

MEDIATING ROLE OF PSYCHOLOGICAL GRIT IN THE RELATIONSHIP BETWEEN QUALITY OF WORK-LIFE AND PERCEPTION OF BRAIN DRAIN AMONG MEDICAL DOCTORS IN NORTH CENTRAL NIGERIA.

Susie Nguemo Hembahnguemoembah@gmail.com

Benjamin Osayawe Ehigiebenosang@yahoo.com,

Anyalewa Alan Ajonye, ladyajonye@gmail.com

Tertindi Lordsent Tyokyaa tertindilordsent@gmail.com

Department of Psychology, Benue State University, Makurdi,

Department of Psychology, University of Ibadan, Nigeria.

Abstract

This study investigated the mediating role of psychological grit in the relationship between quality of work life and perception of brain drain among medical doctors in North Central Nigeria. The cross-sectional research method was used. Participants were 371 medical doctors aged 23 – 66 years old who had spent between 1 year to 37 years as medical doctors. They were 192(51.8%) males and 177(47.7%) females and 2(0.5%) who did not indicate their gender. Data were collected using the Perception of Brain Drain Questionnaire (PBDQ); the adapted Walton Quality of Life Scale, and the Grit Scale by Duckworth (2007). Results of regression and simple mediation analyses showed quality of work-life as a significant predictor of perception of brain drain among medical doctors in North-central Nigeria, with safety and health issues in the workplace, social integration and political instability significantly increasing brain drain while other components of quality of work-life, including fair and adequate compensation, and opportunity to use and develop human capacity, significantly reduce perception of brain drain among medical doctors. While findings further indicate that psychological grit (passion and perseverance) significantly lowers perception of brain drain, it was not found to be a significant mediator in the relationship between quality of work-life and perception of brain drain whereby quality of work-life dimensions, especially issues of safety, health, and political instability, increases positive perception of brain drain with or without psychological grit. Based on the findings, it was recommended that, apart from improving the quality of work-life of the medical doctors through fair and adequate compensation, psychologists should be involved in the selection of candidates into medical training institutions to select candidates who have passion for the job in addition to competence.

Keywords: Grit, Quality of work-life, Perception of Brain drain, Medical Doctors, North Central Nigeria.

Introduction

Brain drain also known in Industrial and Organisational Psychology as human

capital flight is the migration of highly skilled

professionals from their country of origin to

other countries in search of better

opportunities (Etuk et al., 2023). The cause of brain drain in the health sector has been of interest to various authors who have seen a need to stem this rising tide (Akinyemiet al., 2022). According to the World Health Organisation (WHO, 2016), there is a shortage of about 4.3 million health care workers, of this figure, sub-Saharan African countries are most affected being that they have 3% of the world's health workers but bear 24% of the global disease burden (Etuk et al., 2023). The figures for Africa show that about 16 million people left the continent, with the majority of them being health workers (Chimenya & Qi, 2015). This has left a total of 145,000 doctors to serve a population of 821 million people, according to the WHO Report 2012 (Jenkins et al., 2017).

Medical brain drain has been a huge challenge faced by the Nigerian Government, as a report by the head of the Nigerian Medical Association (NMA, 2022) states that 9 in 10 doctors (88%) are seeking to leave the country for work opportunities abroad. A report by Adebayo et al. (2021) stated that 57.4% of resident doctors in tertiary hospitals in southwest Nigeria had intentions to emigrate, and 34.8% had made various attempts at emigrating. From 2010-2016, an average of 600 General Practitioners emigrated annually from Nigeria, and nearly 50% of the emigration was to Europe, North America, and other African countries (Onah et al., 2022). This migration of healthcare

workers, also known as the medical brain drain, jeopardizes efforts to strengthen the healthcare systems in their home country (Imafidon, 2018). This phenomenon has given rise to interest from various scholars who have tried to understand and explain the concept of brain drain due to its debilitating effects.

