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Perceptions About Being On-call Among Doctors and Significant Others: A Qualitative Inquiry

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Abstract

Previous research has not adequately considered the subjective evaluations of being on-call for doctors who provide these services on-site (i.e., proximal doctors) versus those who wait offsite to be called in cases of emergencies (i.e., distal doctors). The current article reports the findings associated with on-call doctors' and significant others' (SOs) evaluations of their experiences when they or their partners were on-call. Eighteen doctors who worked on-call and seven SOs whose partners worked on-call were purposively recruited and interviewed. The data were analysed thematically. Findings revealed that the doctors accepted their on-call duties despite them describing the experience as tiring, stressful, and dangerous. SOs' perceptions of their partners' on-call experiences were that while they had grown accustomed to the limitations the working arrangement presented, it was distracting and there were anxieties about their partners' safety when they were responding to callouts. The participants' experiences differed according to their on-call classification and gender (the latter differences were discussed at greater length in an earlier paper). Recommendations for improving doctors' on-call experiences should acknowledge the individual variation in those experiences and the experiences of those with whom they share their lives.

Keywords: on-call doctors, distal on-call, proximal on-call, active on-call, inactive on-call, psychological detachment

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Introduction

The increasing incidence of burnout among doctors in Trinidad and Tobago (T&T) was exacerbated by the COVID-19 pandemic (Nayak et al., 2021). In a local study on the psychological impact of the pandemic on T&T's healthcare workers (HCWs), results showed a high prevalence of depression, anxiety, and stress associated with the spread of the virus, the threat of infection, an increased workload, isolation from family and lack of sufficient rest (Nayak et al., 2021). However, even before the pandemic, the Trinidad and Tobago Medical Association (TTMA), reported that there was a growing incidence of burnout among local physicians (Doughty, 2018), which echoed empirical findings of high levels of stress, burnout, and depression among T&T medical students (Youssef, 2016).

One aspect of work that has been found to be related to burnout among doctors around the world and across various specialties is being on-call (Balch et al., 2010; Heponiemi et al., 2014; Heponiemi et al., 2015; Irwin et al., 2019). Being on-call is defined as a situation in which "workers are called to work either between regular hours or during set on-call periods" (Glasgow 2019, p. 10). However, to date, no empirical research on the on-call experience has been done in T&T or the wider Caribbean region. Yet, in an article in the T&T Guardian Newspaper (2020), job pressure, in addition to little or no rest between shifts, was believed to be a major contributory factor to high burnout and dissatisfaction rates among local doctors. This anecdotal evidence was supported by claims by Dowlat and Islam (2023) that the frequency with which senior physicians are rostered for on-call duty is unsustainable and inadequate. The authors based their claims on evidence at a local rural hospital.

The TTMA has thus called for improvements in the on-call working arrangements for doctors, specifically identifying that on-call rosters that do not negatively impact sleep and include a reasonable amount of rest time and proper on-site facilities such as bathrooms, lounges, and on-call rooms for short naps during shifts, are needed (Doughty, 2018). Given that being on-call remains a requirement at least at lower ranks within the local medical profession, the relationship between being on-call and burnout, and the evidence that suggests that higher levels of burnout and depression are associated with reduced performance, addictive behaviour, and suicide ideation (Balch et al., 2010), research that seeks to understand perceptions of being on-call, at least from the perspectives of those whom it impacts, is warranted to support the

TTMMA's recommendations. The implications of the findings can improve the health and well-being of those we entrust with our care, especially since their own health and well-being needs have been perceivably largely ignored (Doughty, 2018).

Health Care Workers' Perspectives on Being On-Call

In a literature review, Glasgow (2019) found that on-call stress was experienced due to its disruptive impact on participants' family and social lives and the uncertainty of the period. Female general practitioners (GPs) reported perceived stress due to the role conflict and overload they experienced as they attempted to balance their professional and personal commitments while on-call. On the other hand, men reported perceived stress due to the unpredictability of the period (Rout, 1996). These findings suggest that there may be gendered differences in the perceptions of on-call experiences and the meaning of these perceptions for men and women. However, past evidence has largely reported on associations between variables such as on-call work and stress based on scores on various scales with few investigating other ways in which participants evaluate their on-call experiences and the meaning behind those evaluations (French et al., 2001; Lindfors et al., 2006).

Nevertheless, of those who did, the evidence revealed conflicting results concerning the evaluation of on-call experiences (Cuddy et al., 2001; Imbernon et al., 1993; Smithers, 1995). For instance, in that same review of the literature (i.e., Glasgow, 2019), while being on-call was described as stressful, it was also considered to be a rewarding experience and a "reasonable and important" part of HCWs' jobs (Bamberg et al., 2012, p. 310) because it provided them with the opportunity to comfort the ill and allowed for continuity of care (Cuddy et al., 2001). Interpersonal work relationships (including those with senior doctors) also influenced HCWs' perceptions of being on-call. Being on-call provided doctors with the opportunity to improve team relationships and was believed to enhance learning and buffer against its harmful impacts.

Another reported benefit of being on-call was the educational opportunities it afforded, particularly for junior doctors on proximal call, to obtain unique clinical experiences which stimulated career growth and development (Callaghan et al., 2005; Corriere et al., 2013). In most instances, proximal doctors are on-call at night and during the inactive on-call period may be allowed to sleep for a few hours. Proximal on-call refers to a situation whereby the worker remains on-site for the duration of the on-call period (Glasgow, 2019, p.13). While being on proximal call provided doctors and medical students with valuable clinical experiences such as opportunities to manage unstable patients and informal sessions with seniors, participants often reported being fatigued due to the frequency at which they were called out during their duties (Corriere et al., 2013; Tucker et al., 2010). Additionally, feeling fatigued was associated with the quantity of off-duty days following consecutive nights on-call and with the length of time between on-call shifts and regular work shifts in past studies (Balch et al., 2010; Heponiemi et al., 2014; Tucker et al., 2010).

