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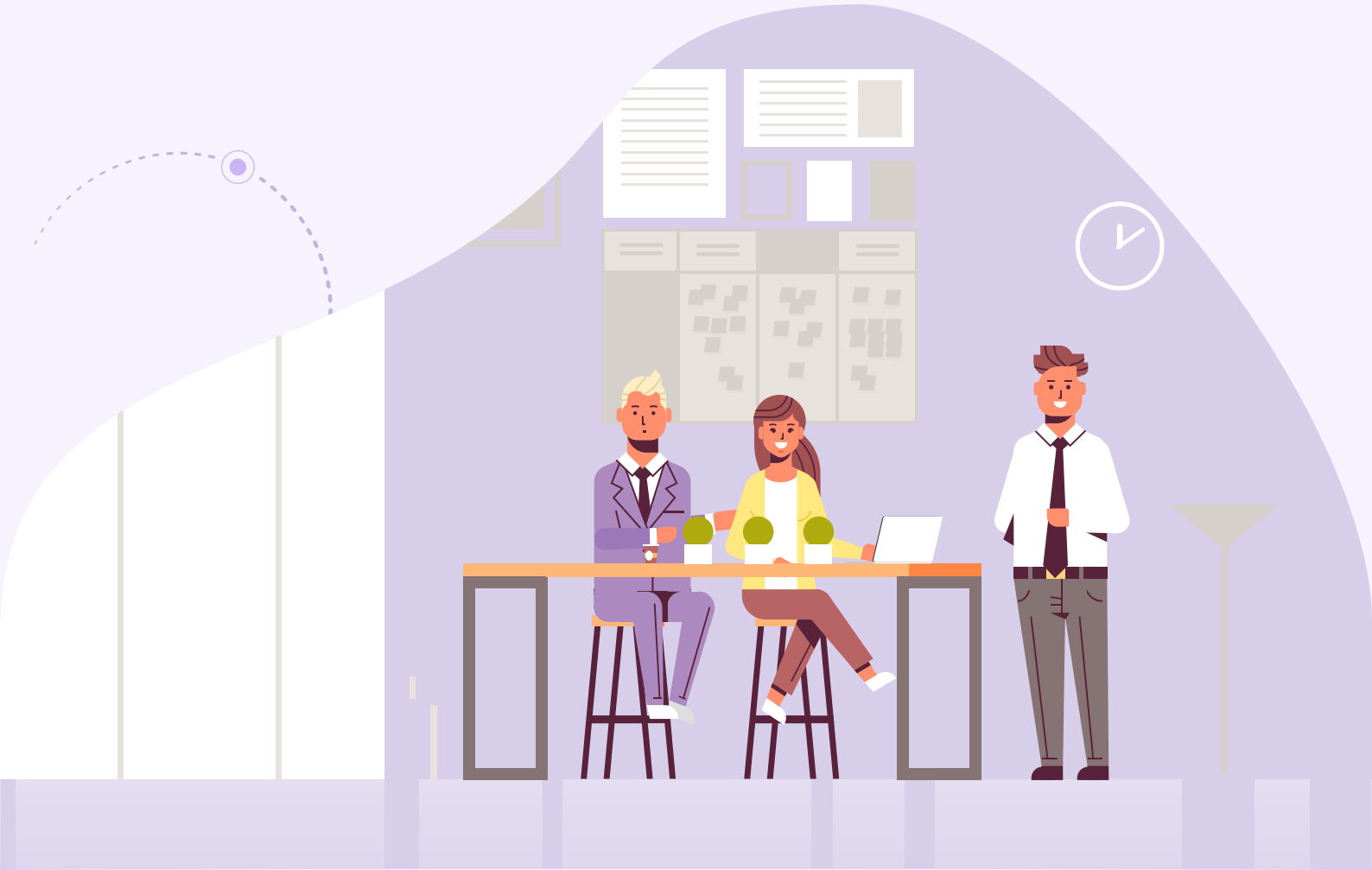
Research Article Review and Critique



Abstract

This paper is a critical review of scholarly articles and seeks to examine the type of research, sample, sample size, and sampling methods that different researchers have used to conduct their studies. The paper also explores the strengths and weaknesses of these factors among other elements of scholarly articles.

