

## A Conceptual Model of Online Volunteering Attaining Work-Family Balance

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**To Link this Article:** <http://dx.doi.org/10.6007/IJARBSS/v12-i10/15470> DOI:10.6007/IJARBSS/v12-i10/15470

**Published Date:** 27 October 2022

### Abstract

A virtual health community in which doctors established various forms of information and communication technologies (ICT) facilitated platforms has created new opportunities for doctors' engagement. Doctors are increasingly using the Internet to volunteer as an alternative to traditional face-to-face volunteering since it allows work to be done in a variety of settings and arrangements. The debate over this form of virtual work, on the other hand, has inspired a slew of studies that look into issues such as the blurring of work-life boundaries. The aim of this study is to assess the experience of doctors who utilized ICT to perform online volunteering by examining the strategies that helps them to negotiate the border around their work and family life to attain a sense equilibrium. This study used case study research design and methodology. This paper presents a conceptual model for assessing online volunteer work-family balance. The model underpins the Clark's work-family Border theory and the potential to incorporate the cyber domain into a framework that highlights the gaps in existing literature on work-family and ICT. Researchers can use this model to further their understanding of virtual borders, which is crucial for integrating ICT into the work and home environment in order to achieve a better work-family balance, especially among those who engaged on online platforms.

**Keywords:** Conceptual Model, Online Volunteer, Work-Family Balance.

**Introduction**

Information and communication technologies (ICTs) are now central to professional career, community life, social and personal relationships as well as connecting everyone through a range of devices at home and work, in open spaces, and while on the move. The evolution of Web 2.0 has created a paradigm shift by transforming the Web into a participatory channel to enable users to contribute and produce new content rather than just consuming the available content. A virtual health community (VHC), in which doctors established various forms of ICT-facilitated platforms for providing health-related information and consultation, has created new opportunities for doctors' engagement, as they are the online volunteers (OV) who are identified as the cyber-communities' core (Liu et al., 2019). Having a large number of volunteer online doctors aids in improving the community's website environment and providing critical roles for the community's subset (Jochum & Paylor, 2013).

The act of volunteerism on the Internet among doctors, also known as online volunteering, is now becoming more prevalent and widespread practice for doctor's engagement as alternative to the onsite (traditional face-to-face) volunteering. This form of virtual work enable work to be conducted in different locations and structures than the traditional way (Boavida & Moniz, 2020). Moreover, Boavida and Moniz (2020) claim that this type of work allows for a better time management and allows for greater management of work and personal lives. However, according to Graves and Karabayeva (2020); Holts (2013); Webster and Randle (2016), the debate about virtual work has resulted in a number of studies that discuss issues such as the blurring of the lines between work and non-work, the extending of work outside the traditional workspace, paid or unpaid work (e.g., voluntary work), and the uncertainty concerning the value establishment. As a result, assessing the work and family arrangement which involves a broad range of activities among online volunteered doctors, is valuable.

Regardless of the benefits offered by the virtual platform, online volunteering is not necessarily suitable for everyone (Seddighi & Salmani, 2019) especially those employees with demanding career such as doctors. Scholars have raised a number of issues that has challenged the successful implementation of online volunteer in attaining a well-balanced life such as dual-earner couples who are juggling with various work and family responsibilities, organizations with long working hours cultures, as well as the remarkable growth of ICT advances that keep employees attached to work and family at all times (Benito-Osorio et al., 2014; Schlachter et al., 2018). Moreover, researches had also identified work and family conflicts as a main problem for individuals who use ICT for volunteering online (Schlachter et al., 2018). Conflict happens when the demands of multiple roles (e.g., employee, spouse, online volunteer) which encompasses limited time, energy and commitment pressures with each other (Allen et al., 2013; Cleave and Doherty, 2005; Greenhaus & Powell, 2006; Wang et al., 2019). The persistent use of ICT has great effects on the way work and family life are structured which caused the online volunteering doctors the difficulties in splitting both activities due to the 'borderless' aspect (e.g., no definite time and place) (Yang et al., 2019). The online volunteering works may be performed by doctors anywhere at any time regardless whether at the workplace or home. This style of working, which practice the 'always-on-culture' belief, inherently creates more blurring restrictions between work and family (Leung & Zhang, 2017; McDowall & Kinman, 2017; Wet & Koekemoer, 2016).

To assess the experience of doctors who volunteer online, this study examining the strategies that helps them to negotiate the border around their work and family life to attain a sense equilibrium. This leads to the following research questions:

RQ 1: What is the possibilities of online volunteering doctors to balance work and family?

