



Systematic Review of Work-life Balance among Early Career Doctors

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Abstract

Background: Early Career Doctors (ECDs) are medical doctors who are in their internship, postgraduate specialist training and medical/dental officers below the rank of principal medical/dental officers. The long hours of work, staff-shortage and various expectations at this formative stage expose ECDs to potential negative outcomes including poor work-life balance.

Methods: This systematic review included all available original articles on the work-life balance among ECDs world-wide between 2006 and 2020. PubMed, Google Scholar and African Journals Online (AJOL) databases were searched, and the review was performed following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

Results: The literature search yielded 145 articles, and after screening 33 articles were included in this review. Twenty (87.9%) of the studies were cross sectional studies, 5 (15.2%) were prospective cohort studies and 1 (3%) was an interventional study, sample size ranged from 21 to 4,581 ECDs with a mean age range 24-35±7yrs. Positive work-life balance was reported among ECDs in 4.7% Karachi, 21% Ireland, 23% USA, 27% Australia; major determining factors include work-load and burn-out, female gender, specialty and location of practice, flexibility of work schedule; and the impacts are burn-out and reduced career satisfaction.

Interpretation: Work-life balance among ECDs is poor worldwide, and is worse amongst the more junior cadre and female gender. It is recommended that reduction in work hours, improved wages, social and organizational support could improve the quality of work-life balance among ECDs.

Key words: Work-life balance, early career doctors, junior doctors, resident doctors

1. Introduction

Early career doctors (ECDs) are doctors in the

formative periods of their career who provide medical services with or without undergoing a simultaneous regimented training and they account for a significant number of doctors in the health sector worldwide.

In Nigeria, ECDs are a group of professionals that comprises medical and dental interns, medical and dental officers below the rank of principal medical officers or equivalent, and medical doctors and

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dentists who are in postgraduate specialist training or residency training.^{1,2} The terminologies ‘junior doctor’ and ‘resident doctor’ are used for doctors undergoing postgraduate medical training; while the terminology ECD consists of medical officers as well as doctors undergoing postgraduate specialist training.²

Work-life balance is a term commonly used to describe the comfortable state of equilibrium that a working individual needs between time and focus allocated for work and other aspects of life like personal, family and leisure activities. The amount of work hours of ECDs has been a global concern with policies made by some countries to reduce the number of work hours and ensure a period of rest.³ In the United States, the Accreditation Council for Graduate Medical Education in response to the numerous adverse effects long working hours have on her resident doctors made a rule that residents should work 40-80 hours a week depending on specialty rotation.⁴ Despite this, it is said that some still work as much as 136 hours a week because the work of the ECD entails research, paperwork and studying apart from patient care which this official time covers.

Nigeria, on the other hand, does not have specified working hours for the ECDs.⁵ Most ECDs are found in tertiary and some secondary health facilities which are also short-staffed, hence the ECDs are faced with unending work hours.⁶ This makes them susceptible to an array of potential negative results from excessive work hours which include sleep deprivation, anxiety, depression, burnout, addiction and family life imbalance.⁷

Ensuring a work-life balance has been a global challenge for doctors of all cadres especially the ECDs due to the enormous work demand.^{5,8} Attaining a work-life balance is important in creating a healthy working environment. It is a practice that allows employees to have some degree of flexibility and independence to bargain their time and presence in the workplace.⁹ Studies have shown that employees who have achieved work-life balance are less likely to be victims of stress-related illnesses.¹⁰

The impact of a poor work-life dynamics is evident by the reasons dissuading individuals from desiring a career in medicine, prominent among which are the fact that a career in Medicine automatically

entails a work-life imbalance with poor quality of life and that these are neither compensated by adequate financial nor significant social reward.¹³

This systematic review aims to evaluate work-life balance amongst ECDs across the world, the prevalence of ECDs with good or positive work life balance as well as factors affecting/predictors of good work-life balance. These will set the foundation for recommendations to policymakers involved in the work scheduling of early career doctors.

