



Research Article

Prevalence of Burnout Syndrome and its Association with Job Title and Violence among Physicians in Baghdad: A Triangulated Methodology Study

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ABSTRACT

Article history:

Received 17 August 2022

Accepted 15 January 2023

Available online 30 April 2023

<https://doi.org/10.47723/kcmj.v19i1.882>

Keywords: Burnout, Baghdad physicians, Triangulation methodology.



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Background: Economic Globalization affects work condition by increasing work stress. Chronic work stress ended with burnout syndrome.

Objectives: To estimate the prevalence of burnout syndrome and the association of job title, and violence with it among physicians in Baghdad, and to assess the burnout syndrome at patient and work levels by structured interviews.

Subjects and Methods: A cross section study was conducted on Physicians in Baghdad. Sampling was a multistage, stratified sampling to control the confounders in the design phase. A mixed qualitative and quantitative approach (triangulation) was used. Quantitative method used self-administered questionnaires of Maslach Burn out Inventory. Qualitative approach used an open-ended question modified from Copenhagen Burnout Inventory by face-to-face interviews. An ordinal logistic regression used in the analysis phase to overcome confounders.

Results: The percentages of emotional exhaustion, depersonalization, and feeling of inefficacy were 72.5%, 31.9%, and 12.7% respectively. Total burnout syndrome was 56.4%. Being single and hospital workers were significantly associated with emotional exhaustion ($p=0.006$, 0.001 respectively) and total burnout syndrome ($p=0.017$, 0.016 in sequence). In addition to emotional exhaustion and burnout syndrome, singles suffered from depersonalization ($p=0.010$). Administrative responsibilities made physicians less liable for emotional exhaustion but more prone to feeling of inefficacy ($p=0.038$, 0.017 respectively). Less than 40-year age group had a relation with depersonalization, $p=0.003$, and total burnout syndrome $p=0.013$. Being male was significant with total burnout syndrome, $p=0.008$. All Violence types were associated significantly with burnout syndrome and its dimensions, $p=0.001$ (except feeling of inefficacy in which only threat was significant with it, $p=0.054$).

In qualitative part, the response rate was 80%. It was formulated from 3 themes. Highest percentages in these themes were gained by female and graded physicians.

Conclusion: Burnout affects over half of Baghdad's doctor. Violence was significant to burnout syndrome but job title was not. In qualitative part female and graded physicians were most groups to be affected.

Introduction

Stress is a “Health Epidemic of the 21st Century” as indicated by World Health Organization (WHO). Chronic job stress may lead to a burnout syndrome. Recent expanding globalization, socio-political transformation, and free market lead to an increasing in work stress, and globalization of burnout during the past 35 years. Ample evidence supports that burnout negatively impacts the psychological, physical, and professional wellbeing of physicians. Burnout Syndrome (BOS) is defined by WHO in 2019 as “a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions:

- Feelings of energy depletion or Emotional exhaustion (EE);
- Increased mental distance from one’s job, or depersonalization (DP)
- Feeling of Reduced professional efficacy (feeling of inefficacy FI).

EE is the closest to an orthodox of stress and the stress is a triggering for it, but burnout is not only a unidimensional simple stress and it is described as a syndrome of three combined dimensions. Scientists suggest a sequential occurrence of BOS; worker develops EE first then passes into DP and FI (1). This negative emotional experience as a result of stressors perceived by individuals regardless of occupational status. But it could be perceived by persons as related to their work and/or working with patients or clients (2).

In United States, the cost of stress and stress-related problems ‘as burnout’ to organizations has been estimated to be in excess of \$150 billion annually. A systematic review studying burnout levels in USA 2017 showed that physicians’ burnout in the USA has reached epidemic proportions and is rising rapidly. Its prevalence exceeds 50% (3).

The European General Practice Research Network Burnout Study Group (EGPRN) led research among family doctors in 12 European nations in 2006. Burnout appears to be a common problem in Family Doctors throughout Europe. Findings reveal high results for: emotional exhaustion 43%, 35% for depersonalization and 32% for feeling of inefficacy, with 12% recording severe burnout in all three dimensions (4).

In addition, studies have recommended the investigation of relationships between personal characteristics, and work characteristics such as knowledge and skills which are briefly described in the job title (5).