RQ 2: How do doctors balance between their work and family while volunteering online in a virtual health community?

To answer the research questions, a case study approach is adopted. After presenting the research method and theoretical background, a conceptual model for establishing work-family balance as an online volunteer is develop. To answer to the first study question, a discussion of the possibilities of online volunteering doctors balancing job and family is presented. The second research question is addressed next, with investigations of doctors' strategies for managing work and family life. Finally, we draw the conclusion.

### **Research Method**

A case study approach is used for the research methodology. A single case study represents a promising method for conducting study that examines the dynamic phenomena of online volunteering doctors in achieving work and family balance. The case is centered on DoktorBudak.com (DB), a unique health virtual community, which aims at aiding parents and sharing knowledge with them by creating an online channel to respond to children's health-related issues. The community's members include pediatricians and pediatric-related specialists who volunteer in government and private hospitals around Malaysia. Some problems in Malaysia's health system, such as a lack of health promotion staff, a supportive environment, and the community's failure to handle responsibility of health issues, might be tackled by DB online volunteers.

### **Literature Review and Theoretical Background**

This section discusses the need to revisit the theory that is used, the concept of work-family balance, and the Border theory.

#### **Revisiting the Theory**

The literature on work-family arrangements presents a different picture, as seen by the various definitions and concepts of work-family balance. Theories such Spillover, Segmentation, and Boundary can be used to describe how doctors who volunteer online balance work and family life. The theories selected form a solid framework for the entire case. However, the study's theoretical framework was centered on Clark's work-family Border theory (2000). The theory contributes to a better understanding of the issues surrounding work-family management and negotiation. This theory opens up a lot of possibilities for understanding border nature, permeability, and how people travel between work and home. Furthermore, this theory can be used to explain an individual's motivation and behaviour when engaging in boundaryless activities and tasks (e.g., online volunteering), where the lines between work and home are blurring. In studies by Karassvidou and Glaveli (2015); Schieman and Glavin (2016), the work-family Border theory was used to help firms understand how to better support their workers at work and at home. According to a previous research that adapted work-family Border theory to present technology, the use of such technologies blurs the lines between work and non-working areas (Adisa et al., 2019; Wang & Chen, 2017).

While the original theory focuses on the domains of work and family, this study expands on the concept of work-family balance by incorporating other important domains, such as community activities (e.g., online volunteering). According to Clark (2000), “balance is attained when a person feels comfortable with the way they have allocated their time and energy, and integrated and separated their responsibilities at work and at home”. Therefore, different people with various experiences are likely to develop distinctive requirements or preferences that shape their views on balance.

Furthermore, Wellman et al (2001) provide an outstanding description of the Internet as a medium that is no longer viewed as alien because of its extensive use in daily life. It has been a normal practice in individual’s lives over the last two decades. Almost all people representing all walks of life are persistently using various related Internet technologies in their daily lives because of its effectiveness, efficiency, and time saving. These are the major reasons for doctors who choose to participate in online volunteering activities. The online volunteering doctors have brought a new domain to their daily lives by venturing into cyberspace. As a result, the use of the work-family Border theory, as suggested by Gurney (2010), is necessary to understand the complexity of this new form of ‘life’. The concept of Border theory is relevant to the study of online volunteering doctors and the balance of work and family life.

There are also gaps in the areas of work-family balance, Border theory, and employees who volunteer online. The theory lacks significant evidence in the area of border crossing between individuals engaged in online interaction. In the Border theory, the mechanism by which individuals transcend the virtual and physical border is still not easily understood. The majority of contributions to this theory center on onsite volunteers rather than online volunteers (Chighizola, 2020; Fiernaningsih & Herijanto, 2020; Voydanoff, 2008). Therefore, the results of an onsite volunteer may not be easily applicable to an online volunteer, whose platform, resources, and time spent differ significantly (Ihm, 2017). Since doctors who volunteer online have high-demand jobs, the job, as well as other aspects of their lives (such as family and online volunteering tasks), can make it difficult to strike a work-family balance.

### **Work-Family Balance Definition**

Past researchers have proposed varying definitions on the concept of ‘work-family balance’; hence, explicit definitions are hard to be found in the academic literature (Frone, 2003). Clarke et al (2009) refer work-family balance as having an equal sense of happiness in various life aspects. Kirchmeyer (2000) outlined a balance life as “achieving satisfying experiences in all life domains; and to do so requires personal resources such as energy, time, and commitment to be well distributed across domains” (p. 80). Balance works in two ways, namely, the positive and negative balance, depending on the level of attention, time, and commitment, and whether they are high or low. Greenhaus et al (2003) extended Kirchmeyer’s definition by considering the levels of time, involvement, or satisfaction. Hence, Greenhaus, Collins, and Shaw defined work-family balance as “the extent to which individual are equally engaged in and equally satisfied with the work and family roles” (p. 513).

