as the effect of perceived control as a moderating factor between these two variables. The findings of this study also showed that smartphone intrusion for work during personal hours and personal leisure during work hours negatively predict the work-life balance among working emerging adults. Additionally, perceived control was also found to have an effect as a moderating factor between smartphone intrusion for personal leisure during work and work-life balance. However, it has no effect as a moderating factor on smartphone intrusion for work during personal hours.

Smartphones have indeed brought a lot of conveniences to their users by increasing the flexibility and efficiency of work activities. Nevertheless, its advancement could also bring about many inconveniences without their users' awareness. Especially for emerging adults who are just entering the workforce with existing knowledge and skills in operating smartphones, there is a need to be aware of how they engage with this technology and the amount of time they spend on their smartphones. As they are identify their place in the workforce and society, it is also crucial that they find a balance in their work and personal life to reduce the risk of developing mental health problems derived from a corrupted well-being caused by the imbalance between work and personal life.

## REFERENCES

Adkins, C. L., & Premeaux S. F. (2019). A cybernetic model of work-life balance through time. *Human Resource Management Review*, 29(4).

<http://doi.org/10.1016/j.hrmr.2019.01.001>

AlHazemi, A. A., & Ali, W. (2016). The notion of work life balance, determining factors, antecedents and consequences: A comprehensive literature survey. *International Journal of Academic Research and Reflection*, 4(8), 74-85.

- Allen, P. & Bennett, K. (2012). *SPSS Statistics: A practical guide version 20* (1<sup>st</sup> ed.). Cengage Learning Australia Pty Limited.
- Ambikapathy, M., & Ali, A. (2020). Impact and challenges towards employees work from home during covid-19 (mco) period. *International Journal of Social Science Research*, 2(4), 97-107.
- Andel, S. A., Kessler, S. R., Pindek, S., Kleinman, G., & Spector, P. E. (2019). Is cyberloafing more complex than we originally thought? Cyberloafing as a coping response to workplace aggression exposure. *Computers in Human Behaviour*. <http://doi.org/10.1016/j.chb.2019.07.013>
- Arnett, J. J. (2015). *Emerging adulthood: The winding road from the late teens through the twenties*. New York, NY: Oxford University Press.
- Baker, T. L., (1994). *Doing Social Research*. (3<sup>rd</sup> Ed.). New York, NY: McGraw-Hill Inc.
- Baturay, M. H. & Toker, S. (2015). An investigation of the impact of demographics on cyberloafing from an educational setting angle. *Computers in Human Behavior*, 50, 358-366. <http://doi.org/10.1016/j.chb.2015.03.081>
- Berger, S., Wyss, A. M., & Knoch, D. (2018). Low self-control capacity is associated with immediate responses to smartphone signals. *Computers in Human Behaviour*, 86, 45-51. [http://doi.org/10.1016/j-chb.2018.04.031](http://doi.org/10.1016/j.chb.2018.04.031)
- Benvenuti, M., Giovagnoli, S., Keep, M., Mazzoni, E., & Selleri, P. (2020). The onlife in emerging adulthood: Experimentation, exploration and

change in the digital era. In *Recent Advances in Digital Media Impacts on Identity, Sexuality, and Relationships*, 241-264.

<http://doi.org/10.4018/978-1-7998-1063-3.ch013>

Biyagamage, K., & Sutha, J. (2018). Assessing the antecedents and consequences of work life imbalance (With reference to female nurses in government hospitals). *Journal of Management and Tourism Research*, 1(1), 21-40. [http://www.uwu.ac.lk/wp-content/uploads/2018/JMTR\\_ch2.PDF](http://www.uwu.ac.lk/wp-content/uploads/2018/JMTR_ch2.PDF)

Cain, L., Busser, J., & Kang, H. J. (2017). Executive chefs' calling: effect on engagement, work-life balance and life satisfaction. *International Journal of Contemporary Hospitality Management*. <http://doi.org/10.1108/IJCHM-02-2017-0105>

Chao, G. T., & Gardner, P. D. (2017). Healthy transitions to work. L. M. Padilla-Walker & L. J. Nelson. *Flourishing in Emerging Adulthood*. (pp.104-128). Oxford University Press.

Chen, C. C., Huang, W. J., Gao, J., & Petrick, J. F. (2017). Antecedents and consequences of work-related smartphone use on vacation: An explanatory study of Taiwanese tourists. *Journal of Travel Research*, 00(0), 1-14. <http://doi.org/10.1177/0047287517714907>

Choi, E., & Kim, J. (2017). The association between work-life balance and health status among Korean workers. *Work*, 58(4), 509-517. <http://doi.org/10.3233/WOR-172641>

Cirianni, F. (2015). Interaction with Mobile Devices and Work-Life Balance.  
In *DC@ CHIItaly* (pp. 13-24).