2. Methods

2.1 Selection criteria

The systematic review is part of the series of research undertaken by the Research & Statistics Committee (RSC)/Research Collaboration Network (RCN) of the Nigerian Association of Resident Doctors of Nigeria (NARD) whose aim is to explore various themes among Early Career Doctors (ECDs) in Nigeria.¹¹ It was performed following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.¹²

This systematic review aimed to study all available literature (original articles) on the work-life balance among early career doctors all over the world between 2006 and 2020.

Literature search was done from the following databases: PubMed, Google Scholar, and African Journals Online (AJOL).

The databases were searched using the following terms: work-life balance/work-life wellbeing, early career doctors/junior doctors/young doctors.

Definition of terms:

1. Work life balance
2. ECDs
3. Junior doctors

Inclusion criteria:

Original articles on the work-life balance among early-career doctors published between Jan 2006 and July 2020 searched on PubMed, Google Scholar and 55 African Journals Online (AJOL).

Exclusion criteria:

Articles that studied high level career doctors majorly/only.

Articles that directly studied only Job satisfaction, quality of life, depression or any other job-related psychosocial issues solely. Although outcomes such as Job satisfaction, quality of life, depression could be associated with lack of work-life balance, we excluded studies that directly measured these variables only.

2.2 Search strategy/article selection and abstraction

The articles from the database search were reviewed to tailor it to the inclusion criteria.

The abstracts of the articles that met the inclusion criteria were reviewed for relevant keywords. The abstracts and the full articles for the selected articles were then reviewed, and the information on each of the key areas were summarized. This review was carried out independently by three reviewers, to minimize errors. The summarized data was compiled, reviewed and discussions done.

Search items: Work-life balance, Workplace well-being, junior doctors and early career doctors.

Key words

Work-life balance/interface/well-being

Early career doctors/physicians

Young doctors/physicians

Junior doctors/physician

Newly qualified doctors/physicians

New generation doctors/physicians

PubMED

(((Work-life balance) OR (workplace well-being)) AND (junior doctors)) OR (early career doctors) Filters: Free full text, Journal Article, Humans, English, Female, Dental journals, MEDLINE, Adult: 19+ years Sort by: Publication Date (((("work-life balance"[MeSH Terms] OR ("work life"[All Fields] AND "balance"[All Fields])) OR "work life balance"[All Fields]) OR (("work"[All Fields] AND "life"[All Fields]) AND "balance"[All Fields])) OR "work life balance"[All Fields]) OR (((("workplace"[MeSH Terms] OR "workplace"[All Fields]) OR "workplaces"[All Fields]) OR "workplace s"[All Fields]) AND (((("health"[MeSH Terms] OR "health"[All Fields]) OR "well"[All Fields]) OR "well being"[All Fields]))) AND (("junior"[All Fields] OR "juniors"[All Fields]) AND

((((((((("doctor s"[All Fields] OR "doctoral"[All Fields]) OR "doctorally"[All Fields]) OR "doctorate"[All Fields]) OR "doctorates"[All Fields]) OR "doctoring"[All Fields]) OR "physicians"[MeSH Terms]) OR "physicians"[All Fields]) OR "doctor"[All Fields]) OR "doctors"[All Fields]))) OR ("early"[All Fields] AND ("career"[All Fields] OR "careers"[All Fields]) AND (((((((("doctor s"[All Fields] OR "doctoral"[All Fields]) OR "doctorally"[All Fields]) OR "doctorate"[All Fields]) OR "doctorates"[All Fields]) OR "doctoring"[All Fields]) OR "physicians"[MeSH Terms]) OR "physicians"[All Fields]) OR "doctor"[All Fields]) OR "doctors"[All Fields]))AJOL (((Work-life balance) AND (junior doctors)) OR (early career doctors) OR (workplace well-being)) AND (junior doctors)) OR (early career doctors)

Google scholar

(((Work-life balance) AND (junior doctors)) OR (early career doctors) OR (workplace well-being)) AND (junior doctors)) OR (early career doctors)

AJOL

(((Work-life balance) AND (junior doctors)) OR (early career doctors) OR (workplace well-being)) AND (junior doctors)) OR (early career doctors)

3. Results

3.1 Steps in article selection

Following the searches using the keywords, a total of 145 articles were selected and downloaded for further scrutiny. This was reduced to 54 articles that were related to early career doctors which were selected for in-depth review by the 3 reviewers. Six (6) articles were duplicated, five (5) articles were not related to work life balance, even though they