Key words: sample, sampling methods, Data Collection Measures, findings/recommendations

Research Article Review and Critique

Introduction

This paper is a critical review of articles. It explores the type of study, location/setting, study design, sample, sample size, sampling methods among other elements of three research articles.

Dahlquist, G, Nystrom, L., & Patterson, C. (2011). Incidence of type1diabetes in Sweden among individuals aged 0–34 years, 1983–2007. *Journal of Diabetes Care, 34*(1), 1754–1759. Retrieved from http://care.diabetesjournals.org/content/34/8/1754.full.pdf+html

The purpose of the study was to clarify whether the increase in childhood type 1 diabetes was a result of the decreasing population of older people. This study was based on the theory that the apparent rise in cases of diabetes among young people was a result of the decreasing cases of the same disease among the older people. Thus, it was implied that, in the past, diagnosis of diabetes had focused on older people ignoring the young who were equally affected by the disease. The study was set in Sweden and applied qualitative approach by reviewing yearly data from registers in government records of incidences of diabetes over a specified period of time.

The researchers used data drawn from two research registers. One of

these was the Swedish Childhood Diabetes Register that included case subjects aged 0–14.9 years at diagnosis. The other was the Diabetes in Sweden Study that included case subjects aged 15–34.9 years at diagnosis. Both registers covered groups between 1948 and 2007. The total sample from the two registers consisted of 20,249 individuals with diabetes diagnosed between 1983 and 2007. The researchers analyzed incidence rates over time using Poisson regression models.

The scientists used a qualitative approach to study with dependent variables such as age and sex. Employing analysis of age-specific incidence rates, the researchers estimated rate of increase in each calendar year with a 5 year interval applied to the data. They used a drift term to describe linear trends that could be equally ascribed to either period or group.

The study revealed that the overall annual incidence had increased to peak of 42.3 per 100,000 people within the male participants who were aged between 10-14 years and to a maximum of 37.1 per 100,000 people within the female participants aged between 5-9 years. The researchers also noted that the trend among women aged beyond 9 had weakened. Furthermore, a significance decrease was noted among the age groups of 15 years. There was also a decline in the older groups of 25-29 and also 30-34. The analysis method of Poisson regression assisted in discovering a group effect as dominance over a time-period effect.

Based on the results of the analysis, the researchers concluded that there was a pattern of change over time in the incidences of type 1 diabetes

that reflected a shift to younger age at the time of diagnosis. The strength of the study is that it involved a large sample, which gave the impetus to the precision of the conclusion. The weakness is that the researchers used data from records which were not specifically collected for this purpose. Thus, it is possible that they missed out on important variables like the history of patients and the diets they followed in their homes.

Renders, C., Valk, G. & Griffin, S. (2009). Interventions to improve the management of diabetes in primary care, outpatient, and community settings. *Journal of Diabetes Care, 24*(1), 1821–1833. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/11574449

The purpose of this study was to review the effectiveness of interventions that target health care professionals and the structure of care with the view of improving management of diabetes in primary care, outpatient, and community settings. In this qualitative study, the researchers used a systematic review of controlled trials to evaluate the effectiveness of interventions that were targeted at professionals in health care. It was to help in determining various ways of improving the process of care and measuring the outcomes of the process to diabetic patients. The scientists used standardized search methods of Organization of Care Group and the Cochrane Effective Practice. The sample of the study included 41 secondary sources that discussed the intervention process in the management of diabetes. The criteria for selection of the sample included the heterogeneity of the study in terms of participants, settings, reported outcomes, and inventions. The inventions were supposed also

to be multifaceted and targeted at health care professionals. Only 12 samples satisfied this criterion.