Clark. S. C. (2000) Work/family border theory: A new theory of work/family  
balance. *Human Relations*, 53(6), 747-770.  
<http://doi.org/10.1177/0018726700536001>

Cohen-Scali, V., Masdonati, J., Disquay-Perot, S., Riberio, M. A.,  
Vilhjálmssdóttir, G., Zein, R., Bucciarelli, J. K., Moumoula, I. A.,  
Aisenson, G., & Rossier, J. (2020). Emerging adults' representation of  
work: A qualitative research in seven countries. *Emerging Adulthood*.  
<http://doi.org/10.1177/2167696820963598>

De Ridder, D., & Gillebaart, M. (2017). Lessons learned from trait self-control  
in well-being: Making the case for routines and initiation as important  
components of trait self-control. *Health Psychology Review*, 11, 89-99.  
<http://doi.org/10.1080/17437199.2016.1266275>

Derks, D., Bakker, A. B., Peters, P., & Wingerden, P. V. (2016). Work-related  
smartphone use, work-family conflict and family role performance: The  
role of segmentation preference. *Human Relations*.  
<http://doi.org/10.1177/0018726715601890>

Dijkstra, M. T. M. & Homan, A. C. (2016). Engaging in rather than  
disengaging from stress: Effective coping and perceived control.  
*Frontiers in Psychology*, 7. <http://doi.org/10.3389/fpsyg.2016.01415>

- Dmour, M. M., Bakar, H. S., & Hamzah, M. R. (2020). Antecedent, consequences, and policies view of cyberloafing among the employees. *Journal of Physics*, 1529. <http://doi.org/10.1088/1742-6596/1529/2/022016>
- Duxbury, L., Higgins, C., Smart, R., & Stevenson, M. (2014). Mobile technology and boundary permeability. *British Journal of Management*, 25(3), 570-588. <http://doi.org/10.1111/1467-8551.12027>
- Ezzedeen, S. R. & Zikic, J. (2015). Finding balance amid boundarylessness: An interpretive study of entrepreneurial work-life balance and boundary management. *Journal of Family Issues*, 1-31. <http://doi.org/10.1177/0192513X15600731>
- Farrell, L., & Hurt, A. C. (2014). Training the millennial generation: Implications for organizational climate. *Journal of Organizational Learning and Leadership*, 12(1), 47-60.
- First Psychology Scotland (2015). *The impact of technology on work/life balance*. <https://www.firstpsychology.co.uk/files/ResearchreportFULL-technology.pdf>
- Fleck, R., Cox, A. L., & Robison, R. A. V. (2015). Balancing boundaries: Using multiple devices to manage work-life balance. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (pp. 3985-3988).
- Fotiaids, A., Abdulrahman, K., & Spyridou, A. (2019). The mediating roles of psychological autonomy, competence and relatedness on work-life



balance and well-being. *Frontiers in Psychology*, 10(1267).

<http://doi.org/10.3389/fpsyg.2019.01267>

García-Cabrera, A. M., Lucia-Casademunt, A. M., Cuéllar-Molina, D., & Padilla-Angulo, L. (2018). Negative work-family/family-work spillover and well-being across Europe in the hospitality industry: The role of perceived supervisor support. *Tourism Management Perspectives*, 26, 39-48. <http://doi.org/10.1016/j.tmp.2018.01.006>

Gatrell, C. J., Burnett, S. B., Cooper, C. L., & Sparrow, P. (2013). Work-life balance and parenthood: A comparative review of definitions, equity and enrichment. *International Journal of Management Review*, 15(3), 300-316. <http://doi.org/10.1111/j.1468-2370.2012.00341.x>

Githinji, F., & Wekesa, S. (2017). The influence of technology on employees' work life balance in the insurance industry. *Journal of Humanities and Social Science*, 22(5), 21-26. <http://doi.org/10.9790/0837-2205052126>

Griffioen, N., Scholten, H., Lichtwarck-Aschoff, A., van Rooij, M., & Granic, I. (2021). Everyone does it - differently: A window into emerging adults' smartphone use. *Humanities and Social Sciences Communications*. <http://doi.org/10.1057/s41599-021-00863-1>

Grosemans, I., Hannes, K., Neyens, J., & Kyndt, E. (2018). Emerging adults embarking on their careers: Job and identity explorations in the transition to work. *Youth & Society*, 1-25. <http://doi.org/10.1177/0044118X18772695>