The incidence of brain drain among medical doctors in Nigeria is critically high and increasingly worrisome (Lawal, 2022). This is so because of the shortages the health sector is left with, especially that of doctors. According to the president of the Nigeria Medical Association (NMA), in 2019, there was a total of 71,740 doctors trained in Nigeria, of which only 27,000 are currently practicing in the country (Etuk et al., 2023). Going by this statistic, only 31.7% are remaining, while 62.4% are scattered all over the globe. This goes to show that a high number of medical doctors would rather leave than stay back to practice in Nigeria, hence the need to understand their perception of the subject matter.

Perception of brain drain is a concept that refers to the feelings of individuals toward brain drain. It focuses on the subjective view of the trend now popularly referred to in Nigeria as "japa," which in the Yoruba language means to "flee or take flight". This perception could be either positive or negative. While many doctors have seen the need to leave the country in search of better

opportunities, others have remained in hopes that factors accounting for the mass migration will continue to improve (Ogaboh, 2020).

Positive perception of brain drain is a relatively new view of brain drain from the positive consequences such as financial gain, training opportunities, and growth that comes about from migration (Jaloweiki&Gozelak, 2004). It aligns with the internationalist thought which views brain drain as being beneficial both to the individual and their country of origin as opposed to the nationalist school of thought (Aliyu, 2005). The premise of the positive perception of brain drain is in the long-term effect resulting from the return of emigrated professionals back to their source countries (Borta, 2007). Another thought in support of the positive perception of brain drain is that there is financial gain made from foreign remittances made from emigrated people. These remittances particularly in Africa provide capital and is reintegrated back into the economy of the host country (Adarkwa, 2015). Nigeria is among the countries in the world with the highest rate recorded of foreign remittances for Africa, which aligns with the argument that the Government still gets return of investment indirectly (Adeloye et al., 2017). In 2018 alone, Nigeria received about 25 billion dollars from people in the diaspora, which is about 6.2% of the country's GDP. This translates to 83% of the Federal Government budget and over 7 times the

amount received through foreign aid of about 3.4 billion dollars (Okorafor, 2020).

The negative perception of brain drain is in the “drain”. The traditional view of brain drain looks at the negative effects of brain drain which include under development, missed opportunities, a work force crisis and lower quality of service being experienced by the source countries (Hunger, 2002). According to Wong and Yong (1999), brain drain does not only affect the growth rate of a developing country, but it also has a negative impact on infrastructure, education, and income distribution. They argue that if the main driver of an economy's growth is human capital accumulation and intergenerational externality, then brain drain must necessarily hurt the rate of the economy. The overall cost of brain drain to the source countries is a big source of concern whereby countries train their nationals only to lose them to other more advanced countries thereby making financial losses (Docquier, 2006). Nigeria loses about 1.8 million dollars in training one medical doctor to brain drain because of the highly subsidized cost of training doctors who then seek to emigrate almost immediately after completing school (Docquier, 2006). Consequently, the negative effect of brain drain includes shortages of medical doctors which has increased the gap in access to health care. The ratio of doctors to patient in Nigeria currently stands at 1: 10,000 as against the WHO recommended 1:600 ratio. This invariably affects the quality of work

life of doctors practising in the country.

The term 'Quality of Work Life (QWL)' is purported to have originated from an International Labour Relations conference in 1972 at Arden House, Columbia University, New York (Davis & Cherns, 1975). Quality of Work-life research is a large body of interdisciplinary scholarship that considers how people experience, navigate, and negotiate different roles, commitments, and boundaries within and across life domains-often to improve individual, organizational, and social well-being and success. Quality of Work-life (QWL) is also said to differ from job satisfaction (Champoux, 1981; Davis & Cherns, 1975; Hackman & Suttle, 1977; Kabanoff, 1980; Kahn, 1981) but QWL is thought to lead to job satisfaction. QWL refers to the impact of the workplace on satisfaction in work life (job satisfaction), satisfaction in non-work life domains, and satisfaction with overall life (Sirgy et al., 2001).

Good Quality of work life (QWL) which implies better living conditions, standard wages, and improved working conditions is one factor that accounts for why doctors emigrate, this is because they crave better living conditions and wages that are unattainable in Nigeria (Osigbesan, 2021). Quality of work-life is living life to the fullest, it encompasses all that an employee needs from their working life. It is a multifaceted variable that refers to the

feelings of a worker concerning various aspects of the job such as salary, work environment, and promotional opportunities amongst others (Najundeswaraswamy & Swamy, 2013). The inability for a nation to provide the necessary QWL for medical doctors leads to their need for emigration. One concept that can be used to understand why some medical doctors overcome challenges despite unpleasant experiences and low quality of work-life is psychological grit.