On the other hand, Iraq suffered from decades of devastating conflicts. Conflict and violence are grass of inevitably worsening of disease status of a country. It causes a negative burden on health system workers and economic status, and impacts psychosocial state of workers. WHO stated that between 8% and 38% of health workers experience physical violence at some point in their profession (6). In Iraq, a 22% decreased in the number of medical specialists in Baghdad (2004-2007) mainly due to threats (3%), violent deaths (1.65%), and kidnappings (0.67%). Other study in Iraq in 2016, among Iraqi Junior Doctors, found high prevalence of

anxiety and depression that was related to violence but they did not study the burnout syndrome relation (7).

The 13th European Conference on Research Methodology for Business and Management Studies: ECRM 2014 recommended a use of both quantitative and qualitative methods to assess stress and burnout. Triangulation helps to uncover a hidden aspect of the phenomenon (8).

There is a limited data about burnout syndrome among Iraqi physicians and their associated factors.

Objective of this study:

- To estimate the prevalence of burnout syndrome among physicians in Baghdad
- To find the association of job title, and violence with burnout syndrome among physicians in Baghdad / Karkh and Rasafa directorates.
- To assess the burnout syndrome at patient and work levels by a structured interview.

Subjects and Methods

Setting & study design:

A cross-sectional study with analytic element in the quantitative part was conducted among physicians in Baghdad. A period of data collection from first July to 1st of October 2019, and whole study timeline was 8 months; ended on March 2020.

Ethical consideration:

Ethical Consideration was obtained from the official approval of the Arab Board of Community Medicine Scientific Ethical Committee and from Al-Rusafa and Al-Karkh health directorates. Furthermore, a verbal consent was taken from participants after clarifying to them the purpose of the study. In both parts of study, data was collected and held anonymously.

Inclusion and exclusion criteria:

The study included Physicians: Working in Baghdad Karkh and Rasafa directorates, in hospitals or primary health care centers (PHCC) centers, Graduated from all Iraqi medical colleges (not from foreign colleges), all spectrum of marital and socioeconomic status, and from all specialties.

Exclusion criteria were Physicians having worked for less than 3 months (as it is the lower cut off to develop a chronic stress, a trigger of BOS) (9). In addition, physicians who: working in private sector only, working for fewer than 18 hours (which represents minimum half week in a health institution), and physicians with evidence of mental disorders at the time of recruitment according to psychiatrist specialist diagnosis (as BOS considered only in worker already free from psychiatric diseases), were excluded.

Sample and Sampling method:

To overcome confounders in the design phase, a multistage stratified sampling method used in both parts of the study by: two stages and a further two strata.

Stages:

First stage begun from top head directorates namely Karkh and Rasafa. At the second stage we chose 50% of hospitals and PHCC at

each directorate by a simple random sampling. Stages followed by stratified sampling.

Strata:

First stratum was according to job title including three categories which are: graded physicians (who are: Junior resident, Senior resident, and Post graduate students according to Iraqi medical law number 1 in year 2000), general practitioners (GP), and specialists physicians. Second stratum was gender, male and female physicians.

Sample size equations:

First equation for total sample chose a: 513 from 6274. The denominator, 6274, was the total number of physicians in Baghdad. Second equation added a 15% from the total sample to the final sample to overcome the expected non-response bias.

Then another equation was applied to choose a subsample from total sample at each stratum.

While the sample size was 20 in the qualitative part of this study according to sample size guidelines of qualitative studies.

Sampling method used to choose participants at level of each stratum was a simple random sampling.

Tool of study:

The questionnaire includes three sections: demographic data, Maslach burnout inventory (MBI) (1) for BOS (a superior validated tool measures BOS at worker level), and a violence assessment part of Copenhagen Psychological Assessment at work (copsoq) (10). In Qualitative part of the study a modified Copenhagen Burnout Inventory (CBI) (11) as open-ended questions were used. CBI measures BOS at worker, patient, and work levels.

Pilot study: was performed on 20 participants.

Statistical analysis:

Using a graphical presentation as tables, and a mathematical presentation as: frequencies and percentages to represent a descriptive data. Analytical data were obtained by Chi square test. To overcome confounders in the analysis stage, an ordinal logistic regression was considered as the output variables were ranks (high, moderate and low). Using SPSS (Statistical Package for Social Sciences) version 20 as a software for data analysis. Finally in quantitative part analysis, P-value was considered significant for associations at ≤ 0.05 , and ≤ 0.001 was highly significant.

