As mentioned, the authors used a self-report method to collect their data, in the form of a questionnaire with close ended questions. For the purpose of this research, this method is the best form of data collection because the authors are trying to learn more the problems associated with stress working in ED’s. As a result, the authors chose to use a descriptive-survey method for their research, and a questionnaire was the most efficient means of collecting the data because it’s cost effective and a larger part of the population can be sampled in a less time consuming manner. In addition, there are many qualitative questions built into the questionnaire, which can then be transformed into quantitative data via scale. “Most data that are analyzed quantitatively actually begin as qualitative data. If a researcher asked respondents if they have been severely depressed, moderately depressed, somewhat depressed, or not at all depressed in the past week, they answer in words, not numbers. The words are transformed, through coding, into quantitative categories.” (Nursing Research, 2013, p.184). This is exactly what the authors have done in this research by setting up questions such as the adequacy of support for stress at work, on a scale of 1 to 5 (1 being never and 5 being very frequent). This is then translated into valuable quantitative data later on.

Although the researchers provided demographic information on the test sample, such as the age, education level, and work age of the respondents, in an attempt to reinforce the validity and reliability of the data, they forget that the overall test sample was limited to doctors and nurses working in the three ED’s in Ireland. Differences in local culture may have drastic different effects on those who work in ED’s and thus these results from the questionnaire may be similarly duplicated across the world. Thus, reliability may be a big problem for this research. There was no mention of an intervention in the article and very little information was given on how the responses to the questionnaire was actually gathered. The article only states that the questionnaire was sent to 150 doctors and nurses working in the three ED’s and then it proceeded to discuss the data collected from the responses. This may potentially raise bias concerns in the collection of the data.

Based on the nature of this research and the data chart created by the authors, it is clear that the authors used descriptive statistics to analyze the data. Descriptive statistics is a statistical method commonly used to describe the basic features in a study by providing simple summaries about the sample and the measures. This method is typically distinguished from inferential statistics, which attempts to draw conclusions about the sample population using probability of law (Descriptive Statistics, 2006). In Box 1 of the article, the authors created a list of stressful events and sorted the list based on the number of respondents who thought the event was the most stressful for them. This is a classical frequency distribution chart used in descriptive statistics, where the numerical data is organized in a certain manner in order to may analysis more efficient. However, despite the fact that the authors used the appropriate statistical method to analyze the data, they failed to show proper support for their hypotheses. The authors stated at the beginning of their article that they believe “While a certain amount of stress can motivate staff and ensure that they focus on the tasks at hand, repeated exposure to stressful events can affect them adversely.” (Stress, 2011). After examining both the questionnaire and the data (frequency distribution table – Box 1), there is nothing to indicate the “adverse” effects that the authors hypothesized. The data strongly proves both doctors and nurses who work in ED’s suffer stress as a result of various events at work. However, the data fails to show how the stress has adversely affected their lives, such loss of sleep, poor job performance, inability to carry out one’s duty etc. In another words, the authors only proved half of their hypothesis, that doctors and nurses who work in ED’s suffer from work related stress, but they failed to provide any evidence that this stress negatively impacted lives of said doctors and nurses.

The authors also used relational statistics to test for statistical significance between demographic characteristics of the sample and a number of stress variables. Statistical significance is important in the context of testing a hypothesis using the normal distribution and the p value, which is defined as probability of observing results at least as extreme as those measured when the null hypothesis is true (Statistical Significance Explained, 2018). In the article, the authors presented data to show whether the respondents’ age and number of years worked in the ED had any significance on the particular stress events. Ultimately, the authors concluded that there is no statistical significance on the respondents’ demographic backgrounds. However, the authors failed to show any data on the statistical significance of the overall hypothesis, which is work-related stress at ED’s have adversely effects on doctors and nurses who work at ED’s. Furthermore, the authors did not provide any information on the effect size of the data, which is defined as a simple way of quantifying the difference between two groups that has many advantages over the use of tests of statistical significance alone (It’s the Effect Size, 2002). The authors listed multiple stressor events and indicated the number of respondents for each event, but they did not provide any statistical analysis on the relationship between the events individually.

Over all, this research article was not very helpful based on the data that was collected and the way the data was analyzed. First, there is a big problem with the statistical validity of the data because all 150 of the respondents selected for the questionnaire all worked in ED’s based in Ireland. For a research whose results are meant to be applicable to all doctors and nurses who work in ED’s around the world, the sample pool seems to be too limited in terms of its demographics and thus potentially biased. Differences in local cultures may have drastic effect on the data. For a descriptive-based method, this significant bias in its sample pool may call into question the overall validity of the data. In addition, the authors failed to present data that would support the entirety of their hypothesis. Their hypothesis was simple: doctors and nurses who work in ED’s suffer from work-related stresses, which in turn has adverse effects on their lives. Although the authors talked about the type of adverse effects stress may have on people towards the beginning of the article, the questionnaire fails to ask the respondents how the work-related stress actually effects their lives. In another word, the data collected only establishes the first half of the hypothesis, that these doctors and nurses who work in ED do indeed suffer from work-related stress due to certain stressor events. However, the data is silent on how said stress negatively impacts them. As a result, this article may not be able to convince the appropriate administrations to take the necessary preventative measures against the work-related stress as it suggests in its conclusion.

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