Psychological grit is the passion and perseverance to stick to a course of action till the goal is achieved. This concept was coined by Angela Duckworth in 2007 to account for an individual's ability to overcome in the face of challenges against all odds. While passion is the "why", perseverance is the "how" to achieve said setbacks. Duckworth used grit to study medical students as well as other professionals in a bid to understand how they overcame challenges of medical school and found that grittier individuals had more achievement than those who were less gritty.

Grit has been presented as a higher-order personality trait that is highly predictive of both success and performance and distinct from other traits such as conscientiousness (Crede et al., 2017). The concept being relatively new in the field of Psychology, was first coined by Angela Duckworth and colleagues in 2007. Grit entails working strenuously toward challenges, maintaining

effort and interest over the years despite failure, adversity, and plateaus in progress. Following this definition by Angela Duckworth and colleagues, Wong (2018) further assessed these attributes to include courage, passion, belief, and perseverance. This is because Grit is thought to counterbalance negative work variables such as stress and burn-out, with the grittiest of individuals continuing to persist and progress onward despite being faced with weariness or arduous challenges. Grit is also seen to account for less employee turnover due to the account that grit seems to be the vigor to continue and complete any mission (Bamisile, 2020; Kristinsson et al., 2023).

Grit is used in this research as a mediator in the relationship between QWL and perception of brain drain. The research aims to understand the relationship between quality of work-life and perception of medical doctors regarding brain drain when grit is a mediator.

\

Statement of the problem

The disparity in health care delivery between high-income countries (HIC) and lower-middle-income countries (LMIC) is widening by the day due to the incidence of brain drain. Medical doctors are emigrating daily in search of a better Quality of Work-Life (QWL), and this has left the health sector plagued by a workforce crisis. High-income countries such as the US, with a disease burden of 10%, have 42% of skilled health

workers the world over, as opposed to Africa, which has 25% of the disease burden yet has access to only 3% of skilled health workers the world over (WHO, 2018). This translates to having a doctor-patient ratio in Nigeria of 1:10,000 as against 1:600, which is the WHO requirement. This workforce crisis translates to long wait times and lower quality of care for patients, while medical doctors are burnt out and unable to receive specialised training. This consequently affects doctors quality of work -life which all lead to lowering the overall health status of the citizenry.

Theoretical review

This research focused on the push and pull theory of migration by Lee in 1966. Lee (1966) noted that migration was the movement of people from one point to the other. According to Lee, migration was a permanent or semi-permanent movement of people from one point to the other. In Lee's paper, the factors that prompt migration fall under four headings: (a) factors associated with the area of origin, (b) factors associated with the area of destination, (c) intervening obstacles, and (d) personal factors. His theory was a condensation of earlier migration theory by Ravenstein in 1889. A common thread in the two theories was that migration happened due to certain factors which are considered to be the 'push' and 'pull' factors. The "push factors are those undesirable factors that push people to leave their country of origin to take up residence in another, while the pull factors are those

factors that entice them in the new country to move there in the first place. For medical doctors, research has shown that push factors are undesirable quality of work life characterised by inadequate salaries and work environment, lack of growth opportunities, capacity for training, political instability, and insecurity. The pull factors in other countries continue to be a good quality of work life consisting of a stable and are environment, good salary and compensation package, good education and health care, amongst others. Research using the push-pull theory have also identified some of the factors accounting for the emigration of medical doctors to other countries have been linked to “push” factors such as persistently decreasing quality of work-life, working conditions, increasing insecurity, and political instability, the “pull” factors continue to be better quality of work life and better opportunities (Imefadon, 2018).

Research Questions

- i. To what extent will quality of work life influence the perception of brain drain among Medical Doctors in North Central Nigeria?
- ii. How will Psychological grit influence the perception of brain drain among Medical Doctors in North Central Nigeria?
- iii. What will be the mediating influence of Psychological grit in the relationship between quality of work-life and the perception of brain drain among

medical doctors in North Central Nigeria?