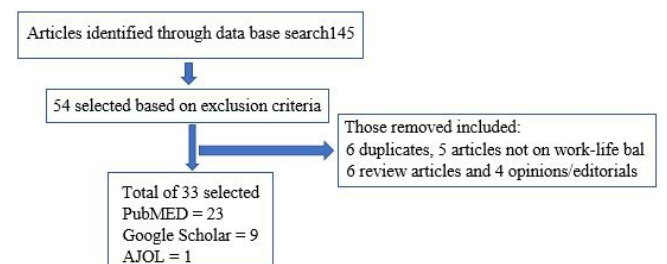


Figure 1: Steps of article selection

evaluated problems with ECDs, 6 articles were review articles and 4 articles were opinion articles or editorials. Thus, a total of 33 articles were finally selected from PubMed (23 articles), Google scholar (9 articles) and AJOL (1 article) for review for this study.

3.2 Demography

A total of 24 (72.7%) of the studies were done in the Americas (13) and Europe (11), other continents with relevant studies were Asia (5), Australia (5) and Africa (1). The United States of America had the largest cohort, 12 (36.4%) of selected studies.

Twenty-nine 29 (87.9%) of the studies were cross

sectional studies, 5 (15.2%) were prospective cohort studies and 1 (3%) was an interventional study. The lowest number of doctors studied was 21 and the highest was 4,581.

Mean and median age group reported in studies showed that most junior doctors were in their late twenties and early thirties. Statistics from reported studies shows mean range 24-35 +/-7yrs, median range 29-32yrs, Median age group range 25-35yrs. The articles generally reflected on all genders with bias towards the female gender in some studies. The table below summarised the main findings in these articles.

Table 1: Summary of articles in the literature search

S/N	First author and year / population studied	Study location	Study Population Size	Assessment tool Used	Main findings
1	Buddeberg-Fisher, B 2008 ¹³ / resident doctors	Switzerland	370	Effort-Reward imbalance Scale	One-third of the doctors experienced stress at work caused by an effort-reward imbalance, hence having a negative impact on their health and satisfaction with life.
2	Okoshi, K 2012 ¹⁴ / hospital doctors	Japan	98	Copenhagen Psychosocial Questionnaire	Surgeons experienced satisfaction from teamwork with fellow physicians, opportunities to manage interesting cases and from patient's gratitude.
3	Ogunsemi, OO 2020 ¹⁵ / resident doctors	Southwestern Nigeria	58	Self-administered questionnaire	Mean working hours was 88.7hours/week; 50% reported that their life was stressful; 31% had mental health problems during residency; 29%, 21.6%, 15%, 9.3% and 8.8% required further screening for depression, panic disorder, generalized anxiety, social phobia and agoraphobia respectively.
4	Gander, P 2010 ¹⁶ / junior doctors	New Zealand	1366	Self-administered questionnaire	Fatigue risk scores in the high tertile was an independent risk factor for problems in social life, home life, personal relationship and other commitments. Women were more likely to be at risk of fatigue.
5	Lennon, M 2019 ¹⁷ / junior doctors	Australia	4581	Questionnaire	Rural junior doctors were significantly more satisfied with their work-life balance, ability to obtain desired leave and leave at short notice, personal study time and access to leisure interests compared with metropolitan junior doctors
6	Arora, M 2014 ¹⁸ / Orthopaedic trainees	Australia	51	Self-administered questionnaire	27% were satisfied with their work-life balance. Those who were burned-out were less satisfied with their careers (p=0.004) and work-life balance (p=0.021).
7	Bin Dahmash, A 2020 ¹⁹ / radiology residents	Saudi Arabia	108	Maslach Burnout Inventory – Human Services Survey	The significant predictors of burnout included satisfaction with work/life balance and exercising. The residents who were satisfied with their work/life balance had lower burnout rates, in addition to lower emotional exhaustion and higher sense of personal accomplishment.