In the context of being on distal call, fatigue may not merely be due to exposure to active on-call duty (Bamberg et al., 2012; Smithers, 1995; Ziebertz et al., 2015). Distal on-call doctors are relatively senior doctors and are usually off-site during inactive on-call duty. Consequently, they primarily only respond to emergencies such as when proximal doctors are experiencing difficulties in managing patients. "Unlike proximal on-call workers, for distal workers […] being on-call is unpredictable because they are not certain if they will be called out to work, when, for what, and for how long" (Glasgow, 2019, p. 13). Therefore, the characteristic unpredictability of being on distal call might distinguish it from the proximal on-call experience in which workers are almost continuously exposed to work demands. However, the distinctions between the meanings ascribed to the experience of being on-call for proximal and distal on-call workers were hardly established in the literature. Furthermore, in the absence of theoretical frameworks presented in past studies, the review concluded that it was unclear how exactly fatigue was experienced when distal doctors were physically away from work. Since the current study was concerned with understanding physicians' evaluations and how they came to hold those evaluations, Meijman and Mulder's (1998) Effort-Recovery (E-R) model (which will be examined after the following discussion) was believed to be applicable for explaining the fatigue distal workers' felt during the inactive on-call period.

Significant Others' Perspectives on Being On-Call

The evidence on the perceptions of significant others (SOs) about their experiences when their partners are on-call is sparse. Significant others are defined as intimate partners of on-call doctors who live with them, including but not limited to spouses. Few existing studies have emphasized the experiences of partners of distal doctors and not those of proximal doctors. Furthermore, except in one study (Rout, 1996), the spouses were predominantly women which may have had implications for how they constructed their realities. The partners of on-call doctors generally described their experiences when their partners were on-call as tiring and stressful (Emmett et al., 2013). Feelings of depression, frustration, and anger were also reported (Emmett et al., 2013). This was primarily due to the effect of their partners' call on their professional and personal lives, their partners' lack of intimacy and disengagement from family life during the on-call period, their partners' workload and changes in moods, and patients who encroached on their personal space and time (Cuddy et al., 2001; Emmett et al., 2013; Rout, 1996).

Nevertheless, SOs generally believed that their partners' on-call work was valuable because of its opportunities to enhance their skills, foster career satisfaction, increase their financial stability, and offer community service (Emmett et al., 2013). There was also an added advantage (for those with distal on-call partners) of having their partners at home with them and their families during the inactive on-call period (Emmett et al., 2013). Married participants in Emmett et al. (2013) compared their then-current experiences with earlier times in their partners' careers when they had to be on-call more frequently and had to remain on-site. In those times, there were more detrimental impacts on their non-working lives.

Theoretical Framework: The Effort-Recovery Model

As previously alluded to, the distinctions between how proximal and distal on-call workers experience the on-call period were not always clarified in the included studies in the review of the literature and became a point of interest in the current study. According to the E-R Model, recovery occurs during periods of non-exposure to work demands "so that the psychophysiological systems which are activated when effort is expended" return to their baselines (Glasgow, 2019, p. 45). Therefore, the immediate effects of work demands (i.e., the accumulation of negative load reactions) are reversed. Prolonged exposure to work forces the psychophysiological systems to remain in a state of activation depleting those resources for the next work situation and causing a greater accumulation of negative load reactions. Over time, the situation can lead to long-term impairments in health and well-being (Meijman & Mulder, 1998). Therefore, having time after work or between shifts to recover is crucial; however, it is during these same periods that doctors are placed on-call (Guerts & Sonnentag, 2006; Nicol & Botterill, 2004).

Even if on-call doctors are not responding to an emergency (i.e., are not physically confronted with work demands), they may be still psychologically preoccupied with work (Bamberg et al., 2012; Sonnentag, 2011). For instance, distal on-call doctors may have invasive thoughts or ruminations about whether they will have to respond to an emergency, when they will have to respond, and what they may be required to do when they respond, although they may not be actively working (Guerts & Sonnentag, 2006; Ziebertz et al., 2015). Expectations of interruption may make it difficult to mentally detach from work (Bamberg et al., 2012).

While other experiences contribute to recovery, psychological detachment is argued to be a critical component because mental preoccupation with work draws upon the same resources utilized when physically exposed to work (Sonnentag et al., 2008; Sonnentag & Fritz, 2015). This reasoning may give credence to the meaning behind distal on-call doctors' unfavourable evaluations of the on-call period which should be distinguished from those of proximal on-call doctors (Derks et al., 2014; Sonnentag, 2001; Sonnentag & Bayer, 2005; van der Hulst & Geurts, 2001; Ziebertz et al., 2015). Unlike proximal doctors, who are almost always physically confronted with work demands, a large part of distal doctors' time on-call is spent waiting to respond to a call out (Jay et al., 2018).

Research has found that the largely unacknowledged period in which distal doctors spend waiting on-call has physiological, psychological, and social effects (Bamberg et al., 2012; Jay et al., 2018; Nicol & Botterill, 2004). In addition, mental preoccupation with work can extend beyond the on-call period. For instance, research has shown that junior doctors on proximal call complained of "anticipatory" and "hangover" stress on the nights surrounding their on-call duties (French et al. 2001, p. 172). Thus, it is not clear when recovery starts or stops, especially in medical professions characterized by mental demands (Zijlstra et al., 2014), and this brings the conceptualization of recovery as a static construct as suggested by the E-R model into question. Therefore, in the current study, the principal investigator remained alert to the taken-

for-granted ways in which proximal versus distal on-call doctors talked not only about being physically but psychologically exposed to their work demands (during and beyond the on-call period) and the implications that had on their ability to recover.