The method of data analysis was tabular in terms of means and proportions of process measures. More data was recorded from the original sources and calculations of absolute difference and relative percentages were done on all collected data. The researchers also recorded baseline data in order to get an indication of comparability of different study groups. Studies that showed a unit analysis error while pointing estimates were presented while paying no attention to values or 95% of confidence intervals. The authors also determined heterogeneity of interventions and settings together with a combination of reported outcomes. The results of the study could not be pooled but instead employed a qualitative assessment of samples. This was done to ascertain the quality, size, and direction of the observed effects.

The researchers reported that complex interventions were capable of improving the process of care. However, the effect of these inventions on patient outcomes was not clear as such outcomes were not always assessed by health care professionals. The results also indicated that interventions at the organizational level could easily facilitate the structured and regular review of patients with favorable process measures. The study also revealed that complex measures which included the education of the patient and the role of the health care professional in an enhanced manner could easily lead to improvement in the patient outcome and in the overall process of care for diabetic patients.

The strength of the research was that it employed a wide range of data sources which provided an insight in making a conclusive and well presented research. By reviewing 41 articles, the scientists were able to glean and collate intervention measures that could be useful in improving the treatment of diabetes in patients. The weakness was that the study did not use primary sources to ascertain the intervention measures. For instance, rather than look for information about intervention processes from other sources, the researchers could have interviewed health care professionals and get first-hand data on intervention mechanisms and procedures that they were using to improve treatment of diabetes among patients. This would have been the best way to obtain information regarding the current situation.

Flegal, K., Carroll, M., Ogden, C., & Curtin, L. (2010). Prevalence and trends in obesity among US adults, 1999-2008. *The Journal of American Medical Association, 303*(3), 235-241. Retrieved from http://jama.jamanetwork.com/article.aspx?articleid=185235

This study was based on the concept that obesity prevalence in the USA had tremendously increased between 1976-1980 and 1988-1994 and later between 1988-1994 and 1999-2000, especially among the adults. The purpose was to inspect obesity trends from the year 1999 to 2008 and the prevalence of overweight and obesity in 2007-2008. As regards design, participants, and setting, the research included an analysis of measures of weight and height of 5555 adult women and men who were 20 years of age and older between the period of 2007-2008. This was done as a part of the National Health and Nutrition Examination Survey. It

was therefore a nationally represented sample. The data collected in the survey were compared with that of the previous years (1999 through 2006). The main outcome measure was to estimate the obesity and overweight prevalence among the American adult citizens. The researchers determined that overweight could be defined as the body mass index from 25.0 to 29.9 with obesity being BMI 30.0 and higher.

The sample size included participants, both male and female, who were at least 20 years old. They were of different ethnic and racial backgrounds. The selection of participants was random. The sampling method was chosen to give equal opportunity for all and also avoid bias in the results. The variables in the study consisted of continuous cycles or categorical cycles that put participants in subgroups. For instance, although the researchers had the bigger groups of men and women as a sample, within these groups they could be designated by their age groups or racial/ethnic identities, which made the comparison of data easier and effective.

The researchers recorded in their results that the age-adjusted obesity prevalence had increased in both men and women adults between the years 2007 and 2008 when compared to the previous years. Another interesting result was that overweight and obesity varied in the age group as well as ethnic and racial groups in both males and females. However, obesity among females did not show any significant trend over the last 10 years. On the other hand, men showed a considerable linear trend despite the fact that the recent data points did not reveal any substantial differences.

The strength of the research was that it employed variables which were easy to identify and monitor. For instance, it is easy to determine the gender or race of a person. Equally, such information is not private, thus the analysis was reinforced on this basis. The limitation was that the study used data from a sample survey which could easily be subject to sampling error or even non-sampling errors. Additionally, the researchers could not detect smaller changes in prevalence, especially among subgroups that were defined by racial/ethnic, age, or sex characteristics.