In qualitative section the analysis of interviews was done by a thematic analysis method (read the discussions of all participants' interviews after writing them, then re-read them to create 'family documents', then constructing 'codes' from the answers, and finally analyzing the answers' codes using SPSS software version 20 as numbers and percentages to create 'themes'.

Results

Quantitative part response rate was 92.20% (473 physicians responded from 513 total sample size). Table (1) summarizes main Socio-demographic characteristics of the study sample.

Physicians with high emotional exhaustion were 343 (72.5%), those with high depersonalization were 151 (31.9%), and those with high feeling of inefficacy were 60 (12.7%). Total participants with high burnout syndrome were 276 (56.4%). Table (2) shows this distribution.

Table 1: Socio-demographic characteristics of the study sample

| Variables | | No. | % |
|---------------------------------|------------|------------|------------|
| Age | ≤ 40 years | 322 | 68.1 |
| | > 41 years | 151 | 31.9 |
| Gender | Male | 244 | 51.6 |
| | Female | 229 | 48.4 |
| Marital status | Single | 115 | 24.3 |
| | Married | 358 | 75.7 |
| | GP* | 102 | 21.6 |
| Job title | Graded | 190 | 40.2 |
| | Specialist | 181 | 38.3 |
| Workplace | Hospital | 348 | 73.6 |
| | PHCC** | 125 | 26.4 |
| Administrative responsibilities | Yes | 72 | 15.2 |
| | No | 401 | 84.8 |
| Total | | 473 | 100 |

*General Practitioner, **Primary Health Care Center

Table 2: Distribution of burnout syndrome (BOS) and its dimensions levels

| | Variables | Levels | No. | % |
|----|-----------------------|-----------------|------------|-------------|
| 1. | Emotional exhaustion | Low to moderate | 130 | 27.5 |
| | | High | 343 | 72.5 |
| | | Low to moderate | 322 | 68.1 |
| 2. | Depersonalization | High | 151 | 31.9 |
| | | Low to moderate | 413 | 87.3 |
| | | High | 60 | 12.7 |
| 3. | Feeling of inefficacy | Low to moderate | 206 | 43.6 |
| | | High | 267 | 56.4 |
| | | Low to moderate | 206 | 43.6 |
| 4. | Burnout syndrome | Low to moderate | 206 | 43.6 |
| | | High | 267 | 56.4 |

Ordinal Logistic Regression (OLR) was used to test significance and control confounders. Table (3) shows significant association between marital status, work place, and administrative responsibilities with high level of Emotional Exhaustion, p value 0.006 and 0.001, and 0.038 respectively. A one unit increase in being single would result in a (0.745) unite increase in the ordered log-odds of being in a higher Emotional Exhaustion category (while other variables in the model are held constant). The same thing is true for those who work in the hospitals but a unit increase here would result in a (1.655) unite increase in the ordered log-odds. In case of having an administrative responsibility a one-unit increase would result in a (-.697-) unite decrease in the ordered log-odds of having high Emotional Exhaustion (while other variables in the model are held constant). These principles of interpretation of OLR results are true for the rest values.

Association between violence and BOS was done by Chi seq and adjusted residual (AR). A residual is the difference between the observed and expected values for a cell. The higher the residual, the greater the contribution of the cell to the magnitude of the significance of chi-square. Here more than one choice for a single item was accredited in the original questionnaire. All violence types were significant with BOS and its dimensions except feeling of

inefficacy (FI) dimension. Threat possessed the only significant association with FI, p=0.054, table (4).

In qualitative part: Response rate 80% (16 from 20 total sample). Demography of participants in qualitative study is shown in table (5).