- Gupta, N., Pandla, K., & Nautiyal, J. P. (2022). Role of communication in enhancing workplace happiness: A review of literature. *International Journal of Research Publication and Reviews*, 3(1), 1366-1370.
- Halfmann, A., & Rieger, D. (2019). Permanently on call: The effects of social pressure on smartphones users' self-control, need satisfaction, and well-being. *Journal of Computer-Mediated Communication*, 24(4), 165-181.  
<http://doi.org/10.1093/jcmc/zmz008>
- Harris, T. R. (2014). *The impact of smartphones on work-life balance* [Doctoral dissertation, Middle Tennessee State University].  
JEWLScholar@MTSU Repository  
[https://jewlscholar.mtsu.edu/bitstream/handle/mtsu/4268/Harris\\_mtsu\\_0170N\\_10284.pdf?sequence=1&isAllowed=y](https://jewlscholar.mtsu.edu/bitstream/handle/mtsu/4268/Harris_mtsu_0170N_10284.pdf?sequence=1&isAllowed=y)
- Hasan, N. A. B. B., & Teng, L. S. (2017). Work-life balance and job satisfaction among working adults in Malaysia: The role of gender and race as moderators. *Journal of Economics, Business and Management*, 5(1), 18-24.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. NY, United States: Guilford Press
- Hill, E. J., Hawkins, A. J., Ferris, M., & Weitzman, M. (2001). Finding an extra day a week: The positive influence of perceived job flexibility on work and family life balance. *Family Relations*, 50(1), 49-58.  
<http://doi.org/10.1111/j.1741-3729.2001.00049.x>

Hirsch, A. S. (2016). *What emerging adults want in a job: 9 key requirements*.

Society for Human Resource Management.

<https://www.shrm.org/resourcesandtools/hr-topics/employee-relations/pages/emerging-adults.aspx>

Holmgren, H. (2018, Spring). *Boundary-less work and digital mobile media: A qualitative exploration of employees' work-life balance in the context of constant online availability* [Master Thesis, Jönköping University, Sweden]. Google Scholar. <https://www.diva-portal.org/smash/get/diva2:1223178/FULLTEXT01.pdf>

Hong, J. S. R., & Ida, H. A. T. (2018). Workplace bullying among emerging adults. *Malaysian Online Journal of Counseling*, 5(1), 64-79

Horwood, S., & Anglim, J. (2019). Problematic smartphone usage and subjective and psychological well-being. *Computers in Human Behavior*. <http://doi.org/10.1016/j.chb.2019.02.028>

Hossain, M. I., Limon, N., Amin, M. T., & Asheq, A. S. (2018). Work-life balance trends: A study on Malaysian generation y bankers. *Journal of Business and Management*, 20(9), 1-9. <http://doi.org/10.9790/487X-2009030109>

Hsu, H. C. (2018). Age differences in work stress, exhaustion, well-being, and related factors from an ecological perspective. *International Journal of Environmental Research and Public Health*, 16(1), 50. <http://doi.org/10.3390/ijerph16010050>

- Israel, G. D. (1992). *Determining Sample Size*. Gainesville: Agricultural education and communication department, University of Florida.  
<http://www.tarleton.edu/academicassessment/documents/Samplesize.pdf>
- Johari, J., Tan, F. Y., & Zulkarnain, Z. I. T. (2018). Autonomy, workload, work-life balance and job performance among teachers. *International Journal of Education Management*, 32(1), 107–120.  
<http://doi.org/10.1108/IJEM-10-2016-0226>
- Kanafi, M. M. (2019, April). *The impact of digital literacy on digital transformation at the workplace – digital immigrants and digital natives*. Google Scholar.  
[https://www.doria.fi/bitstream/handle/10024/173069/mahboob-kanafi\\_matin.pdf?sequence=2](https://www.doria.fi/bitstream/handle/10024/173069/mahboob-kanafi_matin.pdf?sequence=2)
- Kelliher, C., Richardson, J., & Boiarintseva, G. (2018). All of work? All of life? Reconceptualising work-life balance for the 21<sup>st</sup> century. *Human Resource Management Journal*, 29(2), 97-112.  
<http://doi.org/10.1111/1748-8583.12215>
- Kilber, J., Barclay, A., & Ohmer, D. (2014). Seven tips for managing generation Y. *Journal of Management Policy and Practice*, 15(4), 80-91.
- Kim, H. Y. (2013). Statistical notes for clinical researchers: Assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics*. <http://doi.org/10.5395/rde.2013.38.1.52>