Other assumptions of the E-R model have been largely criticized, namely, its failure to consider how personality traits influence the recovery process in individuals (Geurts & Sonnentag, 2006). For instance, work demands may be perceived as more stressful to anxious individuals who may expend more energy to meet those demands relative to non-anxious individuals (Geurts & Sonnentag, 2006). Consequently, this can result in a greater need for recovery for them after work. Similarly, neurotic, extraverted, Type A personalities and people for whom their jobs are an integral part of who they are, may be more susceptible to ruminative thoughts and a reduced ability to psychologically detach themselves from work (Geurts & Sonnentag, 2006; Zoupanou et al., 2013). While these are valid concerns, the study's objectives emphasized group rather than individual-level experiences and highlighted differences in those experiences such as those existing between and within the proximal and distal on-call participant groups.

Research Purpose

Distinctions between the proximal and distal on-call systems have not been made in the literature, yet there may be important differences between them that might produce different challenges and experiences. Therefore, there is a need to consider proximal and distal on-call doctors' experiences separately since the impact of being on-call may be different for each category. Furthermore, the insights of others who may be affected either directly or indirectly by the on-call worker's demands have been largely neglected in the literature (Karan et al., 2019). The evidence on the experiences of SOs is scarce, antiquated, and based mainly on samples of women. Consequently, the current study aims to understand how proximal doctors perceive their on-call experiences relative to their distal counterparts and the meaning ascribed to these perceptions. Additionally, the study aims to explore the on-call experience from the perspectives of SOs. The participants' perceptions of being on-call will be appropriately situated within the theoretical context of the E-R model.

Methodology

Qualitative Descriptive Design

The current study aimed to unearth the underlying meanings doctors and SOs attributed to their on-call experiences. In light of that aim, a qualitative descriptive methodology based on a collective-idealist ontology and a constructionist epistemology was considered appropriate (Cuddy et al., 2001). The shared social constructions among proximal versus distal doctors, doctors working on-call in primary care versus those working in secondary care, doctors versus SOs, and even male versus female doctors were emphasized (Guba & Lincoln, 1994). It was also believed that knowledge about the various "groups' constructions could not be acquired

objectively nor observed with the senses as is consistent within positivist frameworks" (Glasgow, 2019, p. 65). Instead, understanding participants' constructions of their on-call experiences meant gaining an insider view of their realities through dialogical exchanges (Alvermann & Mallozzi, 2010; Ormston et al., 2014). What this meant was that the principal investigator was directly part of the construction of the participants' realities of their on-call experiences as she spoke with them and interpreted and re-told their stories. Furthermore, her interpretations were a function of her pre-assumptions and past experiences as a daughter of a mother who worked on-call (Ormston, et al., 2014). The collective idealist "ontological and constructivist epistemological beliefs placed the study within the interpretive tradition and influenced how" the participants were recruited, and the data collected and analysed (Glasgow, 2019, p. 65).

Sampling Procedure

Trinidadian doctors working on-call were purposively selected to provide rich and meaningful data about the phenomenon based on their ability and willingness to talk about their experiences (Koerber & McMichael, 2008; Latham, 2007). The exclusion criterion was doctors who did not work on-call at the time of recruitment. The majority of distal on-call doctors (who were District Medical Officers [DMOs]) were mainly invited to the study, specifically through snowballing techniques and referrals since recruiting this group proved to be relatively difficult (Koerber & McMichael, 2008; Latham, 2007; Marshall, 1996). DMOs are medical-legal officers who provide clinical support to the T&T Police Service. Their work can be compared to the work of coroners or forensic pathologists in other jurisdictions.

Maximum variation was utilized to select equivalent numbers of distal and proximal doctors and men and women doctors. Additionally, the doctors represented a range of medical specialties, ages, ranks, lengths of on-call experience, and Regional Health Authorities (RHAs) which were thought to be pertinent where there were variations in the on-call experiences (Koerber & McMichael, 2008; Marshall, 1996). The RHAs are independent bodies that own and operate health facilities in their respective jurisdictions across T&T to provide health care to the population. The responsibility for the provision of healthcare services was devolved from the T&T's Ministry of Health to the RHAs in 1994. There are currently five (5) RHAs that deliver public healthcare services to the population. Doctors were selected from public institutions across three RHAs namely, the South-West RHA, the North-Central RHA, and the Eastern RHA, which provide health services for approximately 78% of the national population. The on-call burden at public institutions is perceivably greater than at private institutions and in the local article by Doughty (2018), one doctor claimed that "nothing is put in place for their care and well-being, especially in the public health institutions" (para. 9).

The SOs' on-call partners, however, worked at public and private institutions. Although the authors intended to solicit data from the SOs of the doctors in the sample, these doctors prevented access to that group by stating that their SOs did not wish to participate or by not inviting their SOs at all. Thus, SOs were invited from the general population through snowballing techniques and because they were not matched to the doctors in the study, the

sample size of the group also was not matched to the sample size of the doctors. It is worth noting that reliance on snowballing methods for the recruitment of SOs only occurred after exhausting other means (e.g., invitation through relevant social media groups). Nevertheless, similar to the sample of doctors, SOs across a variety of occupations and representing various ages and number of years married were recruited. Furthermore, almost equal numbers of men and women SOs participated.

Sample sizes in many qualitative studies are based on data sets that are large enough to allow for saturation (Braun & Clarke, 2014; Joffe, 2012), "yet small enough to allow for rich and complex data on the lived experience to be drawn out" (Glasgow, 2019, p. 72). As such, the study's sample size was 25 participants (i.e., 18 doctors and seven SOs) since at that point, patterns within and across the datasets became apparent.