Table 3: Estimate of ordered log-odds and significant associations between socio-demographic variables and high level of the outcome variables according to ordinal logistic regression estimate:

| Outcome Variable (high level) | Socio-demographic Variables | Estimate | Significant |
|-------------------------------|---------------------------------|------------------|--------------|
| 1. Emotional Exhaustion | Marital Status | Single 0.745 | 0.006 |
| | | Married 0* | .** |
| | Work place | Hospital 1.655 | 0.001 |
| | | PHCC 0 | . |
| | Administrative responsibilities | Yes -0.697- | 0.038 |
| | No 0 | . | |
| 2. Depersonalization | Age | ≤ 40 years 1.616 | 0.003 |
| | | > 40 years 0 | . |
| | Marital status | Single 0.573 | 0.010 |
| | | Married 0 | . |
| 3. Feeling of Inefficacy | Administrative responsibilities | Yes 0.785 | 0.017 |
| | | No 0 | . |
| | Age | ≤ 40 years 1.129 | 0.013 |
| | > 40 years 0 | . | |
| 4. Total BOS | Gender | Male 0.678 | 0.008 |
| | | Female 0 | . |
| | Marital status | Single 0.533 | 0.017 |
| | | Married 0 | . |
| | Work place | Hospital 1.310 | 0.016 |
| | PHCC 0 | . | |

*, ** Reference group

Using thematic analysis method, three themes carried a higher agreement between interviewed participants:

Theme I Individual level: Emotional Exhaustion was accompanied by physical fatigue

Theme II Patient Level: Dealing with patients leads to stress

Theme III Work level: Suffering from Law and tribal problems

Highest percentages were recorded by graded physicians and females in expressing these themes accept the third theme in which male was higher as it is shown in table (6).

Table 4: Distribution and significant association of violence types and high level of the outcome variables:

| Outcome Variable (high level) | Frequent Violence | | | | |
|-------------------------------|-------------------|-----|------|---------|-------|
| | No. | % | AR* | P value | |
| 1. Emotional Exhaustion | Verbal | 194 | 56.5 | 7.6 | 0.001 |
| | Threat | 210 | 61.2 | 6.2 | |
| | Physical | 226 | 65.9 | 4.0 | |
| | Bullying | 230 | 67.1 | 6.4 | |
| 2. Depersonalization | Verbal | 79 | 52.4 | 1.9 | 0.002 |
| | Threat | 117 | 77.5 | 7.5 | 0.001 |
| | Physical | 117 | 77.5 | 5.3 | |
| | Bullying | 102 | 67.6 | 2.8 | |
| 3. Feeling of Inefficacy | Verbal | 30 | 50 | 0.7 | |
| | Threat | 40 | 66.7 | 2.4 | 0.054 |
| | Physical | 42 | 70 | 1.7 | 0.230 |
| | Bullying | 40 | 66.7 | 1.4 | 0.314 |
| 4. Total BOS | Verbal | 140 | 52.5 | 3.3 | 0.001 |
| | Threat | 181 | 67.8 | 7.6 | |
| | Physical | 186 | 69.7 | 4.9 | |
| | Bullying | 179 | 67 | 4.5 | |

* Adjusted Residual

Table 5: Demography of participants in qualitative study

| Variables | No. | % | |
|----------------|----------------------|----|-------|
| Gender | Male | 8 | 50.0 |
| | Female | 8 | 50.0 |
| Age | ≤ 40 years | 11 | 68.75 |
| | > 40 years | 5 | 31.25 |
| Marital status | Married | 8 | 50.0 |
| | Single | 8 | 50.0 |
| Job title | Graded | 7 | 43.8 |
| | General practitioner | 3 | 18.8 |
| | Specialist | 6 | 37.4 |
| Place of work | Hospital | 12 | 75.0 |
| | PHCC | 4 | 25.0 |

Table 6: Highest frequent responses percentages to questions according to highest ranking demographic features with burnout syndrome and its dimensions on individual, patient, and work level themes

| Themes | Job Title | | | | | | Gender | | | | | |
|-----------------------------|-----------|------|-----|------|------------|------|------------------|--------|------|------|------|------------------|
| | Graded | | GP | | Specialist | | Total No. (%) | Female | | Male | | Total No. (%) |
| | NO. | % | NO. | % | NO. | % | | NO. | % | NO. | % | |
| Theme I Individual level | 6 | 50 | 2 | 16.7 | 4 | 33.3 | 12 (100) | 7 | 58.3 | 5 | 41.7 | 12 (100) |
| Theme II Patient Level | 7 | 53.8 | 2 | 15.4 | 4 | 30.8 | 13 (100) | 7 | 53.8 | 6 | 46.2 | 13 (100) |
| Theme III Work level | 6 | 85.7 | 0 | 0 | 1 | 14.3 | 7 (100) | 3 | 42.9 | 4 | 57.1 | 7 (100) |

Discussion

Burnout syndrome can have an adverse effect on workers satisfaction, productivity and rates of absenteeism, mental and physical health, and staff turnover. In his study, Emotional Exhaustion (EE) registered the highest percent among burnout syndrome dimensions 72.5%. This might be due to that: in psychology, emotion is a first triggered reaction response as it is an outermost part of the ‘Affect’ (12).