- Koay, K. Y. & Soh, P. C. H. (2019). Does cyberloafing really harm employees' work performance? An overview. In *International Conference on Management Science and Engineering Management* (pp. 901-912). Springer, Cham.
- Lachman, M. E. & Weaver, S. L. (1998). The sense of control as a moderator of social class differences in health and well-being. *Journal of Personality and Social Psychology*, 74(3), 763-773.
- Lapsley, D., & Hardy, S. A. (2017). Identity formation and moral development in emerging adulthood. In L. M. Padilla-Walker, & L. J. Nelson (Eds.), *Flourishing in emerging adulthood: Positive development during the third decade of life* (pp. 14-39). Oxford University Press.
- Larasati, D. P., & Hasanati, N. (2019). The effects of work-life balance towards employees engagement in millennial generation. *Advances in Social Science, Education and Human Research*, 304.
- Layland, E. K., Hill, B. J., & Nelson, L. J. (2018). Freedom to explore the self: How emerging adults use leisure to develop identity. *The Journal of Positive Psychology*, 13(1), 78-91.  
<http://doi.org/10.1080/17439760.2017.1374440>
- Lazim, H. B. M., & Sasitharan, D. (2015). What factor persuade Malaysians consumer to purchase smartphone? *Journal of Technology and Operations Management*, 10(2), 38-50.
- Leonard, E., Chukwuemeka, E. E., & Emmanuel, N. C. (2018). Abusive supervision and organizational cynicism as predictors of cyber-loafing

among federal civil service employees in Anambra State, Nigeria.

*European Journal of Human Resource Management Studies*, 1(2), 19-36. <http://doi.org/10.5281/zenodo.1172162>

Li, L. & Lin, T. C. (2019) Smartphones at work: A qualitative exploration of psychological antecedents and impacts of work-related smartphone dependency. *International Journal of Qualitative Methods*, 18, 1 – 12. <http://doi.org/10.1177/1609406918822240>

Li, J. & Yuan, B. (2018). Smartphone intrusion: Has social interaction online blurred the work-life boundary of employees. *Cornell Hospitality Quarterly*, 1-17. <http://doi.org/10.1177/1938965518777217>

Marchant, C., & O'Donohoe, S. (2014). Edging out of the nest: Emerging adults' use of smartphones in maintaining the transforming family relationships. *Journal of Marketing Management*, 30(15-16), 1554-1576. <http://doi.org/10.1080/0267257X.2014.935799>

Marchant, C., & O'Donohoe, S. (2018). Homo prostheticus? Intercorporeality and the emerging adult-smartphone assemblage. *Information Technology & People*, 32(2), 4533-474.

Marcum, T. M., Cameron, E. A., & Versweyveld, L. (2018). Never off the clock: The legal implications of employees' after work. *Labor Law Journal*, 69(2), 73-82. <http://doi.org/10.1108/ITP-07-2017-0209>

Mastrolia, S. A., & Willits, S. D. (2013). Millennials: What do we really know about them? *Advance in Accounting Education: Teaching and*

*Curriculum Innovations*, 14, 45-72. [http://doi.org/10.1108/S1085-4622\(2013\)0000014009](http://doi.org/10.1108/S1085-4622(2013)0000014009)

Mellner, C. (2016). After-hours availability expectations, work-related smartphone use during leisure, and psychological detachment. The moderating role of boundary control. *International Journal of Workplace Health Management*, 9(2), 146-164.  
<http://doi.org/10.1108/IJWHM-07-2015-0050>

Mellner, C., Aronsson, G., & Kecklund, G. (2014). Boundary management preferences, boundary control, and work-life balance among full-time employed professionals in knowledge-intensive, flexible work. *Nordic Journal of Working Life Studies*, 4(4), 7-23.  
<http://doi.org/10.19154/njwls.v4i4.4705>

Melumad, S., & Pham, M. T. (2020) The smartphone as a pacifying technology. *Journal of Consumer Research*, 47(2), 237-255.  
<http://doi.org/10.1093/jcr/ucaa005>

Mercado, B. K., Giordano, C., & Dilchert, S. (2017). A meta-analytic investigation on cyberloafing. *Career Development International*.  
<http://doi.org/10.1108/CDI-08-2017-0142>

Mohamed, S., Sidek, S., Izharudin, S. Z., Kudus, N., Hassan, M. A., & Noor, M. A. (2019). Social media usage and its impact on work productivity at a Malaysian University. *International Journal of Recent Technology and Engineering*, 8(1S5), 167-172.