Voydanoff (2005) suggested that work-family balance is achievable when individuals can effectively utilize both demand and resources in any domains because it may influence the quality of different life domains. Voydanoff explains resources as a structural or emotional

asset that can be used to simplify individual performance and minimizes demands from any domains. On the other hand, the desire of individuals for any specific role obligation and norms regardless in the form structural or emotional denotes demands. These two references have led to two different viewpoints of work-family connections, which is the occurrence of work-family conflict (WFC) or facilitation (WFF). Frone (2003) further stated that work-family balance is represented when there are low levels of inter-role conflict and high levels of inter-role facilitation.

All in all, the work-family balance (WFB) may bring impact whether positively or negatively to the other domains in life. Nevertheless, since WFB is a multifaceted occurrence, no agreement has been made with regard to the actual meaning it may bring. In this study, researcher use the term WFB to refer to the level that individuals may function effectively in handling different unique demands in work, family as well as voluntary work domains. Individuals may reached a certain level of satisfaction that allow them to attain sense of balance in all domains; work, family and online volunteering.

### **Border Theory**

The work-family border theory comprised of four core concepts: (i) home and work domains; (ii) border between work and home; (iii) border-crossers; and (ii) border-keepers as well as other domains (Clark, 2000). Work and family, according to this theory, are separate worlds that influence one another regardless of physical (location), temporal (time), or psychological borders. The interactivity level between the two domains signifies the strength of the separated border. Those who were spotted passing through the border regularly are deemed as border-crossers (Clark, 2000).

The border has to be managed appropriately to produce and sustain a balance between the domains. A borderline is also required to denote the beginning and ending of such domain as defined according to the respective physical, temporal and psychological borders (Clark, 2000). The physical border refers to the location of the domain-relevant behavior such as the actual walls of one's workspace or home, whilst temporal represents the time period adjusted for work and family, such as an individual work schedule. The psychological border, on the other hand, denotes the thinking patterns or emotions of a domain. In comparison, some borders are more permeable than others; permitting a physical movement from one domain to another while others may be psychological in nature. Although the psychological borders are generally self-developed (Rychlak, 1981, as cited in Clark 2000); the physical and temporal borders are used by individuals to structure the rules that construct the psychological borders.

The characteristics, together with the shaping and managing of the borders may significantly affect the segmentation or integration of the two domains, particularly in influencing the work-family balance (Clark, 2000). Flexibility, permeability, and blending are three main characteristics of a border, as pointed out by the border theorists (Ashforth et al., 2000; Clark, 2000). These three characteristics that must be considered in the Border theory mutually define the strength of a border.

Permeability characterizes “the extent to which a boundary permits psychological or behavioral elements of one role or domain to spill into another” (Ashforth et al., 2000; Clark, 2000; Hall & Richter, 1989). This attribute also refers to the degree where individuals may be physically located in one domain but behaviorally or psychologically in another (Ashforth et al., 2000). Nevertheless, many analysts contended that the permeability of a physical or temporal border is seen as an interruption in which individuals have very little control. Chen and Karahanna (2014), for example, argued that the interruptions may come from work or non-work sources.

Flexibility can also be referred as the extent in which spatial and temporal boundaries are pliable (Ashforth et al., 2000). Hence, individuals can cognitively or behaviorally transform from a role to another in fulfilling the demands of each domain (Bulger et al., 2007). A flexible boundary allows more roles to be performed at any time in several scenario (e.g., a remote worker), whilst a less flexible confines the time and location of carrying out a specific function (e.g., medical doctors located in a physical hospital) (Hall & Richter, 1989).

Blending “arises when a high level of flexibility and permeability exist within borders” (Clark, 2000). Clark further pointed out that a blended border signifies the “area around the presupposed border is no longer exclusive to one domain or the other but called either domain”. On the other hand, a psychological blending takes place when individuals apply their own or family experiences in performing their work or uses their work experiences to enhance their family life. Physical blending occurs when individuals use a laptop and Internet access at home to complete work-related tasks. In temporal blending, individuals can juggle two things in both work and family domains simultaneously, such as discussing family matters while doing their work. However, as asserted by Clark (2000), the blending of similar domains can lead to the integration and a sense of perfection.

