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Research Article

### UNDERSTANDING THE CONCEPT OF SUICIDE RATE, DEPRESSION AND THE HUMAN DEVELOPMENT INDEX (HDI) WITH THE REFERENCE OF AN ECOLOGICAL STUDY.

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**Abstract:**

*Human Development Index includes health, education, pay records, and family unit structures to show the suicide rate. A biological study was carried out in individuals in the range of 15 and 49 years of age. The three indexes were developed that were education index (EI), income index (II), and HDI. From authentic information bases per capita income, poverty, and household rates were gathered. Pearson's correlation coefficient, which is (r), is utilized to decide the strength between per capita pay, suicide rate, joblessness, poverty and depression rates. A various linear regression model was utilized to know the relationship rate between the Human Development Index (HDI) and suicide rates.*

*Human Development Index (HDI) focuses on longevity, basic education and moderate-income. First, an educational component made up of two elements mean and expected years of schooling. Second, a life expectancy component should be estimated using a minimum value. The last element is gross national income (GNI) per capita adjusted to purchasing standards.*

*As a major health issue, there is no global study on suicide. Suicidal rate varies between most countries with different human development index levels. The research examined that the male gender and HDI component is directly linked to increased suicide risk rates.*

*It was the study of the Mexican state. Human Development Index (HDI) of 32 states of Mexican were low 16%, the middle 41% high 22%, and extremely high 13%. An immediate and positive relationship was found between non-family households and the suicide rate. The suicide rate adversely and significantly connected with Pearson ( $r = -0.350$ ;  $p < 0.001$ ).*

*The individuals of this state, with the predominance of non-family households, had a positive relationship with the suicide rate. Because of the consequence of this investigation, it is possible to expect that the Human Development Index (HDI) expands and there is a chance of living alone and having suicidal conduct.*

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**INTRODUCTION:**

Suicide is directly linked with the public health problem that has expanded in recent years. World Health Organization (WHO) reports about 804,00 suicides cases yearly, and it is the second number leading cause of extreme death in the individuals between 15 to 29 years of age [1]. The death rate in Mexico is increased in recent years, and this is one of the causes of disability. Disability Adjusted Life Years (DALYs) for suicide are 304.64/100,000 inhabitants according to the Health Metrics and Evaluation (IHME) institute [2].

Suicide as other non-transmissible and non-contagious disease is a multilevel process which is caused by individual factors like mental disorders, depression, some social factors like stress, working conditions, unemployment, social supports and violence factors that are contemplated as social determinants that impact people's health. Economic conditions influence human development and an individual's health [3]. According to United Nations Development Program (UNDP) health is a most important part of human development and state as: "the declaration of the freedom of people to live a long, happy, health and creative life" [4].

The human development theory expects that better financial conditions do not guarantee a higher level of health. It is viewed that the expansion in Gross Domestic Product (GDP) per capita is not a good measure for the impact on human health [5]. In contrast, the Human Development Index (HDI) could be a good measure because it includes three important aspects of human health. First is the chance of having a long and sound life, second is the chance of gaining information, and the third last is the opportunity to have a decent life.

Countries with low Human Development Health (HBI) index have higher death rates as compared to those countries with high Human Growth Development (HBI) index. In the last case, the rate of non-transmittable diseases such as cancer is higher than in observed countries with medium and low HDI [6]. Although higher Human Development Index (HDI) countries have a bright future, educational level, job income, and they also face suicidal rates for both men and women. In these countries, unemployment is directly linked with suicide, and psychiatry disorders are accounted for to be available in 80 to 90% of suicide death rates. As per this meta-examination, this affiliation is less undimmed in low, middle-income countries(LMIC). 58% of the death rate is connected with mental disorders, mood disasters, state of mind problems [7].

In Pakistan, suicide rate is below the worldwide average. Pakistan's death rate according to the World Bank is 7.28 per 1000 people in 2016 which is the lowest rate in the period of 2006-2018. In 2015, the suicide rate in Pakistan was approximately 1.4 deaths per 100,000 persons, one-seventh of the global average.