- Mohd, I. H., Shah, M. M., & Zailan, N. S. (2016). How work environment affects the employee engagement in a telecommunication company. In *3<sup>rd</sup> International Conference on Business and Economics* (pp. 21-23).
- Nam, T. (2014). Technology use and work-life balance. *Applied Research in Quality of Life*, 9(4), 1017-1040. <http://doi.org/10.1007/s11482-013-9283-1>
- Nevin, A. D. & Schieman, S. (2020). Technological tethering, digital natives, and challenges in the work-family interface. *The Sociological Quarterly*. <http://doi.org/10.1080/00380253.2019.1711264>
- Nippert-Eng, C. (1996). Calendars and keys: The classification of “home” and “work”. *Sociological Forum*, 11(3), 563-582. <http://doi.org/10.2307/684901>
- Omar, M. K., Zakaria, A., & Ismail, Z. I. A. (2017). Whatsapp messenger, workload and satisfaction with work-life balance among employees of a Malaysian government office. *International Journal of Advance and Applied Science*, 4(9), 114-118. <http://doi.org/10.21833/ijaas.2017.09015>
- Oosthuizen, R. M., Coetzee, M., & Munro, Z. (2016). Work-life balance, job satisfaction and turnover intentions amongst information technology employees. *Southern African Business Review*, 20(1), 446-467. <http://doi.org/10.25159/1998-8125/6059>



- Ozimek, P., & Bierhoff, H. W. (2019). All my online-friends are better than me – three studies about ability-based comparative social media use, self-esteem, and depressive tendencies. *Behaviour & Information Technology*, 1-14. <http://doi.org/10.1080/0144929x.2019.1642385>
- Pallant, J. (2013). *SPSS Survival Manual: A step by step guide to data analysis using IBM SPSS* (4th ed.). Crows Nest, NSW: Allen & Unwin.
- Palvia, P. C., & Brown, W. S. (2015). Are mobile devices threatening your work-life balance? *International Journal of Mobile Communications*, 13(3). 317–338. <http://doi.org/10.1504/IJMC.2015.0669128>
- Pindek, S., Krajcevska. A., & Spector, P. E. (2018). Cyberloafing as a coping mechanism: Dealing with workplace boredom. *Computers in Human Behavior*, 86, 147-152. <http://doi.org/10.1016/j-chb.2018.04.040>
- Piszezsek, M. M., (2016). Boundary control and controlled boundaries: Organizational expectations for technology use at the work-family interface. *Journal of Organizational Behaviour*, 1-20. <http://doi.wiley.com/10.1002/job.2153>
- Prakash, A. & Kaur, A. (2018). Cyber loafing in the organisation – Gain or drain. *JK Business School*, 2(1), 57-64.
- Powell, G. N., Greenhaus, J. H., Allen, T. D., & Johnson, R. E. (2019). Advancing and expanding work-life theory from multiple perspectives. *Academy of Management*, 44(1). <http://doi.org/10.5465/amr.2018.0310>
- Procentese, F., Gatti, F., & Di Napoli, I. (2019). Families and social media use: The role of parents' perceptions about social media impact on family

systems in the relationship between family collective efficacy and open communication. *International Journal of Environmental Research and Public Health*, 16(24), 5006. <http://doi.org/10.3390/ijerph16245006>

Rehman, A. U., Hussain, S., & Khattak, J. K. (2019). Impact of smartphone usage on work neglect with mediating role of cyberloafing and moderating role of work engagement. *NUML International Journal of Business & Management*, 14(2), 43-60.

Rife, A. A., & Hall, R. J. (2015). *Work-life balance*. Society for Industrial and Organizational Psychology.  
<http://www.siop.org/WhitePapers/WorkLifeBalance.pdf>

Saim, M. A. S. M., Rashid, W. E W., Ma'on, S. N. (2021). Technostress creator and work life balance: A systematic literature review. *Romanian Journal of Information Technology and Automatic Control*, 31(1), 77-88. <http://doi.org/10.33436/v31lily202106>

Sánchez-Hernández, M. I., González-López, O. R., Buenadicha-Mateos, M., & Tato-Jiménez, J. L. (2019). Work-life balance in great companies and pending issues for engaging new generations at work. *International Journal of Environmental Research and Public Health*, 16(24), 5122. <http://doi.org/10.3390/ijerph16245122>

- Sarabani, J., Carter, M., & Compeau, D. (2018). 10 years of research on technostress creators and inhibitors: Synthesis and critique. *Twenty-fourth Americans Conference on Information System*
- Sarker, S., Ahuja, M., Sarker, S., & Bullock, K. M. (2021). *Navigating Work and Life Boundaries: Insights for Distributed Knowledge Professionals*. Springer Nature Switzerland AG.
- Schwartz, S. J. (2016). Turning point for a turning point: Advancing emerging adulthood theory and research. *Emerging Adulthood*, 1-11.  
<http://doi.org/10.1177/2167696815624640>
- Servidio, R. (2021). Self-control and problematic smartphone use among Italian university students: The mediating role of the fear of missing out and of smartphone use patterns. *Current Psychology*, 40(8), 4101-4111.  
<http://doi.org/10.1007/s12144-019-00373-z>
- Shah, A. U. M., Safri, S. N. A., Thevadas, R., Noordin, N. K., Rahman, A. A., Sekawi, Z., Ideris, A., & Sultan, M. T. H. (2020). Covid-19 outbreak in Malaysia: Actions taken by the Malaysian government. *International Journal of Infectious Diseases*, 97(2020).  
<http://doi.org/10.1016/j.ijid.2020.05.093>
- Shulman, S. (2017). The emerging adulthood years: Finding one's way in career and intimate love relationships. *The Psychoanalytic Study of the Child*, 70(1), 40-62. <http://doi.org/10.1080/00797308.2016.1277123>