Data Collection and Analysis

Ethical approval was secured from Lancaster University, the Caribbean Public Health Agency, and the participating RHAs before the participants were approached to secure their written informed consent. Semi-structured interviews lasting an average of 45 minutes were used to stimulate rich and in-depth discussions about being on-call from the participants' frames of reference (DiCicco-Bloom & Crabtree, 2006; Knox & Buckard, 2009). The interview protocol reflected the research purpose which was to explore the meaning of being on-call in the context of everyday life. The doctors were mostly interviewed face-to-face in private offices or empty medical rooms, while the SOs were interviewed by telephone.

The data were analysed using codebook thematic analysis (TA) after the interviews were transcribed, and there was an illustrative account of the findings (Braun & Clarke, 2019). As Braun and Clarke (2019) clarified in their reflexive commentary about TA, codebook TA is positioned in the middle of coding reliability approaches (i.e., those that emphasize consensus among multiple coders) and reflexive TA, in which the codes are constructed by the researcher "at the intersection of the data, the analytic process and his/her subjectivity" (Braun & Clarke, 2019, p. 595).

Codebook TA uses a coding frame or list of codes generated after familiarization with the data and based on theoretical assumptions from the literature similar to Smith and Firth's (2011) framework analysis, to guide the researcher's constructions. However, the approach adopted in the current study was closer to reflexive TA than to coding reliability approaches in that the analytic process was situated within a qualitative philosophy, the development of the codes in the frame was based to some extent on the principal investigator's interpretation of the patterns of meaning across the data sets, and the themes were not conceptualized as "domain summaries" but as shared meanings organized around meaning-based concepts (Byrne, 2022, p. 1393). The process itself was influenced by the six stages identified by Braun and Clarke (2006) while it was acknowledged that they were not meant to be prescriptive or linear (Braun & Clarke, 2019). "Therefore, there were iterative movements across the stages" from coding

the raw data, defining and redefining the themes, and writing the interpretive story (Glasgow, 2019, p. 85).

The interview transcripts were uploaded to the qualitative data analysis software, NVivo 11 Pro, classified per participant group, namely, doctor (i.e., proximal versus distal) and SO, and read twice to become familiar with the initial patterns in the data (Alhojailan, 2012; Braun & Clarke, 2006; Clarke & Braun, 2014; Mason, 2002). Next, NVivo was used to create a coding framework, which is a list of the codes and their descriptions and was consistently applied across the data set (Bazeley, 2012; King, 2004; Liamputtong, 2009; Pope et al., 2000). Initial or lower-level codes were in some cases *in-vivo* (Alhojailan, 2012; Liamputtong, 2009), and the codes were linked to the relevant portions of text in the transcripts so that the data that were coded were always viewed within the context of the wider transcript (Bazeley, 2013; King, 2004; Liamputtong, 2009; Pope et al., 2000).

After coding, all lower-level codes were organized under higher-order themes, along with the coded extracts (Braun & Clarke, 2006; King, 2004). These higher-order themes were interpretive or linked to theoretical constructs in the existing literature (Pope et al., 2000; Spencer et al., 2014). For example, the lower-level code: 'empty nest' was placed under the theme, 'A Non-Issue' to explain the dynamics of the experiences of SOs as it relates to having childcaring responsibilities fall primarily on them during the earlier stages of their partner's career when the on-call burden was heavier. When their children were grown, while those responsibilities lessened and made the experience of their partner's on-call working arrangement easier to bear, women reported feeling lonely because since their children had now left the nest, there was no companionship at home when their partners were off on-call. At that point, unrelated codes were either discarded or merged with others to relate more broadly to the participants' experiences (Braun & Clarke, 2006).

Themes were also refined and as with the codes, some were discarded or merged (Braun & Clarke, 2006). The principal investigator discussed the categorization of the data with the other authors who challenged her interpretive assumptions, thereby, increasing the richness of the interpretations (Barbour, 2013; Fereday & Muir-Cochrane, 2006). The themes were then defined to reflect the data they represented, and their boundaries were fixed (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006; Spencer et al., 2014). The coded data were checked for coherence and consistency with the codes and the codes were checked for coherence and consistency with themes. Themes were also checked for coherence and consistency with each other and where necessary, modifications were made (Braun & Clarke, 2006; Spencer et al., 2014).

Queries were then run in NVivo to facilitate the analysis of the findings per on-call category for the doctors and overall, for the SOs. The principal investigator remained alert to instances where the findings were unique to specific specialties, genders, sectors, and types of distal call. The results were analysed and presented per theme via interpretive stories of the lived

experiences of the participants (Braun & Clarke, 2006) while remaining reflexive and explicit about the assumptions that influenced the interpretations developed.

Results

Sample Demographics

Proximal or first-call officers in the study were stationed at public hospitals and were the first to be called out in the event of an emergency. Their on-call rotas were either one in four or one in five which averaged approximately seven monthly on-call sessions excluding one weekend call per month. The on-call period was from 4 pm one day to 8 a.m. the next but proximal doctors could also be on-call in the day, afternoon, and evening. These doctors were either at the rank of house officer or intern, and the majority were between 21-30 years old, had less than 10 years of on-call experience, and had romantic partners. However, almost all were without children.

Distal on-call doctors in the study were primarily DMOs (i.e., 67%) who worked at primary healthcare centres and clinics while the minority (i.e., 33%) worked as registrars or consultants at public hospitals. The DMOs were essentially medical-legal officers who provided clinical support to the T&T Police Service. Distal doctors' on-call shifts lasted for 24 hours (i.e., 8 a.m. one day to 8 a.m. the next) and their on-call rotas spanned from one in one to one in six days. They also had weekend on-call shifts. Regarding demographics, their ages ranged from 37 to 60 years old, they usually had more than 10 years of on-call experience and all either had partners and/or children. Overall, the doctors represented various medical and surgical specialties such as internal medicine, general medicine, anesthetics, urology, pediatric surgery, and general surgery.