Hypotheses

- i. Quality of work life will significantly influence the perception of brain drain among Medical Doctors in North Central Nigeria.
- ii. Psychological grit will significantly influence the perception of brain drain among Medical Doctors in North Central Nigeria.
- iii. Psychological grit will have a significant mediating influence in the relationship between quality of work-life and the perception of brain drain among medical doctors in North Central Nigeria.

Method

Sampling

The study employed a cross-sectional survey, which allows for the use of questionnaires to collect data from respondents at a one point in time. The variables tested in the study are quality of work life, which is the independent variable, psychological grit, which is the mediator, and Perception of brain drain, which is the dependent variable.

To determine the sample size for the medical doctors, the sample size estimation table for known populations, developed by Krejcie and Morgan (1970), was used. From the Table, the ideal sample size for populations

within the range of 7000 – 7999 is 364. Therefore, the ideal sample size for this study is 364 medical doctors.

Participants

Participants in this study were 371 medical doctors in North-Central Nigeria. Medical doctors include: Ophthalmologists, Gynaecologists, Paediatricians, Oncologists, Cardiologists, Surgeons, Family medicine (general practice), and Dentists. Participants were aged 23 – 66 years old who had spent between 1 year to 37 years in the medical profession. They were 192(51.8%) males and 177(47.7%) females and 2(0.5%) who did not indicate their gender. They comprised of 39(10.5%) house officers, 197(53.1%) medical officers, 86(23.2%) resident doctors, 45(12.1%) consultants and 4(1.1%) who did not indicate their designation. By their place of work, 133(35.8%) were working with teaching hospital, 108(29.1%) were with Federal Medical Center, 62(16.7%) from General Hospital, 42(11.35%) from Private Hospitals and 25(6.7%) from Primary Healthcare Centers.

Instruments

Data were collected using the questionnaire. In addition to the demographic section, the question consisted of three scales namely: the Perception of Brain Drain Questionnaire (PBDQ); the Walton Quality of Work-Life Scale; and the Angela Duckworth Scale. The PBDQ is a 20-item self-developed and validated instrument that asks questions

pertaining to doctor's perception of brain drain, either positive. Reliability analysis showed Cronbach's alpha coefficient of .946. The instrument is scored on a 5 -point rating scale ranging from 1 = strongly disagree to 5=strongly agree with some negatively worded items which are reversed when scoring. The individual scores are then compiled at the end of the items to make up the total score. High scores indicate positive perception of brain drain while low scores indicate negative perception of brain drain.

The 24-item Walton Quality of Work-life Scale measures 8 aspects of quality of work-life including; safety and health, work and total living space, fair and adequate compensation, career opportunities and job security, opportunity to use and develop human capabilities, social integration in the work place, Social relevance of life at work and Constitutionalism. The scale consists of a Likert style of answers ranging from strongly agree, agree, uncertain, disagree and strongly disagree. The reliability analysis for the block of the questionnaire and a Cronbach alpha coefficient of $\alpha = 0.69$ was determined to represent internal consistency (Freitas & Rodrigues, 2005).

The Angela Duckworth Scale is a 12-item scale developed by Angela Duckworth to measure Psychological Grit. The statements were distributed in two factors namely Consistency of Interests and Perseverance of Effort. It is rated on a 5-point Likert scale (1 =

Not like me at all and 5 = Very much like me). The psychometric properties of the scale are that it has an internal consistency of while the validity and reliability is 0.74 And 0.82 respectively.

Procedure

This study was conducted in North-Central Nigeria, geographically located in the middle region of the country. It consists of a total of seven states which are: Benue, Nasarawa, Plateau, Kogi, Niger, Kwara and the FCT. It spans from the Cameroonian border to the border with the Benin Republic. Ethical considerations were taken into account by getting necessary permissions from State Ministries of Health before proceeding to collect data. Ethical forms were also distributed to individual doctors and only those who were interested participated in the study. The validity and reliability of the instruments were tested in a pilot study involving the 32 medical doctors in Nasarawa State, comprising of 13(40.6%) males and 19(59.4%) females, who were drawn from different departments from the Dalhatu Araf Hospital (DASH) Lafia. From the results of the pilot study, the 21-item Perception of Brain Drain Questionnaire yielded a Cronbach's alpha coefficient of .947. Examining the corrected item-total correlation, it was observed that item 8 (PBDQ8) had score of .215 which is below the accepted minimum requirement of .30. Removing this item from the scale would increase the Cronbach's alpha coefficient to