- Sirgy, M. J., & Lee, D. J. (2017). Work-life balance: An integrative review. *Applied Research Quality Life*. <http://doi.org/10.1007/s11482-017-9509-8>
- Sowon, K., Sikhwari, O., Nyemba-Mudenda, M., & Chigona, W. (2019). Smartphone paradoxes in working mothers' pursuit of work-life balance. *International Development Informatics Association Conference*, 94-106. [http://doi.org/10.1007/978-3-030-11235-6\\_7](http://doi.org/10.1007/978-3-030-11235-6_7)
- Thompson, S. C., & Schlehofer, M. M. (2008). Perceived control. *Health Behaviour Constructs: Theory, Measurement, and Research*. [dcccps.cancer.gov/brp/constructs/perceived\\_control/pc5.html](http://dcccps.cancer.gov/brp/constructs/perceived_control/pc5.html)
- van Laethem, M. V., van Vianen, A. E. M., & Derks, D. (2018). Daily fluctuations in smartphone use, psychological detachment, and work engagement: The role of workplace telepressure. *Frontiers in Psychology*, 9, 1808. <http://doi.org/10.3389/fpsyg.2018.01808>
- Vanden Abeele, M. M. P. (2016). Mobile youth culture: A conceptual development. *Mobile Media and Communication*, 4(1), 85-101. <http://doi.org/10.1177/2050157915601455>
- Vannucci, A., Flannery, K. M., & Ohannessian, C. M. (2017). Social media use and anxiety in emerging adults. *Journal of Affective Disorders*, 207(2017), 163-166. <http://doi.org/10.1016/j.jad.2016.08.040>
- Vannucci, A., Ohannessian, C. M., & Gagnon, S. (2019). Use of multiple social media platforms in relation to psychological functioning in emerging adults. *Emerging Adulthood*, 7(6), 501-506

- Varghese, L. & Barber, L. K. (2017). A preliminary study exploring moderating effects of role stressors on the relationship between big five personality traits and workplace cyberloafing. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 11(4).  
<http://doi.org/10.5817/CP2017-4-4>
- Villadsen, K. (2016). Constantly online and the fantasy of ‘work-life balance’: Reinterpreting work-connectivity as cynical practice and fetishism. *Culture and Organization*.  
<http://doi.org/10.1080/14759551.2016.1220381>
- Viola, M. M., Musso, P., Inguglia, C., & Coco, A. L. (2016). Psychological well-being and career indecision in emerging adulthood: The moderating role of hardiness. *The Career Development Quarterly*, 64, 387-396. <http://doi.org/10.1002/cdq.12073>
- Vorderer, P., Krömer, N., & Schneider, F. M. (2016). Permanently online-permanently connected: Explorations into university students’ use of social media and mobile smart devices. *Computers in Human Behaviour*, 63, 694-703. <http://doi.org/10.1016/j.chb.2016.05.085>
- Wanga, H., Joseph, T., & Chuma, M. B. (2020). Social distancing: Role of smartphone during Coronavirus (Covid-’9) pandemic era. *International Journal of Computer Science and Mobile Computing*, 9(5), 181-188.
- Wayne, J. H., Butts, M. M., Casper, W. J., & Allen, T. D. (2016). In search of balance: A conceptual and empirical integration of multiple meanings of work-family balance. *Personnel Psychology*, 00, 1-44.  
<http://doi.org/10.1111/peps.12132>

- Wolor, C. W., Kurnianti, D., Zahra, S. F., & Martono, S. (2020). The importance of work-life balance on employee performance millennial generation in Indonesia. *Journal of Critical Reviews*, 7(9), 1103-1108. <http://doi.org/10.31838/jcr.07.09.203>
- Wood, D., Crapnell, T., Lau, L., Bennett, A., Lotstein, D., Ferris, M., & Kuo, A. (2018). Emerging adulthood as a critical stage in the life course. In Halfon, N., C. B. Forrest, R. M. Lerner, & E. M. Faustman (Eds.), *Handbook of Life Course Health Development* (pp. 123-144). Springer.
- Xue, X., Song, H. Y., & Tang, Y. J. (2015). The relationship between political skill and employee voice behavior from an impression management perspective. *Journal of Applied Business Research*, 31, 1877-1888.
- Yang, S., Zhao, Y., & Ma, Y. (2019). Analysis of the reasons and development of short video application – Taking Tik Tok as an example. *International Conference on Information and Social Science*, 340-343. <http://doi.org/10.25236/iciss.2019.062>