The two main characteristics of a border are permeability and flexibility, which are used to determine its strength (Clark, 2000). Typically, borders permit an individual to focus more on the domain that is presently stronger. As such, the stronger border is related to the border that is impermeable, inflexible, and does not allow blending. On the contrary, a border that is flexible, permeable, and allows some sort of blending is considered weak (Ashforth et al., 2000). The determination of balance arises from either a strong or weak border.

### **Conceptual Model**

The conceptual model for establishing work-family balance as an online volunteer adapts a fundamental concept from Border theory (Clark, 2000). Among the main contribution is the conceptualization of the cyber domain in the virtual community into a framework that highlights the gaps in existing literature on work-family and ICT developments. According to this study, a third domain named "cyber" emerges alongside the traditional work-family domains as the work-family Border theory is applied to information systems (IS) and emerging technologies. This study would fill in gaps in the literature by integrating the cyber domain into the work-life domain analysis, exposing a new field of investigation that goes beyond the main focus on work and family subjects. Indeed, this study will help to extend Border Theory by highlighting the neglected relationship between work-family and the cyber world, as well as its work-life balance.

Another contribution of this model is that the emergence of ICT has drastically changed the work-life structure. Work may now be done at any time and from any location, implying that the work and family domains have blended and that the lines between work and family are blurring. While technology can help people attain a certain amount of work-life balance (Kreiner et al., 2009), many researchers believe that 24/7 access can blur the lines between work and family. According to Bodker (2016); Burney (2019); Kossek (2016); Schlachter et. al (2018), when the emerging technology keep us more connected than ever, the distinction between work and family is blurred. In contrast to Clark's (2000) work-family Border theory, which focuses on the physical border's characteristics (e.g., flexibility, permeability, and blending), the upcoming challenges of how employees manage the border while volunteering online are more difficult and demanding. This seems to be owing to the online environment's flexible and permeable virtual borders (Bodker, 2016). As employees volunteer online, they are blending the virtual and physical borders, resulting in unclear border spaces which could contribute to more conflict (Jimenez et al., 2010).

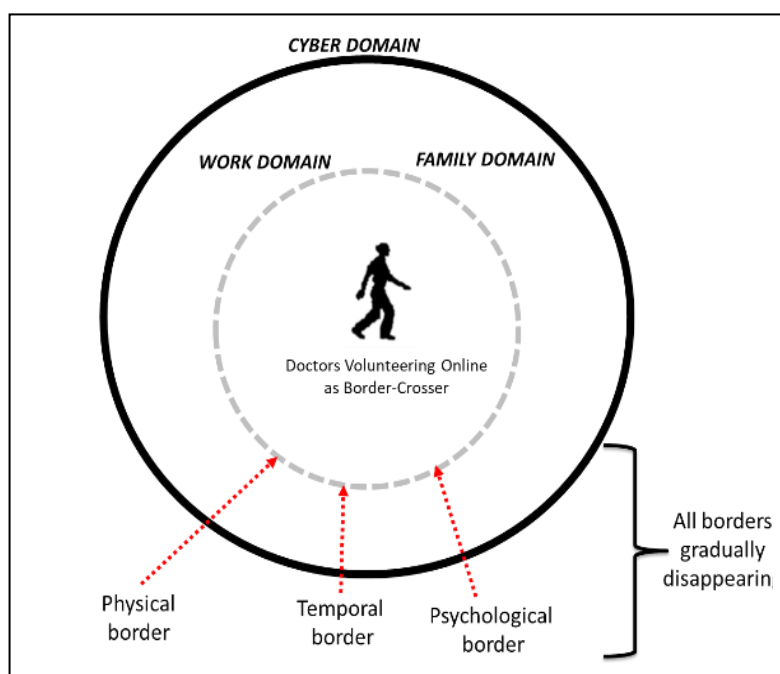


Figure 1. The conceptual model of doctors volunteering online in attaining work-family balance

### Discussion on the Possibilities of Online Volunteering Doctors to Balance Work and Family

Doctors who volunteer online in a virtual health community (VHC) can be considered "central participants" in the domain that they accepted. The central participation is defined in terms of two elements; influence and identification. Individual's ability to influence is shown by their competency, relationship with other central members and internalize of the domain's culture and values, thus giving them authority to deal with changes to the domain and its border. Clark (2000) proposes that "if being a central participant gives a person more choices, then balance between work and home is more easily attained" (p. 759). The second element of central participations is identification with domain responsibilities. According to Clark (2000) "When individuals internalize domain values and when their identity is closely tied with their

membership in the domain, their motivation to manage borders and domains increases” (p. 760).