All SOs were married to on-call doctors who for the most part, provided distal call. The majority were married for less than five years; had at least one child and were employed. Additionally, three had partners who worked within the public health sector while the partners of four worked at private health institutions, including at their businesses. Consequently, their ranks could not be compared with the ranks that exist in the public health sector. Still, except for one partner who was at the rank of a junior doctor, all SOs indicated that their partners were middle to senior doctors (i.e. synonymous with either registrars or consultants). The doctors of these SOs represented various specialties such as endocrinology, family medicine, occupational medicine, anesthetics, nephrology, and obstetrics and gynecology. Their on-call rotas ranged from one in every four days to one in every four weeks depending on staffing and skill demand. The on-call period lasted about two hours for house calls to 24 hours on-call at public hospitals and since most partners were relatively senior doctors, they were only called out to manage complex or emergency cases.

Doctors' Experiences

Accepting On-Call Duty

Being on-call came with "the territory of their jobs" (P3) or, to put it differently, was mandatory within the physicians' specialties. Furthermore, it was an eventuality about which they were made aware before they entered the profession. Nevertheless, some doctors explained that if given the choice, they would not perform on-call duties, as exemplified in the quote below.

> I like the idea of not being on-call more and more but in our setting, it is actually quite difficult. If I worked in the UK, there would be more options, more opportunities I think for just doing 8-4 work and not doing on-call. But down here that really isn't so much of an option too much if you're in like my department certainly […]. I know of nobody here in the surgical department who can only do work and not be on-call. (P1, as cited in Glasgow, 2019, p. 98-99)

Proximal and distal doctors also felt that the on-call service offered patients continuity in their care. Concerning the former, the requirement to remain at the worksite meant "that there [was] always […] someone available and that they wouldn't have to wait […] to get someone on-site" (P4, as cited in Glasgow, 2019, p. 99). In that regard, being on-call was perceived as necessary "humanitarian" work for proximal doctors (P3). Distal doctors also believed that in providing patients with continuity of care, they were fulfilling their "duty of care" (P1) obligation. However, they did not share the meaning of care continuity as their proximal counterparts. For them, continuity of care meant that they were able to follow up on patients they may have admitted during their 24-hour on-call shifts, given that they were sometimes scheduled to do a regular shift immediately following their on-call shift. Therefore, their patients' care was in the hands of a doctor who was initially involved in their case as explained in the quote by a distal doctor below.

> So, if we start call 8 this morning, I'm post-call 8 tomorrow morning and then I have my regular day job […] so, I get to see the patient. […] I would be the one to see them when they came through emergency, I would be the one to operate on them and then I would see them tomorrow. So, […] it provides a really good continuity of care. (P6, as cited in Glasgow, 2019, pp. 99-100)

Finally, both proximal and distal doctors acknowledged that being on proximal call especially, increased clinical exposure and promoted professional growth and that this system of working was the only system that allowed them to achieve those benefits. One proximal doctor described the arrangement as "...throwing you in the deep end of the pool and [having] you […] learn to swim" (P3, as cited in Glasgow, 2019, p. 100).

Being On-Call as Tiring

Feeling fatigued was more prominent in the narratives of proximal doctors than distal doctors because being on-call for the former, especially those in surgical specialties, meant that they were more likely to be faced with physical work demands, and as a result felt like they were "always playing catch up" (P10). For example, a surgeon on proximal call explained that sometimes he is at the hospital for five consecutive days "with a little break to maybe run home,

shower, eat and then come back again" (P5, as cited in Glasgow, 2019, p. 101). This is because the on-call period usually either immediately preceded or followed regular duty. Therefore, he felt that the combination and close succession of regular work shifts and on-call shifts contributed to his fatigue.

> If you are only on-call and you have no additional duties and you have a set shift, then I can see the advantages […] because you are fresh […]. I would change having to do a normal day's work the next day. (P5, as cited in Glasgow, 2019, p. 101)

Proximal doctors also experienced insufficient recovery which extended beyond their on-call periods due to implicit expectations by their seniors regarding the need to remain accessible. For instance, P5 lamented that "you never get to escape, you can't turn off cause when you go home your bosses […] texting you for updates on the patient" (Glasgow, 2019, p. 103). Intertwined with these implicit rules was the pressure "to sort of prove yourself to be invincible" and to a large extent, convincing senior doctors of their invincibility was accomplished when proximal doctors remained accessible (P5, as cited in Glasgow, 2019, p. 103).

Contrary to their proximal counterparts, distal doctors' experiences of fatigue were dependent on whether they had a busy on-call duty. However, fatigue was also experienced even when distal doctors were not called in.

> […] and it's not that you're necessarily tired from doing but you just tired because any time your phone could ring, you can't plan anything, you can't set out to do anything because they could call you out. […] you get up very early, whether they wake you up or not […] [and] you always have that phone in your hand, just batting an eye. (P7, as cited in Glasgow, 2019, p. 102)

For P7, tiredness was tied to the uncertainty of whether and when he would have to respond to an emergency. Furthermore, like proximal doctors, distal participants found that they ruminated about being called out even when on vacation, and thus, there was this inability to "switch off" which led to extreme behaviours when off-duty.

> You never switch off. It's a state of being receptive. Switching off only occurs when you are on sanctioned leave and even that switch-off is not immediate because people will still call you when you start leave. (P8, as cited in Glasgow, 2019, p. 103)

> And it's grueling. It severely affects you. […] I mean I telling you from experience, a lot of the guys end up you know either drinking frequently because you don't really have time to breathe. (P7, as cited in Glasgow, 2019, p. 108)

Being On-Call as Stressful

On-call stress among doctors on proximal call was attributed to the intensity of the on-call period, which was characterized by high patient volumes, demands, and time constraints as the following account shows.