## **APPENDIX**

### **APPENDIX A**

#### **IMPLIED COSNENT FORM**

##### **INTRODUCTION**

Dear Participants,

I am Chegne Shuh Ting, a student from the course of Masters of Psychology (Industrial and Organisational Psychology) from Universiti Tunku Abdul Rahman, Kampar, Perak Campus. This survey is done as a part of the research study that is required for the course mentioned above. Please read the following inform consent below before making the decision whether to participate or not.

This online survey consists of demographic information and 4 questionnaires that measure different areas of this research study. This survey may take approximately 10 minutes of your time.

##### **CONFIDENTIALITY**

Please be aware that your identity will remain anonymous and the answers to this survey will be kept confidential and will not be revealed to any third party other than me as well as my supervisors. The information obtained from this survey will only be used for academic purposes.

##### **PARTICIPATION**

Your participation in this study should be voluntary. Should you experience any discomfort throughout this survey and wish to withdraw, you may do so at any time without any consequences or penalties. Your participation and contribution to this study are very much appreciated.

Should you have questions regarding this survey, please do not hesitate to contact the researcher through the email listed below

[emilychegne@lutar.my](mailto:emilychegne@lutar.my)

## APPENDIX B

### DEMOGRAPHY INFORMATION

**Instructions:** Please choose the option that best describes you by ticking (/) the box beside it.

<b>AGE</b>	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	

<b>GENDER</b>	
Female	
Male	

<b>WORKING STATUS</b>	
Full Time	
Part-Time	



## APPENDIX C

### Level of Smart Phone Intrusion

Definition of smartphone: “Smartphone refers to a mobile phone that has a touchscreen interface, enables the user to have internet access, have additional software (e.g. email), have operating system that is compatible to download additional applications and run them, and also able to perform the many functions of a computer. (Merriam-Webster, 2018; Oxford Dictionary, 2018). ”

**Instructions:** Please rate the following statements by ticking (/) the relevant response based on your **personal time** that is not typically or supposedly to be dedicated towards work activities.

**Scale:** (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree

\* The items in italics are reverse scored

### **Work Life to Personal Life Smartphone Intrusion**

No.	Questions	1	2	3	4	5
1	<i>I can control how often I use my smartphone, during my personal time for work.</i>					
2	<i>I am happy with how much I use my smartphone for work during my personal time.</i>					
3	<i>I am not bothered by using my smartphone for work during my personal time.</i>					
4	<i>I feel that using my smartphone for work activities during my personal time adds to my productivity.</i>					
5	<i>I feel that using my smartphone for work activities during my personal time is ultimately beneficial to all areas of my life.</i>					
6	<i>My smartphone makes my work life easier.</i>					
7	I feel using my smartphone for work invades my personal life.					
8	I feel my smartphone being used for work during personal time is overwhelming.					
9	My personal time is regularly interrupted by work activities because of my smartphone.					
10	Using my smartphone for work causes me to feel overwhelmed.					
11	I often use my smartphone for work during my personal time.					
12	I wish my smartphone did not have to be used for work during my personal time.					
13	I feel using my smartphone for work during personal time interferes with my personal life.					
14	Alerts from work on my smartphone interrupt important activities in my personal life.					

### **Personal Life to Work Life Smartphone Intrusion**

<b>No.</b>	<b>Questions</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1</b>	<i>I can control how often I use my smartphone for personal reasons during work time.</i>					
<b>2</b>	<i>I am happy with how much I use my smartphone for personal reasons during my work time.</i>					
<b>3</b>	<i>I feel that using my smartphone for personal life activities during my work time is ultimately beneficial to all areas of my life.</i>					
<b>4</b>	<i>My smartphone makes my personal life easier.</i>					
<b>5</b>	<i>I am not bothered by using my smartphone for personal activities during work time.</i>					
<b>6</b>	I feel using my smartphone for personal time invades my work life.					
<b>7</b>	I feel my smartphone being used for personal reasons during work time is overwhelming.					
<b>8</b>	My work time is regularly interrupted by personal activities because of my smartphone.					
<b>9</b>	Using my smartphone for personal life causes me to feel overwhelmed.					
<b>10</b>	I often use my smartphone for personal activities during work time.					
<b>11</b>	I wish my smartphone did not have to be used for personal reasons during work time.					
<b>12</b>	I feel using my smartphone for personal reasons during work time interferes with my work life.					
<b>13</b>	Alerts from my personal life on my smartphone interrupt important activities in my work life.					
<b>14</b>	I feel that using my smartphone for personal activities during my work time decreases to my productivity.					