Doctors who volunteer online have a strong work orientation and can handle different domains and borders to meet their needs, based on this study. The effect of satisfaction on other commitments in life, such as volunteering online, grows as the level of identification with the work-family domains increases. Doctors have strong role in delineating the work and family domains and organize their online volunteering (OV) work in order to avoid conflicts. The increased autonomy in work (e.g., flexible schedule, superior support) allowed doctors volunteering online to engage in informal work related to family or OV work. Employees with high job autonomy are expected to have better work-family balance because they have the freedom to handle their time and work, according to (Walia, 2014). This is one of the aspect of having a role as central participant in a domain, according to (Clark, 2000). The nature of work, in which the strong border work setting allows virtually no interruption from family into work, influences the centrality of the work domain in informants' lives. The results of the study are confirmed by previous work by (Kang, 2016), which suggests the importance of selecting a suitable range of volunteer characteristics. In order to drive greater volunteer engagement, it is critical to establish a positive volunteer identity.

Despite the fact that the majority of doctors volunteering online were able to manage work and family life, a minority of doctors in this study struggled to identify a strategy that was well-balanced across all domains. They are referred to as "peripheral participants" (Clark, 2000). According to Clark (2000), "peripheral participants" are those that have less influence within the domain because they have disregarded domain values, have not attained full competence in their responsibilities, and do not necessarily communicate with other domain members. Doctors participating in this study are juggling successful careers with a fulfilled family and personal life, posing a challenge to their involvement in both the work and family domains. Thus, they are unable to control their domains well and more likely to experience work-family conflict (Saungweme, 2010).

### **Discussion on How Doctors Balance between their Work and Family while Volunteering Online in a Virtual Health Community**

The goal of the study is to learn how doctors who volunteer online manage and negotiate the boundaries between work and family life in order to achieve a balance. Since Clark (2000)'s border does not incorporate the boundaryless structures defined by technologies, the researcher was inspired to identify the strategies used by doctors volunteering online in delineating the work and family domains, where the role of ICT could be accelerating permeability between these boundaries.

The details strategies used by doctors volunteering online are discussed in response to the second research question, which include the characteristics of permeable, flexible, blending, and border strength. The permeability of work and family boundaries for doctors volunteering online has increased with the advent of ICT such as smartphones and wireless Internet, as work and family are no longer restricted to any particular areas (physical) or times (temporal). Using ICTs for online volunteering has diminished temporal boundaries, allowing informants to better control their environment in terms of when and where they perform their OV activities.



Flexibility can be referred as the extent in which spatial and temporal boundaries are pliable (Ashforth et al., 2000). Hence, individuals can cognitively or behaviorally transform from a role to another in fulfilling the demands of each domain (Bulger et al., 2007). Doctors who volunteer online and use ICTs to perform OV work at home or during working hours view their work and family borders as flexible. Some of the online volunteering work was completed in a range of settings, including at work (e.g., during break time), at home, and after working hours (e.g., while driving back home, over the weekend).

Blending occurs when a great deal of permeability and flexibility occurs. Blending ensures that the area around the presumptive border is no longer exclusive to one domain or the other, but rather blends both work and family, resulting in a border land that cannot be solely referred to as one. For online volunteer doctors, they were more satisfied when combine their work-family lives especially when the use of ICT tools such as smartphones facilitate the process of integrating multiple domains.

Online volunteer doctors experience frequent role blurring owing to the weak borders that existed in their work and family lives. The borders are tremendously porous making work-family intrusion among doctors in both direction either work to family or family to work. According to Kreiner et al (2009), this occurrence is termed as 'allowing differential permeability'. The doctors' work obligations and their strong desire to be treat patients more generate their prioritization of work over family or other non-work tasks such as online volunteering, resulting in very weak borders. Researchers hence disputed that weak borders are open to influence and are susceptible to integrate different life domains since flexibility and permeability occur in the border space (Ashforth et al., 2000; Clark, 2000; Kreiner et al., 2009). Online volunteer doctors normally honor and change their consideration principally to the work domain as it is a central element in doctor-patient communication, and they have a tendency to travel with the work sphere everywhere they go. This is consistent with the Border theory belief that individuals often act dynamically to shape the work-family boundary to attain a proper balance life (Ashforth et al., 2000; Clark, 2000). Online volunteer doctors do not differentiate between the two domains. Therefore, work activities (including OV works) occur in the family domain and family activities sometimes may take place in the work domain.

When it comes to achieving work-family balance, the use of ICT tools allows for greater coordination between work and family. More specifically, online volunteer doctors used a variety of strategies, including (1) leveraging ICT, (2) adjusting time management, (3) utilizing other people and (4) prioritizing to adjust the work and family boundaries.