Being single was more liable for emotional exhaustion. According to Maslow’s theory of needs’ satisfaction, marriage is a tension reduction factor because of psychological and social support. Spouse tries to reach a feeling of security. Psychological stability deals with internal stress and married are more secure to manage a fear of being alone and having no family. On the other hand, our western society considering a marriage as a privilege for success. Emotionally exhausted Singles try to deny society’s favoring a marriage as one of life goal and achievement. This will lead to a state of avoidance to discuss this state or trying to make a distance between them and surrounding. The latter state is a documented marker of depersonalization. EE with DP are enough to show BOS (13). This result is similar to a cross-sectional study in the primary health care centers in Kuwait during 2010 and 2011. Studied population were doctors and the response rate was 52.9%. A higher level of emotional exhaustion and depersonalization were recorded by singles, in comparison to married. The spouse social assistance might play a protective floor against burnout (14).

A significant association of ‘Hospital working’ physicians with high level of EE, and BO syndrome. This might be due to the more difficult, more emergent, and a risky in nature cases faced in the hospital. More hours of working, night shift, more pressure from community and administration, and more medico legal cases found in hospital work place. American Board of Family Medicine (ABFM) administered the survey in 2016 to those who are graduated from residency in 2013. They found that a more procedures or clinical content areas i.e., hospital working is more associated with burnout syndrome (15).

Physicians with administrative responsibility, in this study, are less susceptible to EE. This might be due to less contact to the stress of dealing with patients. Even with presence of work load in administration still their work nature carries a less stress of dealing with so many people need, risk of diseases, and life-threatening conditions. Conversely physicians with administrative responsibility suffered from feeling of inefficacy. FI has two facets: social appreciation for Physician achievement, and a financial achievement (1). Administration has less contact with patients to save their life and improving patients’ quality of life. This led to a less social recognition to appreciate their work, so they might have a less sense of overall achievement and efficacy. A survey was conducted in 2014, and again in 2017, in a large academic medical practice, USA, the Massachusetts General Physicians Organization. This study measured administrative workload on physicians and rates of their burnout. The average time spent by a physician on administrative duties increased from 23.7% in 2014 to 27.9% in 2017. Attaining an administrative role in the organization was less associated with level of exhaustion. In multivariate analysis and after controlling for basic demographic characteristics, exhaustion was associated with several outcomes, but not with intent to seek an administrative position within the organization (16).

Young physicians, age ≤ 40 year, might suffer from a more preferring to making distance and withdrawing from organization after facing tuff working circumstances. In the college period, physicians in general, might draw, better work condition in their mind than they did actually face. As a result, they try to lessen the hard reality effect by withdrawal from it. A withdrawal and reality refusal are exactly the expression of depersonalization state. Less than 40-year age group was more prone to BOS because of more stress pressure on them with less ability to overcome the problems, less training, less financial income, and less practicing with patient, work, and organization problems. Similar result was obtained from a previous study among s doctors in Ministry of Health in Bahrain kingdom in 2016. They reported that age group of (30-40) year to have a highest level of BOS (13).

Male had a significant relation to the total BOS. The superior model of Maslach of BO syndrome suggested a sequential model of BOS. This model assured BOS to occur in sequence as EE first, then

DP, then FI (1). On the other hand, although female is more liable for stress and EE (a beginning of a sequential model of BOS) but male is more easily go through these sequential stages. A meta-analysis study published in *Journal of Vocational Behavior* in 2010, on male–female differences in burnout, and another Arabic systematic review about factors associated with burnout among health care professionals in Arab countries in 2014, both showed that female is more susceptible to EE but male showed more depersonalization in reflex to an exhaustion (17,18). In collection more male show total BO syndrome as exhaustion should have accompanied by another dimension to show a total burnout syndrome (1).