Table 1: Summary of articles in the literature search (continues)

8	Levin, KH 2017 ²⁰ / neurology residents	United States of America	354	Maslach Burnout Inventory – Human Services Survey	23% indicated that their work schedule left enough time for personal/family life. Greater satisfaction with work-life balance, meaning in work and older age were associated with lower risk of burnout.
9	Lorio-Morin, C 2017 ²¹ / neurosurgery residents	Canada	76	Self-administered questionnaire	Work-life balance was the only tested domain in which significant dissatisfaction was identified in 17%. The overall quality of life was high for 33%. The workload was deemed too much by 41% of respondents.
10	Hayes, B 2019 ²² / hospital doctors	Ireland	1749	Effort-Reward- Imbalance scale and Maslach - Burnout Inventory	Over half (59.7%) reported work-life balance, 82% experienced workplace stress with effort greatly exceeding reward, exacerbated by over- commitment.
11	Starmer, A 2016 ²³ / Early career paediatricians	United States of America	840	Questionnaire	Good work-life balance was found to be associated with excellent or very good self- reported health, meeting federal exercise recommendations, personal support from physician colleagues, adequate resources for patient care, and perceived autonomy in clinical decision-making. Female gender, lower amounts of sleep, chaotic work settings, and working >50 hours per week were factors associated with a lower perceived work-life balance.
12	Starmer, A 2019 ²⁴ / Early career paediatrician	United States of America	1293	Self-administered questionnaire	Few women and men reported being very successful at achieving balance between their job and other life areas (15% vs. 19%, respectively; P = .05). Strategies to increase work-life balance included reducing work hours, outsourcing household-related work, and adjustments to personal responsibilities and relationships.
13	Markwell, AL 2009 ²⁵ / Junior doctors	Australia and New Zealand	914	Professional Quality of Life (ProQOL) scale	Over half (54%) reported their workload had been excessive; majority of respondents (59%) reported spending time with family or friends as their main coping strategy for work-related stress. 76% worked 41–60 hours per week.
14	Robertson, SL 2017 ²⁶ / Primary care residents and teaching physicians	United States of America	585	Self-administered questionnaire	More than half (53%) of respondents indicated that they were dissatisfied or very dissatisfied with their work-life balance. Physicians spent average of 5-7 hours on the Electronic Health Records during outside-of work hours per week (maximum 18-30 outside work hours per week). A total of 85% of respondents indicated that the Electronic Health Records affected their work-life balance.
15	Williamson, K 2018 ²⁷ / Emergency medicine residents	United States of America	261	Maslach Burnout Inventory, Visual analogue scales (VASs), Primary Care Evaluation of Mental Disorders Patient Health Questionnaire 2 (PRIME-MD PHQ-2)	Among respondents, 136 (52%) reported a positive work-life balance. Those who reported a negative work-life balance scored higher on emotional exhaustion and depersonalization). Work-life balance ratings were not significantly associated with personal accomplishment.

Table 1: Summary of articles in the literature search (continues)

