

Free literature review on significance of the study and the contributions it can ...

[Sociology](#), [Women](#)



Analysis of Qualitative and Quantitative Research methods used in articles

The human brain is a receptacle of knowledge and reasoning and man has always had an inherent ability to think, analyze argue and conclude. The concept of critical thinking as a form of analysis has its roots during the time of Socrates. He believed that man should not blindly accept view- points placed before them by people in seats of power. Men are fallible and prone to confused thinking and empty rhetoric. It is important to analyze on the basis of knowledge, available data and insight. RH Ennis (2003) described critical thinking as, focussed thinking based on sound reasoning and reflections that help in deciding between what we believe and what we should do, thus summarizing Socrates.

This logical approach to a subject leads to two branches of social research – quantitative analysis and qualitative analysis. A simplified explanation of the difference between the kinds of research can be gained by the meanings of the words itself. Quantity, as concerned with the value of something is based on a statistical analysis of the subject. In that sense qualitative is a more definitive and precise classification. Quality, as concerned with the overall properties of the subject thus, taking into account different interpretations of one single subject. Analysis based on Aristotle’s thinking relied on more concrete evidence and hence more qualitative in their approach.

Although quantitative analysis is commonly associated with research on economics, there is a recent trend of both these approaches being used in medical diagnostic research also. In this article we will analyse two recently

published articles using these research methods. For the purpose of relevance both articles are related to medical science.

This article will analyze and conclude if the research process and conclusions drawn by the authors are applicable and justify the use of that particular method of analysis. We will classify and analyze on the basis of whether; the purpose and method of study is clear;

Qualitative analyses

For the purpose of analysis of qualitative methods we will look at the research article submitted by Laura L Tirado-Gómez on “ Cervical cancer: a qualitative study on subjectivity, family, gender and health services”. This article is based on the research conducted by Ms. Gomez with her associates on the instances of cervical cancer in women hailing from the State of Veracruz, Mexico and Mexico City. The basis of the research is on quantitative data obtained in the year 2002 on the same issue. This data was based on “ socioeconomic, behavioural[sic] and biological characteristics” (Gomez, 2007. para. 1). The purpose of the research was to recognize and establish cultural, societal and gender bias which prevented women from taking care of their health or learning more about their body’s needs. The data established thus would help doctors and medical care professionals in recognizing these factors and tune medical care to address specific issues. As mentioned in her own words, Ms. Gomez and her associates interviewed and made a conclusive report on their research using Qualitative analysis methods.

As part of a multi-level, multi-method research effort, this particular study

was based on individual interviews with women diagnosed with cervical cancer (identified as the "cases"), their female friends and relatives (identified as the "controls") and the cases' husbands. (Gomez, 2007. Para. 3).

The participants in the interview were categorized thus based on subjectivity; influence of family, influences and restrictions imposed by gender and the role and efficiency of the health care that was offered. In an analysis of such nature, the aspect of socio-economic influence plays a vital role as it contributes multi-folds to the women's education, which would help her understand the diagnosis and the affordability to quality medical care. Ms. Gomez eliminates the need for analysis on socio economic factors as her research is based on available data. Therefore we will base our analysis on the assumption that participants in her case study were from a particular socio-economic group. She also narrowed down her study demographically based on available history and research on cervical cancer. The professional qualifications and medical affiliations of Ms. Gomez and her associates in this research confirms her knowledge of Cervical cancer, the many causes for the disease in women which can be attributed to the presence of the Human Papilloma Virus (HPV) in the body as well as many other related to the functioning of the woman's reproductive system, her life style and socio economic status. Therefore the analysis is not for the purpose of scientific research but more on ways to get more women to get timely diagnosis and thereby prevent death by the disease. Advances in medical sciences has proven that even deadly diseases like cancer can be arrested and cured to a certain extent depending on the malignancy and severity at

the time of diagnosis. Therefore it is important that women at a certain age make specialized tests such as Papanicolaou test (PAP) part of their regimen. Ms. Gomez analysis is therefore very necessary in order to establish why women Mexican women will not take the first step towards early diagnosis. Upon reviewing the enclosed interview summary from Ms. Gomez article, we can understand that the women in Mexico were bound by tradition and hold many old fashioned beliefs on the role of women in a man's life, in family and the society in general. We do see evidence of some in the younger generation who are more educated and therefore more open-minded influenced their mothers to have a check up done. Most women were ashamed of their own body and fearful of exposure during checkups, while some others were in denial, which stopped them from getting a check up. We see also an inherent fear of losing their hold on their husbands if they were not able to perform the reproductive functions that is expected of them. The husbands however showed a bit more restraint and practical approach to it. Their attitude was to get rid of the problem by a surgical removal of the womb. Their practical approach was also based on the fact that they were not well equipped to take on family responsibilities if anything should happen to their wives. The husbands interviewed were also from the limited of men who accompanied their wives to the checkups. So based on the data collected from the supposedly supportive husbands, it is possible to gauge the reactions and attitudes of those who were not. The reactions to the medical care that they received shows that the women and participants in the program were not fully educated about the disease and therefore could not gauge the standards of the medical care that they received

accurately.