> […] you in your mind as that one officer [...] have to be thinking where I'm needed

> most. […] And all of that adds to […] your stress levels […]. If we got referred any patients, unless they absolutely dying, those patients unfortunately have to wait, because we have to finish clinic. […] So, let's say they come casualty 8 o'clock and casualty refers them like half 8, from half 8 to half 12 when we finish clinic, that patient is just waiting to be seen because we just can't physically be in two places at once. (P11, as cited in Glasgow, 2019, p. 105)

When the above occurred, patients usually became incensed, amplifying the already turbulent situation as evidenced by the quote below.

> So, with [that] environment now, it's stressful in the sense that patients are being aggravated and taking out their stress on us. I mean we are not allowed to defend ourselves really so we just have to sit and take all these verbal abuse and things. (P12, as cited in Glasgow, 2019, p. 105)

Poor organizational interpersonal relationships, the lack of appropriate work equipment and on-call facilities, and the need to be invincible (as was previously mentioned) caused yet "another strain" (P11).

For distal hospital doctors, on-call stress was linked to how confident they felt about the competency of their junior doctors. The experience was "perceivably less demanding" (P1) when they trusted the clinical expertise of those on-site as described below.

> […] if you have an experienced house officer, then it's much easier. But if you have a junior house officer, then it means that almost every patient that they see on-call not only are they calling but […] you're coming in much more often because you have to sort of cover for their lack of experience. So, that can be quite taxing. (P1, as cited in Glasgow, 2019, pp. 106-107)

The above could be contrasted with P1's experience when she was working with a registrar, who is a more experienced doctor.

> If I'm on-call with the registrar, it makes my life easier because [she] fields a lot of the phone calls from the house officers, and then I'm only going to be contacted for the more ill patients [...]. So, that makes the burden a lot less on me. (P1, as cited in Glasgow, 2019, p. 107)

It may be worth noting that the distal doctors' stressful on-call experiences also differed according to their tenure (i.e., those who worked on-call longer felt like they coped better than younger doctors), and whether they provided on-call services at the hospital or as a DMO. The experience was deemed less stressful for those who transitioned from providing hospital on-call services to serving their communities as DMOs. DMOs who had previous hospital experience believed that those experiences prepared them for their current roles. However, this was not every DMO's reality. P7 shared that because he had worked at the hospital for a long time, he still experienced great distress in his new role as a DMO.

> It's not high intensity for the DMO calls but the stress level is always. I'll tell you this:

> working through the hospital system and the on-call service, develops a level of anxiety and fearfulness in your mind because you don't know what to expect. You could be called at any time and in some of us […], it becomes so engrained […] that even on the non-call days we would find ourselves thinking well, "Am I on-call? When next am I on-call?" You are at this heightened level of attention all the time. (P7, as cited in Glasgow, 2019, p. 108)

Additionally, treating traumatic cases, such as child incest and rape, contributed to the DMOs' perceptions of stress because such cases were difficult to get out of their minds.

> It takes a day or two to get it out of your mind. The rape cases or children you find murdered for example [....]. I had to clear the body of a six-year-old girl. I'd be honest with you that night […] when the call was done […] I sat down and I […], revel in that for a few days […]. (P7, as cited in Glasgow, 2019, p. 109)

Being On-Call as Dangerous

Only distal doctors evaluated the experience of being on-call as dangerous given that responding to a call, for them, required them to journey from their homes to either the hospital or some other location. Unlike the relative safety of responding to a call-out at a hospital for those who were hospital distal on-call doctors, DMO calls usually happened "in fairly remote areas and at fairly odd hours of the morning" (P7 as cited in Glasgow, 2019, p. 109). The threat of danger was particularly believed to be more relevant for women than men, and there were some gender-biased concerns voiced by men regarding the appropriateness of the job for a woman. One male DMO believed that besides having to go to lonely and high-risk areas at night, being on-call presented other challenges for women as illustrated in the following scenario:

> For one of my jobs, we had to get an excavator […], because they buried somebody and […] we had to dig a hole 20 feet by 20 feet. And I had to go down in that hole in the mud, in the rain. I drove home in my [underwear] that day. […] So that's why I say a lady shouldn't really be doing that. […] it might sound sexist but […] I don't know if that is […] safe for a woman to do. (P13, as cited in Glasgow, 2019, p. 110)

Additionally, having to journey at night to respond to callouts was also disruptive to families whose sleep would sometimes be interrupted so that they could accompany especially female DMOs to their destinations or stay awake until their return.

> So, sometimes the whole family is wake up to accompany me. Cause it's a female out there. And it's not like you going to a hospital or a very safe environment. You are out there within the public, sometimes in lonely areas, rural areas. (P16, as cited in Glasgow, 2019, 109)

SOs' Experiences

It Is a Non-issue

SOs expressed that they had grown accustomed to their partners being on-call as they

progressed in their relationship. Additionally, those with partners who were senior doctors on distal call felt that their experiences were better now than when their partners were junior doctors on proximal call. As most of their partners were senior doctors on distal call, they did not have to be physically at the hospital all the time nor were they on-call often, and coincidentally, for one SO, the children were grown. However, because her children were grown, she experienced feelings consistent with 'empty nest' syndrome (e.g., loneliness), and these were shared by other women in the sample.

> As our kids are all grown now, it's usually just him and me and he's not here so I'm in the house by myself. […] When the kids were younger it was easier because I had their company. But now the house is like an empty nest. (P14, as cited in Glasgow, 2019, p. 114)

All in all, being a partner of a doctor working on-call had become part of the rhythm of the SOs' lives and they had grown accustomed to it. It also helped that they were preoccupied with either their children, studies, or careers of their own and thus, were able to identify with their partners' on-call commitments.