16	Brown, M 2010 ⁵ / Junior doctors	United Kingdom	34	Audio recording of in-depth interview or focus group discussion	Doctors experienced difficulty maintaining a balance between the desire for a successful medical career and their home-life commitments. Personal needs were frequently pushed aside in favour of professional commitments.
17	Kelly, M 2020 ²⁸ / Pathology residents and fellows	United States	145	Self-administered questionnaire	Overall, the majority of residents (62.4%) rated their work-life balance as poor or fair. Among the factors contributing to job stress and burnout and detracting from work-life balance, workload was the leading factor. Most of the respondents who seldom or never engaged in hobbies, recreational activities, or personal interests outside of their role as a resident activities tended to rate their work-life balance as poor or fair.
18	Mahmood, S 2015 ²⁹ / Resident physician	United States of America	219	Profession – Family Questionnaire	An overwhelming majority of trainees believed they were neglecting their hobbies (97.0%), social life (97.5%), and family (91.0%) because of work. Hospital based specialty residents (Pathology, Radiology and Anaesthesiology) had higher work-life balance satisfaction as compared with surgical specialties (General Surgery, Orthopaedic Surgery, Urology, Otorhinolaryngology, Neurosurgery and OB/GYN).
19	Khalid, A 2018 ³⁰ / Postgraduate trainee doctors	Pakistan	335	Self-administered questionnaire	Job related factors like supervisor support, organizational support and job value were positively associated with doctor's work-life balance. Support had the most significant impact on work-life balance.
20	Pitre, C 2017 ³¹ / Trainees and junior faculty	United States of America	50	Interactive workshop model	The majority of surveyed junior faculty agreed or strongly agreed that the program increased their knowledge about how to create better work-life integration.
21	O'Neil, MB 2011 ³² / Specialist paediatric trainees	Ireland	53	Mixed model questionnaire	The number of Specialist Registrars (SPRs) citing positive skewed Likert score for satisfaction with work /life balance was 11(21%), with 26(49.1%) experiencing significant compromise of both personal and family lives which is reflective of the tension that occurs between the training process and the trainee's home life. This cost was very acceptable for only 8 (15.1%) of SPRs.
22	Keeton, K 2007 ³³ / physicians	United States of America	935	Self-administered questionnaire and Maslach-Burnout Inventory	The strongest predictors of work-life balance were having some control over schedule and hours worked followed by total weekly hours worked. Being a general surgeon was significantly associated with lower ratings of work-life balance as compared with being an internist. Being older and having fewer children at home were significant but weak predictors of work-life balance.
23	Fisher, J 2015 ³⁴ / Junior doctors and medical registrars	United Kingdom	21	Focused group discussion	Participants described that medical registrars were negative about their job, with high levels of stress, often compounded by poor work/life balance.

Table 1: Summary of articles in the literature search (continues)

24	Sagalowsky, ST 2018 ³⁵ / paediatric residents	New England	203	Maslach Burnout Inventory, Relationship Assessment Scale (relationship satisfaction), Single-item linear analogue self-assessment	Perceived work-life conflict and dissatisfaction with resident life were strongly associated with burnout. Many partnered residents (55.5%) felt frequent conflicts between their personal and professional lives. However, only 13.5% felt that the personal sacrifices they made during residency training were not worthwhile. Approximately half (51.5 %) were satisfied with life as a resident.
25	Buddeberg-Fischer, B 2008 ³⁶ / Family physicians	Switzerland	543	Sense of Coherence Scale, SOC-1, German Extended Personal Attributes Questionnaire (GE-PAQ,) (gender role Orientation), The Expressiveness (PAQ-E) scale, Career Motivation Questionnaire, CMQ, Occupational Self-Efficacy Expectation Questionnaire, Life Goals Questionnaire, Work-family model	These results suggest that family physicians like their jobs but family, friends, leisure activities are equally important to them. Our study results also indicate that future family physicians are less career-oriented, i.e. show lower extrinsic career orientation. Some studies indicate that doctors experiencing difficulties in balancing professional and private life are at higher risk of developing burnout symptoms.
26	Tucker, P 2013 ³⁷ / Resident doctors	Sweden	1534	Self-administered questionnaire	Higher frequency of weekend working was associated with greater difficulties combining work & family. A lack of completely free weekends was also associated with higher stress. Having more completely free weekends predicted better work ability and less work-family interference. Having influence over work hours was a strong positive predictor of five of the six outcomes relating to wellbeing, with exception of work ability. Longer unpaid weekly work hours were associated with greater burnout, higher stress, worse ratings of fatigue after work, and greater difficulty combining work and family.
27	Buddeberg-Fischer, B 2006 ³⁸ / Resident doctors	Switzerland	567	Self-administered questionnaire	The medical profession is characterized by high workload, time pressure and emotional stress. It entails a work-life imbalance with limited quality of life. Medicine is rewarded neither by adequate income nor by social acknowledgement. Residents complain mainly of deteriorating structural working conditions, including an unfavourable work-life balance.
28	Rosta, J 2014 ³⁹ / Post-graduate medical trainee	Norway	1300-1600	Self-administered questionnaire	The average weekly working hours and the proportion with suboptimal work-home balance did not change significantly among Norwegian junior and senior doctors from 1994 to 2012.