.950. Therefore, item 8 on the scale was dropped, leaving 20 items on the scale which was used in the main study. Also, the Quality of Work Life Scale yielded a Cronbach's alpha coefficient of .940 with all the 23 items having corrected item-total correlations above .30. The 12-item Grit Scale; Relatedly, the Grit Scale yielded a Cronbach's alpha coefficient of .84 with all the items having corrected item-total correlations above .30. Reliability of the 55-item Work Design Questionnaire was also tested and the result showed that the scale initially yielded Cronbach's alpha coefficient of .93 with six items loading below .30. When these items were removed from the analysis, the Cronbach's alpha coefficient became .94 with all the items loading above .30.

The main study employed the use of an online tool called chisquares for the distribution and collection of data.

Data Analysis

Data for this study were analysed using both descriptive and inferential statistics. First of all, a preliminary analysis using frequencies, mean and standard deviations was performed to summarise the demographic characteristics of the respondents. Also, inter-correlations among the study variables were examined. For hypotheses 1 and 2, data were analysed using multiple linear regression, while hypothesis 3 was analysed using mediation analysis.

Results

Table 1.1: Multiple linear regression analysis showing influence of quality of work-life on perception of brain drain among medical doctors in North-central Nigeria.

Predictors	R	R ²	df	F	Sig.	β	t	Sig.
Constant							20.447	.000
Safety & Health						.251	5.723	.000
Work & total living space						-.001	-.013	.990
Fair & adequate Compen.						-.577	-10.829	.000
Career Opport. & Security	.654	.428	7, 348	37.207	.001	.082	1.835	.067
Human capacity Devt.						-.265	-5.453	.000
Social integration						.293	6.216	.000
Political instability						.204	4.126	.000

The results in Table 4.3 showed that there is a significant joint influence of quality of work-life on perception of brain drain among medical doctors in North-central Nigeria $R=.654$, $R^2=.428$, $F(7,348)=37.207$, $p<.01$. Quality of work-life as a whole explained 42.8% of the total variance observed in perception of brain drain among the medical doctors. On the independent basis, the results show that safety and health in workplace ($\beta=.251$, $t=5.723$, $p<.0$) made significant positive contribution to the model, indicating that the more medical doctors are worried and concerned about their safety and health in the workplace, the higher their perception in favour of brain drain. This is similar for social integration ($\beta=.293$, $t=6.216$, $p<.01$) and political instability ($\beta=.204$, $t=4.126$, $p<.01$) which both have made positive independent contributions to the perception of brain drain among the medical doctors. This means the more the medical doctors experience

political instability and social integration, the higher their perception in favour of brain drain.

On the other hand, the results indicate that fair and adequate compensation ($\beta=-.577$, $t=-10.829$, $p<.01$) and, opportunity to use and develop human capacity ($\beta=-.265$, $t=-5.453$, $p<.01$) made significant negative contribution respectively to perception of brain drain among medical doctors in North-Central Nigeria. This means that the more medical doctors feel they enjoy fair and adequate compensation, and have opportunity to use and develop human capacity, the lower their perception of brain drain. However, no significant independent contribution was found for work and total living space ($\beta=-.001$, $t=-.013$, $p>.05$) as well as career opportunity and job security ($\beta=.082$, $t=1.835$, $p>.05$). Based on this result, hypothesis two was confirmed.

Table 2: Multiple linear regression analysis showing influence of psychological grit on perception of brain drain among medical doctors in North-central Nigeria.