Distractions and Interruptions

Distractions stemmed from the SOs' partners' inability to switch off post-call and the constant telephone calls that invaded "every single aspect of their lives," especially their sleep (P14). For instance, the doctors had remote access to their worksites and so were able to work at home even after their on-call shifts. Furthermore, when the telephone rang, there was "this level of chatter in the house" that changed everything including the quality of time spent with family (P14).

> […] it doesn't matter physically where he is, when he is on-call he is not with us! There may be […] a slow week and you would find him more present physically as well as in his presence of being with us. But generally, once he's on-call […] there's a disconnect with the family. (P14, as cited in Glasgow, 2019, p. 115)

The inability to switch off for those such as P14's partner was to an extent related to the unpredictable nature of being on-call away from the worksite, particularly when he had to entrust the care of critical patients to others. SOs with distal on-call partners described them as being in a state of "waiting and calculating" which meant the constant checking of messages on their phones and being detached from the rest of the family (P14, as cited in Glasgow, 2019, p. 115).

Concerns about Safety

Safety concerns when called out at night were common among SOs whose partners provided distal call as it was for DMOs. SOs reported feeling anxious when their partners were responding or returning from callouts at unsocial hours. They usually did not sleep until their partners arrived and returned from work safely. For example, P15 (as cited in Glasgow, 2019, p. 116) explained that because his partner was a "female doctor going out at hours":

> It's always a bit nerve-wracking and a lot of messages, you know "Have you reached,

> have you reached, have you reached?" And then you just wait until she calls to say that she's arrived and invariably I would stay up until she comes home. […] and it's not just criminals but it could be a drunken driver or anything at that hour. If she's tired, it could be anything.

Discussion

Comparing the Evaluations of On-Call Doctors

Consistent with the perceptions of on-call workers in the literature, the current findings showed that distal and proximal doctors described their perceptions of their on-call experiences in favourable and unfavourable ways (Imbernon et al., 1993; Smithers, 1995). Furthermore, some assessments were only relevant to a particular category or sub-category of doctors. For example, the dangers of being on-call were a common theme among DMOs, who responded to calls during unsocial hours and within high-crime risk areas, but not among distal hospital doctors and proximal on-call doctors. In a past study, veterinarians in the UK working alone during the on-call period also reported safety concerns associated with traveling to and treating their patients (Irwin et al., 2019). Moreover, in this study, the safety risk seemed to be greater for distal women overall when compared with men. The findings also highlighted the perceived gendered nature of being on-call as a DMO, and therefore its classification as men's work. No research on the evaluation of the on-call experience among DMOs was found in the literature. Nevertheless, the on-call experiences of GPs in past studies (e.g., Cuddy et al., 2001; Rout, 1996) can be used as a point of comparison in the analysis of the experiences of DMOs within the T&T context.

Although both categories of doctors generally described their on-call experiences in similar ways, the underlying meanings they ascribed to these descriptions were different. For example, distal doctors attributed their on-call stress to the anxiety related to the unpredictability of the on-call period; "their lack of confidence in the competency of the proximal or junior doctors on-call with them, and in the case of DMOs, the degree of trauma they were exposed to when called out" (Glasgow, 2019, p. 154). On the contrary, proximal doctors defined the meaning of on-call stress as the intensity of the on-call period which required them to be in multiple places concurrently, time restraints, high patient volumes, poor organizational relationships and on-call facilities, and senior doctors' expectations for them to remain available. While past studies have reported on the impact of being on-call on stress (French et al., 2001; Bamberg et al., 2012), they did not necessarily explore the meaning attached to on-call stress due to the use of quantitative methodologies. Other researchers were more speculative in their claims about the underlying factors of on-call stress since those claims were not evidenced in participants' accounts (Heponiemi et al., 2014; Lindfors et al., 2006). The interpretive nature of the current study, therefore, sheds light on the meanings ascribed to proximal and distal doctors' definitions of on-call stress and how that stress impacted and was impacted by their interactions within their working environments.

Other evaluations were more pronounced in the lives of a particular on-call category relative to the other. For example, the increased clinical exposure that being on proximal call afforded junior doctors featured prominently in their discussions as they explained how it trained them for their current jobs while preparing them for future roles as senior doctors. Previous researchers also found that medical students and doctors on proximal call rated their experiences positively primarily because of the derived educational value (Callaghan et al., 2005; Corriere et al., 2013).

Proximal doctors, particularly those in surgical specialties, also spoke more about feeling fatigued because of their constant physical exposure to work when compared with distal doctors. This was in line with past evidence which showed that reported fatigue among junior doctors and medical students on proximal call was related to the frequency and length of their on-call duties (Balch et al., 2010; Corriere et al., 2013; Heponiemi et al., 2014; Tucker et al., 2010). However, those studies lacked a theoretical perspective, unlike the current study which was framed within the context of the E-R model.

The model assumes that prolonged exposure to physical work demands such as the situation that exists when doctors provide proximal call, restricts recovery because the individual's psychobiological systems remain activated. In addition, proximal doctors' on-call shifts usually preceded or immediately followed their regular shifts, which meant that their energy resources were already often depleted at the start of the on-call period and therefore they had to invest "compensatory effort" to meet their on-call work demands, resulting in an even greater need for recovery post-call (Geurts & Sonnentag, 2006, p. 483). The E-R model thus, explains how proximal on-call doctors might have arrived at their perceptions of their on-call experiences as tiring and in so doing provides a framework within which to understand these perceptions.

While feelings of fatigue were less emphasized in the accounts of the distal doctors, results showed that consistent with previous evidence, this group was specifically tired when mentally confronted with work demands during inactive on-call periods, which made it difficult to psychologically detach from work (Bamberg et al., 2012; Imbernon et al., 1993; Smithers, 1995). As was discussed in the introduction of this paper, the mental preoccupation associated with waiting to be called out places demands on the same resources used for work similar to prolonged physical exposure to work demands (Sonnentag, 2001; Sonnentag & Bayer, 2005).