Table 1: Summary of articles in the literature search (continues)

29	Sivey, P 2010 ⁴⁰ / Junior doctors	United States of America	532	Self-administered questionnaire	This study shows that a range of work-life and intrinsic job attributes influence choice of specialty for junior doctors. Doctors would be prepared to sacrifice 20 to 25% of their annual income for improvements in control over working hours and opportunities to do procedural work. The most highly valued attribute is time spent On-Call, where avoiding being on call every other day had a valuation nearly twice as high as any other attribute (approximately 50% of annual income).
30	Dodelzon, K 2020 ⁴¹ / Resident parents	United States of America	12-36	Focused group discussions and interviews	Four major challenges were reported by our resident parents in navigating their new work-life balance. These included: time management, not knowing where to turn with questions about new life challenges, not feeling connected to their peers, and financial strain.
31	Khan, SA 2020 ⁴² / Medical residents	Karachi	275	Self-administered questionnaire	Thirteen 13(4.7%) participants thought they had work-life balance; 165(60%) felt their job had negatively affected their private lives; 118(42.9%) felt worn out; 109(39.6%) expressed moderate dissatisfaction with work-related factors; 119(43.3%) were dissatisfied with life outside work; and 93(33.8%) were dissatisfied their health. The most commonly suggested measures for work life balance included improvement in the pay scale (86.5%), reduction in work hours (83.3%), availability of monitoring by the Department of Postgraduate Medical Education (PGME) (61.8%) and the need for a friendly faculty (61.5%)
32	Somsila, N 2015 ⁴³ / resident doctors	Thailand	256	Thai version work-related quality of life scale-2 (WRQOL)	Residents working with less than 80 hours/week had a higher work-related quality of life. Analysis showed the trend that working less than eight shifts/month and working less than 80 hours/week had the potential association with good quality of work-life.
33	Rich, A 2016 ⁴⁴ / Resident doctors	United Kingdom	137	Focused group discussions and interviews	Work-life imbalance was particularly severe for those with children and especially women who faced a lack of less-than-full-time positions and discriminatory attitudes. Female trainees frequently talked about having to choose a specialty they felt was more conducive to a work-life balance such as General Practice. Lack of work-life balance did not just result from work taking up a lot of time, but also from its stressful and difficult nature.

4. Discussion

4.1 Prevalence of work-life balance among junior doctors/early career doctors

In a focused group and interview study on junior doctors in Wales, it was noted that doctors had difficulty maintaining a balance between the desire for a successful medical career and their home-life commitments. Personal needs were frequently pushed aside in favour of professional commitments.⁵ One third of the doctors experienced stress at work, caused by an effort-reward imbalance. This had a negative impact on their health and satisfaction with life.¹³

Ogunsemi et al. in southwestern Nigeria reported that half (50%) reported that their life was stressful;

and about two out of every five residents were not satisfied with their general life well-being

When prompted to write comments about the relationship between work characteristics and their life, 76% of comments by junior doctors in training positions in New Zealand were about the negative effects of work patterns on life away from work (e.g. difficulty in being able to commit to regular activities away from work, being too tired to maintain activities away from work, the disruptive nature of shift work for life outside work, social isolation, having insufficient time to spend with partners, children, or family, and particular problems resulting from having to both work and study).¹⁶

Only 27% of respondents in another study in Australia were satisfied with their work-life balance¹⁸ which is similar to findings among junior doctors in various specialties in the United States with majority believing they were neglecting their hobbies, social life and family because of work.^{20,26-29,31}

In a study amongst Canadian neurosurgery residents, 17% of the residents were significantly dissatisfied with their work-life while about a half of respondents reported average satisfaction with work-life balance.²¹

Hayes et al. noted that only one in five of the doctors studied in Ireland felt that they had good work life balance. Amongst those with poor work life balance, those undergoing Basic Specialist Training (equivalent of residency training in North America) were most affected.²²

Starmer et al. in a survey of cohorts of paediatric early career doctors in the United States, observed that two out of every five pediatricians reported appropriate work-life balance.²³

The number of Specialist Registrars (SPRs) in Ireland citing positive skewed Likert score for satisfaction with work /life balance was 11(21%), with 26(49.1%) experiencing significant compromise of both personal and family lives which is reflective of the tension that occurs between the training process and the trainee's home life. This cost was very acceptable for only 8 (15.1%) of SPRS.³²

