**Abstract 2**

Your Name

School Name or Class

## Inter-Relationships of Cholesterol with Cardiac Factors for Heart Patients

**Abstract**

**Background:**

According to the mentioned research, atherosclerosis is a prefatory type of heart disease that involves restricted blood flow caused by the formulation of cholesterol plaques in artery walls. It is asserted that most of the previous studies only elucidated the interconnectivity between evident cardiac facades that include diastolic and systolic blood pressure as well as meta-analysis, multiple and logistic regression etceteras, that in any case, cannot be considered as a pragmatic statistical technique for constructing psychological heterogeneous positive data. Moreover, it is also discussed that only a few researches evaluated the underlying relationship of cardiac diseases and cholesterol through a dual perspective that includes archetype of heart disease risk factor on cholesterol and other relevant factors, and the impact of cholesterol on myriads of cardiac factors. Therefore, in order to somehow fill the implied gap, the following research assessed the inter-relationship that reflects upon cholesterol through both dimensions by employing the device of real data set. Furthermore, the perceived impact of cholesterol on heart factors is also scrutinized.

**Objectives:**

The core objective of this study is to comprehend the effect of cholesterol from the cardiac risk factor’s perspective, in due course; two cardiac factors and cholesterol levels are utilized in the development of the evaluation model.

**Method:**

In order to sift through the implications of selected parameters, the research employs a set of real data that comprised of 303 patients with cardiac complications. Moreover, the study encapsulates fourteen primary characters throughout the assessment process. The study considered Log-normal and Gamma distributions along with Statistical Joint Generalized Linear Models (JGLMs).

**Results:**

Through observation of collected data set, the cholesterol level model was developed, and it is derived that female heart patients encounter higher cholesterol levels than men, (female P= 0.0013 > male P = 0.0012) and the level depicts an elevated tendency in older patients than younger ones. On the other hand, according to collected data, the cholesterol demonstrated a higher level in the patients with maximum higher heart rate (0.0877), or normal resting level of electrocardiographic (0.0107), or reversal defect of thalassemia (0.0466) and at the point of the fixed defect (0.0940) than any normal state. Similarly, patients diagnosed with heart disease and have an angiographic disease status (value 0) carry elevated cholesterol levels and less than fifty percent diameter narrowing value (P=0.0515) as compared to other patients. On the other hand, the cholesterol level variance is higher for a female cardiac patient (0.0265), which significantly surpasses the variance rate for male patients. The variance simultaneously augments with ST depression that could be accelerated through workouts and other physical activities. Additionally, the variance for maximum heart rate diminishes with elevated cholesterol levels correspondingly. Through the evaluation of blood pressure collected data and archetype it is extracted that resting blood pressure has a perfect correlation with cholesterol and both factors increase in a parallel manner. In such situations, the resting blood pressure is considered as cofounder agent in the model.

**Conclusion:**

According to the study and assessment results of the real data set, it is advocated to examine cholesterol levels in older ages on a regular basis. In this context, maximum heart rate and resting blood pressure in both genders and thalassemia status are also critical factors to analyze. Along with all the implied conclusions, the limitations of the study are also underlined that referred to the scope of research that is based on only two factors i.e. Trestbps and Thalach. Furthermore, the expansion of the study did not address other relevant facades such as mean arterial and men central venous pressure as well as DBP, SBP, ejection fraction, and cardiac index are not reflected within the data set.

**Reference**

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