Predictors	R	R ²	df	F	Sig.	β	t	Sig.
Constant							15.189	.000
Passion	.367	.135	2, 359	27.944	.001	-.207	-3.691	.000
Perseverance						-.220	-3.920	.000

The results presented in Table 4.4 showed that there is a significant joint influence of psychological grit on perception of brain drain among medical doctors in North-central Nigeria $R=.367$, $R^2=.135$, $F(2,359)=27.944$, $p<.01$. Psychological grit as whole explained 13.5% of the total variance in perception of brain drain among the medical doctors. On the independent contributions of the two components of psychological grit, the results indicate that perseverance ($\beta=-.220$, $t=-3.920$, $p<.0$) made the highest significant negative contribution

to the model, accounting for 22% of the total variance observed in perception of brain drain among the medical doctors. This is followed by passion ($\beta=-.207$, $t=-3.691$, $p<.0$) with significant negative contribution to the model, accounting for 20.7% of the total variance in perception of brain drain among the medical doctors. This means that the more a medical doctor exhibit perseverance and passion, the lesser their perception in favour of brain drain. Based on this result, hypothesis three was confirmed.

Table 3: Andrew Hayes' Mediation analysis showing mediation effect of psychological grit in the relationship between quality of work-life and perception of brain drain among medical doctors in North-Central Nigeria

Type of Effect	β	SE	R ²	df	F	p	LLCI	ULCI
Total effect	.0801	.0389	.0114	1, 369	4.2457	.040	.0037	.1565
Direct effect	.0783	.0391	.0473	3, 367	6.0785	.001	.0015	.1551
Indirect effects								
Passion	.0090	.0071					-.0018	.0261
Perseverance	-.0073	.0061					-.0209	.0024

The results presented in Table 4.7 showed that quality of work-life has significant total effect on perception of brain drain among medical doctors in North-Central Nigeria with the effect psychological grit held constant $R^2=.0114$, $F(1,369)=4.2457$, $p<.05$;

$\beta=.0801$, $SE=.0389$, $LLCI=.0037$, $ULCI=.1565$). The R^2 -value of ($R^2=.0114$) indicates that the model explained 1.14% of the variance in observed in perception of brain drain among the medical doctors. When the two psychological grit components were

included in the second model, quality of work-life still had a significant direct effect on perception of brain drain among medical doctors in North-Central Nigeria $R^2=.0473$, $F(3,367)=6.0785$, $p<.01$; $\beta=-.0783$, $SE=.0391$, $LLCI=.0015$, $ULCI=.1551$). The second model explained 4.73% of the total variance observed in perception of brain drain among the medical doctors. The negative β -value means that the more favourable the quality of work-life, the lower the perception of brain drain. The results however showed no significant indirect effect of quality of work-life on perception of brain drain through psychological grit: passion ($\beta=.0090$, $BootSE=.0071$, $95\%CI(-.0018$ to $.0261)$), perseverance ($\beta=-.0073$, $BootSE=.0061$, $95\%CI(-.0209$ to $.0024)$). Based on this result, hypothesis six was not confirmed.

Discussion

This study found that quality of work-life significantly influenced perception of brain drain among medical doctors in North-central Nigeria, with safety and health in workplace making significant positive contribution to the model, indicating that the more medical doctors are worried and concerned about their safety and health in the workplace, the higher their perception in favour of brain drain. Similarly, social integration and political instability both made positive independent contributions to the perception of brain drain among the medical doctors. This means the more the

medical doctors experience political instability and social integration, the higher their perception in favour of brain drain. Findings also indicate that fair and adequate compensation as well as opportunity to use and develop human capacity made significant negative contribution respectively to perception of brain drain among medical doctors in North-Central Nigeria. This means that the more medical doctors feel they enjoy fair and adequate compensation, and have opportunity to use and develop human capacity, the lower their perception of brain drain (negative perception of brain drain). However, no significant independent contribution was found for work and total living space as well as career opportunity and job security. This finding agrees with Chandar et al. (2015) who found that poor opportunities for career growth and poor quality of life have positive relationships. The finding is also in agreement with Al-Otaibi, (2020) who reported that career advancement and job opportunities impact perception of quality of work-life.

In the second hypothesis it was found that psychological grit had significant influence on perception of brain drain among medical doctors in North-central Nigeria with both perseverance and passion contributing significant negative influence to the model. This implies that medical doctors who have perseverance and passion for their job perceive brain drain negatively and would

not support it. This finding agrees with Jachimowicz et al., (2018) who reported that people with passion prefer to remain committed to the same goals over months and years.