*Leveraging ICT.* Doctors, who volunteer online, be it at home or at work, take advantage of the unique characteristics of information and communication technology (ICT), such as mobility, ubiquity, and availability, to help them perform OV work and manage work-family activities from any location or time. This strategy demonstrates how information and communication technology (ICT) has become an essential aspect of completing daily tasks across all domains. As a result, technology has provided them with a new 'zone' in which they feel more capable of coping with and managing their hectic work and home life. According to studies by Fleck, Cox, and Robison (2015); Lirio (2017), individuals use the functionality of different mobile devices to help them maintain a work-family balance that suits them.

*Adjusting Time Management.* Since doctors have many expectations in terms of work hours and demands, it is indeed important to organise their time because the profession does not always allow them to spend time with family. Extra roles as OV require employees to balance time with family and other personal activities (such as OV work), as ICT keeps professional things always important and accessible. Adjusting time management among doctors who volunteer online can be seen as planning, which helps them achieve work-family balance. To guarantee that all job and family plans are accomplished, several arrangements are established, including scheduling family and other commitment time in between work hours, optimising work break hours, outsourcing housework to a third party, and 'banking' time from one domain to be used later.

*Utilizing Other People.* Other people, which are being used, are people close to the informant who they can depend on and who may have an impact on individual work-family boundary crossing. They can include spouses, parents, colleagues, friends, superiors, and others from the workplace or family. Besides concentrating on the individual himself, past research (Kreiner et al., 2009; Mickel, 2019) has contended that other people (such as mentors) also may affect how individual negotiate the work-family boundary. Specifically, findings from this study have indicated that other people, or known as the 'border-keepers' (Clark, 2000) in informant's lives have great influence in helping and supporting informants to juggle work, family and OV work.

*Prioritizing.* An essential part of the modern work-family struggle is to manage multiple simultaneous demands and roles (Hirschi et al., 2019). In a typical doctor work setting, they are often expected to respond to patient needs with urgency and unpredictability, work long hours, work on weekends and nights (during on-call), or meet deadlines. Similarly, family needs are often pressing and important, such as when children become ill. When both domains are important and challenging, doctors volunteering online must decide which one takes priority. The results of this study showed that doctors prioritize work and family demands by making the right decisions on which issues are the most important to pursue and which can be postponed for the time being. Interestingly, the majority of the doctors who volunteered online in this study put work ahead of families, suggesting that their work setting encourages them to do so. This implies that achieving work-family balance can present challenges, such as making tradeoffs between the two domains. A doctor, for example, can choose to reschedule time with family in order to respond immediately to work-related duties. This is consistent with Rich et al (2016) findings that doctors are expected to prioritize their work over their families, resulting in a lack of balance in their lives, especially among women.

### **Discussion and Conclusions**

The study explored into the role of online volunteering doctors and their experiences in managing and negotiating the work-family border in order to achieve work-family balance. Since information and communication technology (ICT) can be viewed as a liberating power that allows people to juggle multiple demands, the way work-family relationships are structured around ICT is vital to doctors volunteering online in their search for a fair balance.

The conceptual model presented in this paper underpins the Clark's (2000) work-family Border theory and the potential to incorporate the cyber domain into a framework that highlights the gaps in existing literature on work-family and ICT. The previous examinations focused on existing borders (physical, temporal, and psychological) that separate work and family domains, which are no longer applicable for doctors volunteering online because the lines between the two domains have blurred. The Border theory is insufficient to explain the full dynamic of online volunteers' engagement in achieving desired sense of balance. Border theory is best explained in the case of online volunteerism from the standpoint of blending domains of work, family, and cyber into one single domain, as the difference between virtual and real worlds fades. As a result, a third domain known as "cyber" emerges alongside the traditional work-family domains as the work-family Border theory is applied to information systems (IS) and emerging technologies. By integrating the cyber domain into the work-life domain research, this study would fill in gaps in the literature, exposing a new topic of investigation that extends beyond the focus on work and family subjects.

Indeed, this study will contribute to the development of Border theory by emphasizing the neglected relationship between work-family and the cyber world, as well as the work-life balance that it offers. This model can be used by researchers in the area to advance their understanding of virtual borders, which is necessary for integrating ICT into the work and home environment in order to establish a better work-family balance, particularly among those who participated on online platforms.