In patriarchal cultures such as Mexico, it is important to study the psychological aspects that prevent a woman diagnosed with cancer, especially of the nature as isolated in this study, from taking care of herself while also studying the attitudes of female members of her family and support group. Last but not the least it is most essential to study the attitudes of the husbands or men who are dominant in her life. The data obtained from interview with these three groups were identified under various coded categories and analysed using open and axial coding systems. We cannot ignore the possibility that Ms. Gomez's interpretations could have a gender bias. This doubt is however eliminated by the fact that her team of four distinguished analysts had an equal number from men and women. Therefore it is prudent to assume that the collective data obtained by such a qualitative analysis can be used in conjunction with the already available quantitative data to derive an efficient awareness and medical program.

Quantitative Analysis

The article selected for research using Quantitative analysis "Computer based quantitative analysis of capillary abnormalities in systemic sclerosis and its relation to plasma concentration of von Willebrand factor" was published in the "Annals of Rheumatic disease". The research utilized computerized data analysis for vascular and capillary abnormalities, which could find use in the diagnosis of sclerosis and other rheumatoid diseases. The authors, Agneta Scheja, Anita Akesson, Izabella Niewierowicz, Lena Wallin, Marie Wildt and, Frank A Wollheim used coded photographs and

drawings of microscopic images to analyse the vascular changes found in patients suffering from Sclerosis. These tests were compared with healthy controls. In order to conduct the research the authors conducted the following research.

Nail fold capillaries were investigated by capillary microscopy and photographed in 17 consecutive SSc patients (five with diffuse cutaneous systemic sclerosis (dSSc) and 12 with limited cutaneous systemic sclerosis (lSSc)) and in 17 healthy controls. (Scheja et al. 1996, p. 52).

Sclerosis is a condition that affects the vascular functions of the body and is known to be caused by damage or injury to the immune system of the body, which work on a pathogenic mechanism. The authors admit that the only conclusive study available on sclerosis is more qualitative and diagnosis at very early stages still proves to be a challenge. The research studied the difference capillary density, measured by loops/mm and median density, which measured the median curve. Medical science already has conclusive research information that patients diagnosed with sclerosis experienced changes in their body due to function and

“ organic arterial changes” (Scheja et al. 1996, p. 52). Therefore by evaluating the photographic data the researches hoped to establish that these changes can be quantitatively measured and can aid in early diagnosis of sclerosis or other rheumatoid ailments. In order to not eliminate other rheumatoid related changes, “ Plasma concentration of von Willebrand factor (VWF) was analysed using an enzyme linked immunosorbent assay (ELISA).” (Scheja et al, 1996, p. 52)

The study was based on various already established and proven medical

theories. The point of analysis and the use of VWF to calculate plasma density are also based on a proven theory by Ms. Scheja in 1994 as a symptom of systematic sclerosis. To calculate this plasma concentration the technique of finger pressure and reaction to cold temperatures was done. From this analysis and the calculations thus computed, it was clear that capillary density of those with Ssc was lower than those of healthy controls as the loop density of SSc patients were higher than those of healthy controls.

Ms. Scheja's article and research is also based on certain restriction imposed by previous microscopic analysis of SSc. We also have evidence of many qualitative theories on the study of capillary abnormalities in research of SSc. We see in the current analysis that care was taken to conduct the research under controlled temperature settings and it was made sure that body temperatures of all participants was same at the time of research. The patients chosen for the research of capillary loop area and density were also admitted to the hospital within a span of 18 months and therefore showed relative symptoms. The ratio of men to women chosen was controlled to eliminate the biological factor of gender. Of the healthy controls, similar gender and age ratio was maintained. Three among the healthy controls chosen were also smokers. We can see from the research article that care was taken to perform the plasma concentration analysis test as well. The measurement was performed at a room temperature of 18-19°C after 20 minutes of equilibration. Patients were dressed in normal indoor clothes and were not allowed to smoke for four hours before the investigation. The fingertip temperature of all fingers, the arm blood pressure and the finger

systolic pressure of the mid phalanx of the two most severely symptomatic fingers were measured before and after local cooling with water at 1 0°C, perfused through a specially constructed digital blood pressure cuff. The procedure was repeated after oral intake of 30 ml of 40% ethanol and body warming with a heating pad placed on the abdomen for 15 minutes. (Scheja et al. 1996, p. 53-54).

The statistical differences were then studied on the basis of variance. The test results were re-corroborated and analyzed by two different sets of analysts and a panel of experts in the study of rheumatoid diseases over a period of time. Various academic and medical foundations in Lund, Sweden, which proves the credibility of Ms. Scheja's qualification and the standard of analysis, funded the research.

Diagnosis of sclerosis has proved to be huge challenge and most often not done until much progressive deterioration has occurred. This research and analysis showed conclusive reports of changes in vascular function, which can be used, in the early diagnosis of sclerosis and other rheumatoid diseases. The examination of nail fold capillaries have long been in practise for study of Ssc, the use of Immersion oil to obtain maximum transparency also eliminates ambiguity. Therefore we can see that maximum care was taken to conduct the tests. Using computerized system to analyse data eliminates the possibility of different interpretations of test results, which can affect the diagnosis.

We do not have conclusive evidence of whether this system is used in conducting further research in SSc, we can however conclude that such

quantitative analysis can provide conclusive measurements of capillary loop density and median curve.

Conclusion

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