In a qualitative review by Fisher et al. of perspectives on medical junior doctors in Newcastle, participants described that medical registrars were negative about their job, with high levels of stress, often compounded by poor work/life balance.³⁴ Only 4.7% participants thought they had work-life balance and 60% felt their job had negatively affected their private lives.⁴²

4.2 Major factors determining work life balance

Workload and burnout

More than half of the orthopaedic trainees were considered burned-out and those who burned-out were less satisfied with their careers and work-life balance.¹⁸

Burnout was found as an important predictor of work/life balance, as the radiology residents who were satisfied with their work/life balance had

lower burnout rates.¹⁹ Greater satisfaction with work-life balance were associated with lower risk of burnout.²⁰

A dose-dependent relationship between the fatigue risk scores and problems with social life, problems with home life, problems with personal relationships and problems with other commitments were observed by Gander et al. in a study of junior doctors in training positions in New Zealand.¹⁶

Gander et al. observed that average fatigue stress scores among junior doctors in training positions [7.6 (women) or 7.8 (men)] were significant with attendant negative effects on work life balance.¹⁶

In a study of randomly selected doctors that evaluated both junior doctors and fellows, three-fifths of the doctors reported poor work-life balance, 82% experienced workplace stress, with effort greatly exceeding reward. This was significantly more prevalent among the junior doctors.²²

Chaotic work settings, and working >50 hours per week, and lower amounts of sleep were factors associated with a lower perceived work-life balance.²³ Amongst emergency medicine residents, those who reported a negative work-life balance scored higher on emotional exhaustion and depersonalization on MBI scales.²⁷

Among the factors contributing to job stress and burnout and detracting from work-life balance, workload was the leading factor. A higher percentage of residents and fellows reported poor or fair work-life balance among the respondents currently experiencing burnout than among the respondents who were not experiencing burnout.²⁸

Perceived work-life conflict and dissatisfaction with resident life were strongly associated with burnout.³⁵ Some studies indicate that doctors experiencing difficulties in balancing professional and private life are at higher risk of developing burnout symptoms.³⁶

It is worthy of note that the lack of work-life balance did not just result from work taking up a lot of time, but also from its stressful and difficult nature.⁴⁴

Gender and work-life balance

Among the most important findings in this study is that gender is a key factor associated with work-life balance. Among the participants who reported more than one challenge mitigating against work-life

balance, females (2.1) reported more challenges compared to male (1.8) participants.²⁴ Similar finding was observed by Starmer et al.²³

Women neglected social life and family life because of work more often than men (29). This was reinforced by findings that showed that female paediatricians were noted to spend more time on household responsibilities than male paediatricians.²⁴

Furthermore, female trainees frequently talked about having to choose a specialty they felt was more conducive to a work–life balance such as General Practice.⁴⁴

Speciality and location of practice

Hospital based specialty residents (Pathology, Radiology and Anaesthesiology) had higher work–life balance satisfaction as compared with surgical specialties (General Surgery, Orthopaedic Surgery, Urology, Otorhinolaryngology, Neurosurgery and OB/GYN).²⁹ Similarly it was found that being a general surgeon is significantly associated with lower ratings of work–life balance as compared with being an internist.³³

In a nationwide study in Australia, rural junior doctors were significantly more satisfied with their work-life balance because of their ability to obtain desired leave and leave at short notice, personal study time and access to leisure interests compared with metropolitan junior doctors.¹⁷ Rural junior doctors were more likely to be positive about the balance between personal and professional commitments, taking time off, having sufficient study time, predictability of working hours and easy access to leisure activities.¹⁷

Flexibility of work schedule

The strongest predictors of work–life balance are having some control over schedule and hours worked followed by total weekly hours worked.³³

In the analyses of weekend working, higher frequency of weekend working was associated with greater difficulties combining work and family. Having more completely free weekends predicted better work ability and less work-family interference.³⁷

The results suggest doctors would be prepared to sacrifice substantial proportions of their annual income (20 to 25%) for improvements in control

over working hours and opportunities to do procedural work.⁴⁰

Education about work-life balance

Residents who had received prior education regarding work–life balance were more satisfied than those without such education.²⁹ Pitre et al. in evaluating findings at a workshop for resident doctors and junior physicians found that the target audience was generally not familiar with this skill set and that significant knowledge about work-life integration was gained.³¹