Finally, it was found that there is no significant indirect effect of quality of work-life on perception of brain drain through psychological grit (perseverance and passion). This showed that, with or without psychological grit, quality of work-life is a very important factor in determining perception of brain drain among the medical doctors. This is contrary to Chen et al., (2020) who suggest that grittier individuals are more likely to adopt a strategic mindset towards problem solving, considering alternative approaches that may be more efficient and effective than their first attempts.

Conclusion

Grit is an important component to be possessed by any individual in a bid to overcome challenges. Although grit which is the passion and perseverance is vital in any human pursuit or endeavor, it becomes imperative for the individual to re-assess their choices in the face of conditions which are not ideal such as an inadequate quality of work life. It can thus be concluded from the findings that quality of work-life, especially safety and health issues in workplace, social integration and political instability increase positive perception of brain drain. This

influence is quite strong and occurs irrespective of psychological grit.

Recommendations

This study recommended as follows:

- i. Management of hospitals should ensure fair and adequate compensation, health and safety of the medical doctors in order to stem the tide of brain drain. This is because the study found fair compensation as well as issues relating to health and safety as some of the factors affecting the quality of work-life of the medical doctors.
- ii. The choice of medical profession should be driven by passion and not as a way of earning a good living. This is because it is found in this study that passion as a component of psychological grit is an important factor in reducing brain drain. Medical doctors who have passion for the job would not think of leaving their work for greener pasture irrespective of the work design and quality of work-life. Therefore, right at the point of screening candidates into medical school, psychologists should be involved in the process in order to identify those who are not only competent but also have passion for the job.
- iii. State Government and the Federal Government of the country at large should bring up creative ways to make medical doctors want to stay back after

graduation. The model adopted by the Benue State Government as well as the Plateau Government in providing incentives for young doctors is a welcome development. Also, the re-appointment of specialists who have retired but are still active is one way of training the younger medical doctors.

References

- Adarkwa, M. A. (2015). Impact of remittances on Economic Growth: Evidence from selected west African Countries. *African Human Mobility Review(AHMR)*, 11(2), 1-11.
- Adebayo, A. & Akinyemi, O.O. (2021). “What are you really doing in this country?” Emigration intentions of Nigerian doctors and their policy implications for human resource for health management. *Journal of International Migration and Integration*, 23, 1377–1396
- AdeloyeD., David, R.A., Olaogun, A.A., &Auta, A. (2017) Health Workforce and Governance: The Crisis in Nigeria. *Human Resources for Health*, 15, 32.
- AkinyemiT.O., Lawani, O.O., Adewole, A.A. & Oiwoh, S.O. (2022). Perception of postgraduate medical trainers and trainees on residency training program in a developing country and its influence on brain drain. *Nigerian Journal of Medicine*, 31, 20-4.
- Aliyu, M.S. (2005). *An examination of the causes of brain drain in Nigerian Universities. A case study of Ahmadu Bello University Zaria, Nigeria*. A project submitted to the postgraduate school in partial fulfilment of the requirements for the award of the Degree of Master of Business Administration (MBA) of Ahmadu Bello University, Zaria.
- Al-Otaibi, R. (2020) The Impact of Work-Life Quality on Staff Performance at Dawadami Public Hospital, Saudi Arabia. *Journal of Human Resource and Sustainability Studies*, 8. 107-130. Doi: 10.4236/jhrss.2020.82007
- Borta, O. (2007). *Brain drain controversy*. Master's Dissertation submitted to the Department of Management and Economics, Linköping University, Sweden. oxabo376@student.liu.se
- Chandar, H., Jauhar, J., & Abdul Ghani, A. B. (2015). Postgraduates' perception about the causes of brain drain among Malaysian professionals. *Problems and Perspectives in Management*, 13(2-si), 365-370
- (Champoux, J. E.(1981). A sociological perspective on work involvement. *International Review of Applied Psychology*, 30, 65–86.
- Chen, P., Powers, J.T., Katragadda, K.R., Cohen, G.L., & Dweck, C.S. (2020). A strategic mindset: An orientation toward strategic behavior during goal pursuit. *Proceedings of the GRIT AT WORK 52 National Academy of Sciences*, 117(25), 14066-14072. <https://doi.org/10.1073/pnas.2002529117>
- Chimenya, A. & Qi, B. (2015). Investigating Determinants of Brain Drain of Health Care Professionals in Developing Countries. *A Review Net Journal of Management*, 3(2) 27-35
- Davis, L. & Cherns, A. (Eds) (1975). *The Quality of Working Life* (New York:

- Free Press)
- Docquier, F., & A. Marfouk. (2006). International Migration by Education Attainment in 1990– 2000.” In C. Ozden and M. Schiff eds., *International Migration, Remittances, and the Brain Drain*. Washington, D.C.: The World Bank.
- Etuk S.G., Imangha, O.A., Akpan, A.O. & Nkanor, W.A. (2023). Working conditions and Human Capital Flight Intentions among Medical Doctors in Federal Tertiary Healthcare Institutions in South-South Nigeria. *European Journal of Business and Innovation Research*, 11(2), 31-54
- Hackman, J. R., & Suttle, J. L. (1977). *Improving life at work*. IL: Scott, Foresman, Glenview
- Hunger, U. (2002) The “Brain Gain” Hypothesis: Third-World Elites in Industrialized Countries and Socioeconomic Development in their Home Country. University of Muenster, Germany Visiting Fellow, Center for Comparative Immigration Studies.
- Imefadon J., (2018) *One Way Traffic: Nigeria's Medical Brain Drain. A Challenge for Maternal Health and Public Health System in Nigeria?* University of California, Los Angeles
- Jachimowicz, J.M., Wihler, A., Bailey, E.R., & Galinsky, A.D. (2018). Why grit requires perseverance and passion to positively predict performance. *Proceedings of the National Academy of Sciences*, 115(40), 9980-998
- Jalowiecki, O.B. & Gorzelak, G. J. (2004). “Brain Drain, Brain Gain, and Mobility: Theories and Prospective Methods”. *Higher Education in Europe*, 29, (3), 31.
- Jenkins, R., Kydd, R., Mullen, P., Thomson, K., Sculley, J., Kuper, S., Carroll, J., Gureje, O., Hatcher, S., Brownie, S. & Carroll, C. (2010). International migration of doctors, and its impact on availability of psychiatrists in low- and middle-income countries. *PLoS ONE*, 5(2), e9049.
- Kabanoff, B. (1980). Work and non-work: a review of models, methods and findings. *Psychological Bulletin*, 88, 60–77
- Kahn, 1981) Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692-724.
- Nanjundeswaraswamy, T.S., Swamy, D.R. (2013). Review of literature on quality of work life. *International of Journal of Qualitative Research*, 7, 201–214.
- Ogaboh, A. A. M., Udom, H. T., & Eke, I. T. (2020). Why brain drain in the Nigerian health sector? *Asian Journal of Applied Sciences*, 8(2), 95–104.
- Okoroafor, E. (2020). Nigeria's Diaspora Remittance Earnings under Threat. Thisday Newspaper of 29th August, 2020.
- Onah, K.C., Azuogu, B.N., Ochie, C.N., Akpa, C.O., Okeke, K.C., Okpunwa, A.O., Bello, H.M. & Ugwu, G.O. (2022). Physician emigration from Nigeria and the associated factors: the implications to safeguarding the Nigeria health system. *Human Resources for Health*, 20, 85.
- Osigbesan, O. (2021). "Medical Brain Drain and its Effect on the Nigerian

- Healthcare Sector" *Walden Dissertations and Doctoral Studies*, 10828.
- Schacter, D., Gilbert, D., Wegner, D., & Hood, B. (2016) Psychology: Sensation and Perception. 103-179 doi-10.1007/978-1-1-37-40673.
- Sirgy, M. J., Efraty, D., Siegel, P. & Lee, D.J. (2001). A New Measure of Quality of Work Life (QWL) Based on Need Satisfaction and Spillover Theories. *Social Indicators Research*, 55, (3), 241-302.
- Wong, K., & Yong C. K. (1999). Education, economic growth, and brain drain. *Journal of Economic Dynamics and Control*, 23(5-6)99-726