Therefore, consistent with the E-R model, not only does physical exposure to work demands restrict recovery, but mental exposure due to a lack of psychological detachment (Sonnentag, 2001; Sonnentag & Bayer, 2005). These results were consistent with past studies conducted with distal on-call participants who reported feelings of fatigue and a need for recovery due to their negative preoccupation with being called out to work during the inactive on-call period. (Smithers, 1995).

Furthermore, the lack of psychological detachment because of negative rumination about work

extended beyond the on-call period for both categories of doctors. Evidence in the literature has only emphasized the lack of detachment among distal workers during the inactive on-call period. However, current evidence revealed that the lack of detachment among distal doctors was experienced even when off-call and on vacation. Meanwhile, proximal on-call doctors found it difficult to detach from work post-call due to the constant presence of work contributed in part by the expectation that they remained available to their seniors. The difficulties associated with detaching beyond the on-call period support the argument that effort recovery should be conceptualized as a dynamic process or, in other words, a process about which we are uncertain as to when it starts and stops (Zijlstra et al., 2014) - a limitation of the E-R model. The implications are that an accumulation of negative load effects due to prolonged exposure to work demands can lead to longer-term difficulties for the health and well-being of on-call doctors.

SOs' Evaluations of On-Call

SOs in the current study generally perceived that their partners' on-call working arrangements no longer posed an issue for them, despite the distractions they caused and the concerns they had regarding their partners' safety. This is because they had grown accustomed to it over time. However, only women SOs reported feeling lonely at some point when their partners were on-call. Having grown children was perceived to be a double-edged sword because while it mitigated mothers' experiences when their partners were on-call because of the reduction in their caregiving responsibilities, it also meant that they experienced loneliness when the children left the house. More considerable gendered differences were recognized elsewhere in terms of what being on-call meant for the SOs' family and social lives (Glasgow, 2019).

Conclusion and Limitations

While overall the ambivalent perceptions of the on-call experience as recounted by doctors and SOs were consistent with previous research, the current study emphasized the nuances between proximal and distal on-call systems and in-group distinctions among distal on-call doctors' experiences. Moreover, past studies have been largely silent about a theoretical model within which to frame evaluations of the on-call experience. Meijman and Mulder's (1998) E-R theory was used in this study to understand how both distal and proximal on-call doctors arrived at their evaluations of their experiences. A core component of effort recovery is psychological detachment. Discussions in the on-call literature regarding psychological detachment, however, have occurred only in the context of distal on-call systems and have mainly emphasized the lack of detachment experienced during the on-call period. The current findings show that a lack of psychological detachment applies to both the distal and proximal on-call experiences. Additionally, challenges mentally withdrawing from work occur beyond the on-call period for both proximal and distal doctors, suggesting longer-term impacts on health and well-being. Finally, the experiences of those who live with on-call doctors, that is, their SOs, provided a more holistic view of the on-call experience. However, the findings were not without limitations.

The aggregated realities of the distal doctors presented here might have been mostly reflective of the realities of the DMOs and not necessarily the experiences of the distal hospital doctors since the distal on-call sample was mainly composed of the former. Therefore, it is unclear if the recruitment of a greater number of distal hospital doctors might have magnified their lived on-call experiences since the DMOs' experiences were described as less stressful.

Additionally, the study contributed to knowledge about the experience of being on-call by sharing the perspectives of those who live with the on-call doctors. However, future researchers should seek to use dyads or match the SOs to the doctors in their studies since more recent research is needed in this area. Issues regarding access to the SOs of doctors should be negotiated before the inclusion of the doctors in the study perhaps by obtaining contact details for their partners as a requirement for them [the doctors] to participate in the research. Nevertheless, "the study offered rich insights into the multi-faceted nature of the on-call experience that was often hidden behind the statistical approaches of past research" (Glasgow, 2019, p. 180).

Recommendations

The requirement to be on-call, especially in one's early medical career, is an enduring component of the profession, and therefore, appropriate strategies should be developed to improve what on-call doctors and SOs characterize as the positive aspects of the on-call experience and to minimize the negative. While individual doctors can assume some degree of responsibility for their health and well-being, organizational interventions which consider the needs within, and across on-call situations or categories, are warranted.

For instance, on-call rosters could be developed in such a manner as to facilitate lengthier recovery periods between on-call shifts or between on-call and regular shifts to alleviate the fatigue experienced among proximal on-call doctors. This is in keeping with the process by which prolonged exposure to work demands impacts recovery from work as per the E-R theory. Supervisors of medical staff would need to be trained in effectively rostering/scheduling their staff, considering the potential long-term effects of the accumulation of negative load reactions from insufficient recovery on employee health and well-being. This recommendation can address claims about the current, untenable on-call rostering of senior doctors locally (Dowlat & Islam, 2023). Furthermore, distal on-call policies could involve the recruitment of more registrars to reduce the likelihood that consultants (senior doctors) on-call will be called out. Additionally, the police could be used on a more consistent basis or other members of the protective services to escort at least female DMOs responding to night calls to and from the locations of the emergencies they are called to attend to. DMOs should be encouraged to engage with reputable counseling services given the occupational psychological hazards to which they are exposed in their line of work. Furthermore, these services should be made more accessible. Proximal and distal doctors should also be trained to use individual strategies such

as relaxation and meditation techniques to address the prolonged lack of psychological detachment, experienced outside the on-call period. Based on the assumptions of the E-R theory, psychological rest from work-related thoughts is required to reverse the negative effects of prolonged work exposure and return the functioning systems to baseline levels. In short, organizational strategies should support individual approaches. While some of these recommendations may have been already raised with and by relevant stakeholders, it is hoped that the evidence presented here will be a catalyst for implementation going forward.

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