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### **References**

- Adisa, T. A., Gbadamosi, G., Mordi, T., & Mordi, C. (2019). In search of perfect boundaries? Entrepreneurs' work-life balance. *Personnel Review*, 48(6), 1634-1651.
- Allen, T. D., Johnson, R. C., Kiburz, K. M., & Shockley, K. M. (2013). Work-family conflict and flexible work arrangements: Deconstructing flexibility. *Personnel Psychology*, 66(2), 345–376. doi:10.1111/peps.12012
- Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *Academy of Management Review*, 25(3), 472–491. doi:10.5465/AMR.2000.3363315
- Benito-Osorio, D., Muñoz-Aguado, L., & Villar, C. (2014). The impact of family and work-life balance policies on the performance of Spanish listed companies. *Management*, 17(4), 214-236.
- Boavida, N., & Moniz, A. B. (2020). Virtual work in Portugal. *International Journal on Working Conditions*, (19), 1-15.
- Bodker, S. (2016). Rethinking technology on the boundaries of life and work. *Personal and Ubiquitous Computing*, 20(4), 533-544.
- Bulger, C. A., Matthews, R. A., & Hoffman, M. E. (2007). Work and personal life boundary management: boundary strength, work/personal life balance, and the segmentation-integration continuum. *Journal of Occupational Health Psychology*, 12(4), 365–375.

- Burney, C. (2019). *Personal and Company Smartphones and Work-Life Balance: A Mixed-Methods Study* (Doctoral dissertation, University of Phoenix).
- Chen, A., & Karahanna, E. (2014). Boundaryless technology: Understanding the effects of technology-mediated interruptions across the boundaries between work and personal life. *AIS Transactions on Human-Computer Interaction*, 6(2), 16-36.
- Chighizola, B. E. (2020). *When pro environmental behavior crosses contexts: Exploring the moderating effects of central participation at work on the work-home interface* (Doctoral dissertation, Seattle Pacific University).
- Clark, S. C. (2000). Work/family border theory: A new theory of work/family balance. *Human Relations*, 53(6), 747–770.
- Clarke, M. C., Koch, L. C., & Hill, E. J. (2009). The work-family interface: Differentiating balance and fit. *Family and Consumer Sciences Research Journal*, 33(2), 121–140.
- Cleave, S., & Doherty, a. (2005). Understanding volunteer and non-volunteer constraints: A mixed-method approach. *Paper presented at the Eleventh Canadian Congress on Leisure Research, Canada*. Retrieved from <http://lin.ca/Uploads/cclr11/CCLR11-18.pdf>
- Fiernaningsih, N., & Herijanto, P. (2020). Does border strength affect work-life balance and OCB: Empirical studies at higher-educational institutions. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(4), 699-709.
- Fleck, R., Cox, A. L., & Robison, R. A. (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).
- Frone, M. R. (2003). *Work family balance*. In J. C. Quick, & L. E. Tetrick (Eds), *Handbook of Occupational Health Psychology* (pp.143-162). Washington DC, US: American Psychological Association.
- Graves, L. M., & Karabayeva, A. (2020). Managing virtual workers - Strategies for success. *IEEE Engineering Management Review*, 48(2), 166-172.
- Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work-family balance and quality of life. *Journal of Vocational Behavior*, 63(3), 510–531.
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, 31(1), 72-92.
- Gurney, S. (2010). *Gender, work-life balance and health amongst women and men in administrative, manual and technical jobs in a single organisation: A qualitative study*. (Doctoral thesis, University of Glasgow, United Kingdom). Retrieved from <http://theses.gla.ac.uk/1641/>
- Hall, D. T., & Richter, J. (1988). Balancing life and home life: What can organizations do to help? *Academy of Management Executive*, 11, 213-223.
- Hirschi, A., Shockley, K. M., & Zacher, H. (2019). Achieving work-family balance: An action regulation model. *Academy of Management Review*, 44(1), 150-171. doi: 10.5465/amr.2016.0409
- Holts, K. (2013). Towards a taxonomy of virtual work. *Work Organisation, Labour and Globalisation*, 7(1), 31-50. doi.org/10.13169/workorglaboglob.7.1.0031
- Ihm, J. (2017). Classifying and relating different types of online and offline volunteering. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 28(1), 400-419. doi.org/10.1007/s11266-016-9826-9
- Jimenez, A. G., Orenes, P. B., & Puente, S. N. (2010). An Approach to the Concept of a Virtual Border: Identities and Communication Spaces. *Revista Latina de Comunicación Social*, (65).