This suggests that an important educational gap exists and that early career physicians may have lacked important skills to successfully negotiate conflicting boundaries between work and life domains. This findings are in congruent with existing literature suggesting that early career physicians report the lowest rate of career satisfaction and the highest frequency of work-life conflicts.³¹

Job satisfaction and work-life balance

Lorio-Morin et al. noted that though the workload was deemed too much by 41% of neurosurgery residents surveyed and only a third had a high overall quality of life; respondents were generally satisfied with their choice of job, the work they do and the environment in which they work.²¹ Work-life balance ratings were not significantly associated with personal accomplishment.²⁷ This national physician survey suggests that physicians can struggle with work–life balance yet remain highly satisfied with their career.³³

Other factors

Poorly designed shift rotas can have negative impacts on junior doctors' professional performance and educational training, with implications for clinical practice, patient care and the welfare of junior doctors.⁵

4.4 Impact of work-life balance

Lack of work–life balance and lack of meaning in work were associated with reduced career satisfaction and increased risk of burnout.²⁰ It is the antisocial aspect which is probably tiring.⁵

Trainees felt they had to prioritise work over home life to cope with a difficult job while also

completing their training requirements; and frequent transitions at work and home could disrupt personal relationships. This caused stress which impacted on learning and deprived trainees of support to cope with work difficulties. Trainees felt they lacked time to cope with personal pressures outside of work which they perceived as significantly affecting their learning and performance.⁴⁴

4.5 Coping strategies and recommendations

Respondents who rated their work-life balance as good or excellent shared strategies that they use to promote it. One of the most common types of strategies involved compartmentalizing work and/or extracurricular activities, such as designating or carving out specific times for activities and "leaving work at work." Specific types of activities were also common, including exercise, watching movies or videos, cooking, crafts, and other hobbies.²⁸

Social support via friends and/or family was also common among the respondents who had good or excellent work-life balance. By contrast, most of the respondents who seldom or never engaged in hobbies, recreational activities, or personal interests outside of their role as a resident tended to rate their work-life balance as poor or fair.²⁸

Correlation and regression analysis showed that the job-related factors like supervisor support, organizational support and job value were positively associated with doctor's work-life balance. Support had the most significant impact on work-life balance.^{30,39}

The participants were asked what model of workload distribution between mother and father they will adopt if they intend to have or already have children. Most female respondents prioritized a combination of work and family obligations in terms of both parents working part-time.³⁶

Four major challenges were reported by resident parents in navigating their new work-life balance. These included: time management, not knowing where to turn with questions about new life challenges, not feeling connected to their peers, and financial strain.⁴¹

Residents' suggestions on means of improving work-life balance were mostly: increments in pay scale, reduction in work hours, availability of

monitoring by the Department of Postgraduate Medical Education (PGME) and the need for a friendly faculty.⁴²

Analysis showed the trend that working less than eight shifts/month and working less than 80 hours/week had the potential association with good quality of work-life (QWL).⁴³ Similarly, Metropolitan junior doctors in Australia were able to achieve satisfactory level of work life balance by utilizing the available network of doctors supporting them and the opportunities for family.¹⁷ This could be as a reduction in working hours might lead to increased availability of time for other aspects of life and an improvement in work-life balance. In addition, increased support from colleagues and improved opportunities for family promotes family and life satisfaction and ultimately, an improvement in work-life balance.

Conclusion

Work-life balance among early career doctors is still poor worldwide with 17%, 33%, 50%, 60%, 76% experiencing stress at work or dissatisfied with its negative impacts on their lives in Canada,²¹ Switzerland,¹³ Nigeria,¹³ Karachi,⁴² New Zealand¹⁶ respectively. It is worse amongst the more junior cadre and female gender. Limited study has been done amongst the African early career doctors to identify more factors responsible for this work-life imbalance that may be peculiar to them. Prolonged work hours (>40 hours/week), type of specialty, gender of trainee have been identified as factors contribution to work-life imbalance.

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