All Violence types were associated significantly with BOS and its dimensions except high FI dimension in which only threat was significant with it. Again, the superior model of Maslach of BO syndrome could interpret these findings. More time required for the affected physician to acquire FI after being emotionally exhausted and depersonalized (1). So, more physicians detected to have EE, and DP in response to violence. In addition, if a person is exhausted emotionally, they might avoid as much as possible thinking and memorization of stress events. This avoidance of thinking will in turn delay a FI as thinking is a cornerstone in feeling. Instead, emotionally exhausted persons prefer to be in distance from surrounding (the push factor to manifest a DP by e.g., by absenteeism). So, more physicians appeared to be emotionally exhausted and depersonalized than FI due to violence stimulant (19). At the same time, Freud's psychoanalytic theory agreed with this model. It stated that the unconscious reflexes have more effect on people daily life activity especially stress management. The latter would be controlled by 'thoughts and feeling suppression and avoidance' which are represented here by more suppression to feeling of inefficacy and delay appearance of it, while preferring to be far from surrounding like in case of depersonalization (20). A cross-sectional study conducted in the emergency departments of hospitals in Turkey, 2015. They targeted all physicians working in the emergency units of Pamukkale University Hospital, County and City Hospitals, 112 Emergency Services in Denizli. They found that there were significant associations between total violence and emotional exhaustion, and depersonalization; $p=0.012$, in both cases (21).

In the structured interviews; Copenhagen Burnout Inventory (CBI) concentrates more on EE dimension as indicator for BOS. So, the qualitative part of study found that being female associated with the highest levels of burnout in percentage. The American Psychological Association reports a gender gap, year after year, showing that women consistently report higher stress levels (22). This part of study recorded a higher percentage of being Graded suffer from burnout. Working in emergency and hospitals is associated with very high work level burnout (23).

Male are more liable for a law and tribal problems. Male prefers to face problem firmly. This producing adverse reaction on patients and their relatives represented by law and tribal problems (24).

One of strength of this study was the use of a mixed triangulation design that help to uncover different aspect of this problem. A quantitative design search about a burden. Qualitative design enlightens a new aspects of burnout syndrome on work and patient levels. A stratified sampling according to work site, job title and gender help to eliminate important confounders. In addition to the elimination of confounders methods in the analysis faces. A use

of standardized measures like MBI, CBI, and copsoq to gain a valid data. Our findings help to estimate the burden of this problem at the Capital, Karkh and Rasafa directorates Baghdad level as whole and not only on some subdistricts like other studies. This help to assist organizational policies and plan makers for the promotion and protection of health for this professional category.

Limitations were the cross-sectional design which creates difficulties in assuring cause-effect relationship. The study was not conducted through all nation, so the extent of generalizations on nation level could be limited. However, there are no major cultural, political, economic, and security differences, among those participating and non-participating ones.

Conclusion

Baghdad's doctor burnout poses a significant problem: it affects over half of them. Highest subscale affected was the emotional exhaustion, followed by depersonalization, then feeling of inefficacy. Significant relations were found to link burnout with various socio-demographic variables. Being single and hospital workers were significantly associated with emotional exhaustion and total burnout syndrome. In addition to emotional exhaustion and burnout syndrome, singles suffered from depersonalization. Administrative responsibilities made physicians less liable for emotional exhaustion but more prone to feeling of inefficacy. Less than 40-year age group had a relation with depersonalization and total burnout syndrome. Being male was significant with total burnout syndrome. Job title was not significant with the outcome variables. All frequent violence types were significant with high burnout syndrome and its high subscales except in case of feeling of inefficacy. Only threat type of violence was significant with feeling of inefficacy.

In qualitative part female and graded physicians were most groups to be affected on individual, and patient levels, but on work level male was more prone for tribal and law problems.

Funding

This research did not receive any specific fund.

Conflict of Interest

No conflict of interest

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To cite this article: Mohammed MA, Ali MAK, Marzook AA, Albayaty M. Prevalence of Burnout Syndrome and its Association with Job Title and Violence among Physicians in Baghdad: A Triangulated Methodology Study. *Al-Kindy College Medical Journal.* 2023;19(1):62–68.