- Jochum, V., & Paylor, J. (2013). New ways of giving time: Opportunities and challenges in micro-volunteering. A literature review. Institute for Volunteering Research, NCVO. Available at <http://www.ivr.org.uk> (Last accessed 21st August 2015).
- Kang, M. (2016). Moderating effects of identification on volunteer engagement: An exploratory study of a faith-based charity organization. *Journal of Communication Management*, 20(2), 102-117. doi.org/10.1108/JCOM-08-2014-0051
- Karassvidou, E., & Glaveli, N. (2015). Work-family balance through border theory lens: the case of a company “driving in the fast lane”. *Equality, Diversity and Inclusion: An International Journal*.
- Kreiner, G., Hollensbe, E., & Sheep, M. (2009). Balancing borders and bridges: Negotiating the work-home interface via boundary work tactics. *Academy of Management Journal*, 52(4), 704–730.
- Leung, L., & Zhang, R. (2017). Mapping ICT use at home and telecommuting practices: A perspective from work/family border theory. *Telematics and Informatics*, 34(1), 385-396.
- Lirio, P. (2017). Global boundary work tactics: managing work and family transitions in a 24–7 global context. *Community, Work & Family*, 1-20.
- Liu, Y., Zhang, X., Sun, J., Jiang, Y., & Tian, Z. (2019, January). *Understanding patients’ WOM of IT-enabled healthcare service: a case study of online health consultation*. In Proceedings of the 52nd Hawaii International Conference on System Sciences.
- McDowall, A., & Kinman, G. (2017). The new nowhere land? A research and practice agenda for the “always on” culture. *Journal of Organizational Effectiveness: People and Performance*.
- Mickel, A. E. (2019). Manage Stress to Tackle Mental Health Problems in the Workplace. *Archives of Psychology*, 3(7).
- Rich, A., Viney, R., Needleman, S., Griffin, A., & Woolf, K. (2016). ‘You can't be a person and a doctor’: The work–life balance of doctors in training - A qualitative study. *BMJ Open*, 6(12). doi: 10.1136/bmjopen-2016-013897
- Saungweme, R. (2010). *Work-family culture and border permeability in the context of work-family border theory*. (Unpublished Doctoral dissertation). University of the Witwatersrand, Johannesburg, South Africa.
- Schlachter, S., McDowall, A., Cropley, M., & Inceoglu, I. (2018). Voluntary Work-related Technology Use during Non-work Time: A Narrative Synthesis of Empirical Research and Research Agenda. *International Journal of Management Reviews*, 20(4), 825-846.
- Seddighi, H., & Salmani, I. (2019). Online volunteering, a way to reduce health inequalities: a review study. *Journal of Community Health Research*, 7(4), 256-264.
- Voydanoff, P. (2008). A conceptual model of the work-family interface. In Handbook of work-family integration (pp. 37-55). *Academic Press*.
- Voydanoff, P. (2005). The effects of community demands, resources, and strategies on the nature and consequences of the work-family interface: An agenda for future research. *Family Relations*, 54(5), 583–595. doi:10.1111/j.171-3729.2005.00343.x
- Walia, P. (2014). Work-life balance in relation to task variety and task autonomy: A study of bank employees. *Journal of Strategic Human Resource Management*, 3(1).
- Wang, X., Gao, L., & Lin, Z. (2019). Help or harm? The effects of ICTs usage on work–life balance. *Journal of Managerial Psychology*.

- Wang, Z., & Chen, X. (2017). Communication technology use for work at home during off-job time and work-family conflict: The roles of family support and psychological detachment. *Anales De Psicología*, 33(1), 93-101. doi:10.6018/analesps.33.1.238581
- Webster, J., & Randle, K. (2016). *Positioning virtual workers within space, time, and social dynamics*. In *Virtual workers and the global labour market* (pp. 3-34). Palgrave Macmillan, London.
- Wellman, B., Haase, A., Witte, J., & Hampton, K. (2001). Does the internet increase, decrease, or supplement social capital? Social networks, participation, and community commitment. *American Behavioral Scientist*, 45(3), 436–455. <http://doi.org/10.1177/00027640121957286>
- Wet, W. de, & Koekemoer, E. (2016). The increased use of information and communication technology (ICT) among employees: Implications for work-life interaction. *South African Journal of Economic and Management Sciences*, 19(2), 264–281.
- Xu, L. (2009). View on work-family linkage and work-family conflict model. *International Journal of Business and Management*, 229–233. doi:10.5539/ijbm.v4n12P229
- Yang, J., Zhang, Y., Shen, C., Liu, S., & Zhang, S. (2019). Work-Family Segmentation Preferences and Work-Family Conflict: Mediating Effect of Work-Related ICT Use at Home and the Multilevel Moderating Effect of Group Segmentation Norms. *Frontiers in Psychology*, 10, 834.