## APPENDIX D

### PERCEIVED SENSE OF CONTROL

**Instructions:** Please rate the following statements by ticking (/) the relevant response based on your **personal time** that is not typically or supposedly to be dedicated towards work activities.

**Scale:** (1) Strongly Disagree, (2) Disagree, (3) Slightly Disagree, (4) Neutral, (5) Slightly Agree, (6) Agree, (7) Strongly Agree

#### Personal Mastery

No.	Questions	1	2	3	4	5	6	7
1	I can do just about anything I really set my mind to.							
2	When I really want to do something, I usually find a way to succeed at it.							
3	Whether or not I am able to get what I want is in my own hands.							
4	What happens to me in the future mostly depends on me.							

#### Personal Constraint

No.	Questions	1	2	3	4	5	6	7
1	Other people determine most of what I can and cannot do.							
2	There is little I can do to change many of the important things in my life.							
3	I often feel helpless in dealing with the problems of life.							
4	What happens in my life is often beyond my control.							
5	There are many things that interfere with what I want to do.							
6	I have little control over the things that happen to me.							
7	There is really no way I can solve all the problems I have.							
8	I sometimes feel I am being pushed around in my life.							

## APPENDIX E

### Work-Life Balance

**Instructions:** Please rate the following statements by choosing the relevant response based on your **personal time** that is not typically or supposedly to be dedicated towards work activities.

1. How easy or difficult is it for you to balance the demands of your work and your personal and family life?
  - a. Very easy
  - b. Easy
  - c. Neutral
  - d. Difficult
  - e. Very difficult
2. I have sufficient time away from my job to maintain adequate work and personal/family life balance.
  - a. Strongly agree
  - b. Agree
  - c. Neutral
  - d. Disagree
  - e. Strongly disagree
3. When I take a vacation, I am able to separate myself from work and enjoy myself.
  - a. Strongly agree
  - b. Agree
  - c. Neutral
  - d. Disagree
  - e. Strongly disagree
4. All in all, how successful do you feel in balancing your work and personal/family life
  - a. Extremely successful
  - b. Somewhat successful
  - c. Successful
  - d. Neutral
  - e. Unsuccessful
  - f. Somewhat unsuccessful
  - g. Extremely unsuccessful

5. How often do you feel drained when you go home from work because of work pressures and problems?
- a. Never
  - b. Rarely
  - c. Sometimes
  - d. Often
  - e. Almost always

## APPENDIX F

### ETHICAL APPROVAL



**UNIVERSITI TUNKU ABDUL RAHMAN**  
Wholly Owned by UTAR Education Foundation (Company No. 578227-M)

Re: U/SERC/117/2018

24 October 2018

Dr Walton Wider  
Department of Psychology and Counselling  
Faculty of Arts and Social Science  
Universiti Tunku Abdul Rahman  
Jalan Universiti, Bandar Baru Barat  
31900 Kampar  
Perak

Dear Dr Walton,

#### **Ethical Approval For Research Project/Protocol**

We refer to your application dated 3 October 2018 for ethical approval for your research project (Postgraduate student's project) and are pleased to inform you that your application has been approved under expedited review.

The details of your research project are as follows:

<b>Research Title</b>	The Impact of Smartphone on the Work-life Balance with the Moderating Effect of Perceived Sense of Control Among the Emerging Adults
<b>Investigator(s)</b>	Dr Walton Wider Chegne Shuh Ting (UTAR Postgraduate Student)
<b>Research Area</b>	Social Sciences
<b>Research Location</b>	Malaysia
<b>No of Participants</b>	200 participants (Age: 18 - 25)
<b>Research Costs</b>	Self-funded
<b>Approval Validity</b>	24 October 2018 - 23 October 2019

The conduct of this research is subject to the following:

- (1) The participants' informed consent be obtained prior to the commencement of the research,
- (2) Confidentiality of participants' personal data must be maintained; and
- (3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.

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**Sungai Long Campus** : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia  
Tel: (603) 9086 0288 Fax: (603) 9019 8868  
Website: [www.utar.edu.my](http://www.utar.edu.my)

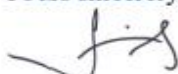


Should you collect personal data of participants in your study, please have the participants sign the attached Personal Data Protection Statement for your records.

The University wishes you all the best in your research.

Thank you.

Yours sincerely,



**Professor Ts Dr Faiz bin Abd Rahman**  
Chairman  
UTAR Scientific and Ethical Review Committee

c.c     Dean, Faculty of Arts and Social Science  
           Director, Institute of Postgraduate Studies and Research