**METHODOLOGY:**

According to an exploratory natural cross-sectional study, the unit of examination is suicide rate which is the dependent variable in the state of Mexican between 15 to 49 years old people and linked with factors of income, educational status, poverty, unemployment and depression rate which is the independent variable. The suicide rate depends upon the per capita income of an individual, educational level and unemployment [8]. Concerning with the type of households INEGI defined it well and classified in family and non-family household term. Non-family households can be clear, expanded and compound. On the other hand, non-family households include family and non-family household.

For only research study purpose family households and non-family households are included. The poverty rate was acquired from the data of the National Council for the assessment of Social Development Policy and the future life expectancy from the database of the National Population Council [9].

The depression rate was procured by the General Directorate of Epidemiology of the Ministry of Health. For each condition of the state of Mexican three records were built which are the health index (HI), the educational index (EI) and the income index (II) these are based on the methodology of UNDP for the development of Human Development Index (HDI) [10].

The Human Development Index of each state was estimated with the ratio between the value for the Mexican Republic state minus Maximum value of it and divided by the difference of maximum and minimum value. Human Development Index (HDI) has a few fundamental parts that include life expectancy at birth, mean years of formal education and anticipated year of formal education [11]. The countries are classified according to the Human Development Index (HDI) which is as follow: Low Human Development Index (HDI) ranges 0.667-0.7720, Medium Human Development Index (HDI) ranges 0.723-0.742, High Human Development Index (HDI) ranges 0.745-0.760 and High Human Development Index (HDI) ranges 0.760-0.830.

**DISCUSSION:**

The purpose for this research study was to examine the probability of suicide rates in Mexican State in the 15-49 years of age as an element of depression rate, the Human Development Index (HDI) different factors of social advancement such as health, education, and payment Indexes as the household structure [12].

The findings of current research uncovered that the depression rate was not correlated with suicide rate in young population in the range of 15 and 49 years old depression is a realized risk factor for suicide. There is a positive relationship between Human Health Development (HDI) and misery but not with medium and low Human Development Index (HDI). It is possible that in states medium, low Human Development Index (HDI), there are fewer chances of mental health services and vice versa fewer depression rates and suicidal death are registered in statistical research [13]. Along these, the probability of suicide could be comparable between the states with low Human Development Index and high Human Development Index. Even though depression is profoundly predominant in young people, and this is the most stronger indicator of suicide. In these nations, more exploration is still needed to understand the affiliation being the effectiveness of suicide and depression [14].

Even though human development does not conduct suicidal behaviour, the social and individual impact of the adjustment in social connections could be elements identified with suicidal behaviour. Factors like depression, loneliness have been depicted as critical indicators of suicide risk. We observed that the suicidal rate is higher in high Human Development Index (HDI) countries, and also include those countries having individuals who feel alone has been reported frequency that reach up to 40% [15]. This is in according to different investigations that have proven of Human Development Index (HDI) and suicide. Worldwide 52% of suicides have happened in nations with a high Human Development Index (HDI). A longitudinal study carried out in nations in which high Human Development Index (HDI) found that elevated levels of loneliness have fundamentally corresponded with the suicide rate in young people. This is the perspective that should be examined for future investigations for the research study. This finding was revealed in HMICs, and other factors like unemployment, financial stress for family, instability lead to poverty and prestige to suicidal conduct. New systematically studies in LMICs uncovered a positive relationship between

poverty and suicide. This information is more consistent at an individual level.

The conditions of Mexican State with the highest commonness of non-family households had a positive relationship with the suicide rate [16]. The outcomes show that both sorrow, depression, loneliness, and variables are directly related to the Human Development Index (HDI) which affect the suicide rates.

These discoveries add to a perspective in the manners upon which the suicidal behaviour can occur. It should consider that nation is in a state of social change and economic uncertainty effect on suicide rates that's why psychological health services must be improved. There is no model on essential consideration. There is an increase in beds in General hospitals for the deliberation of patients with mental disorders would be the case of patients with suicide risk [17].

**CONCLUSION:**

Human Development Index is based on three sets of important indicators knowledge, healthy life and decent living standards. Research shows that social determinants are functional to represent the capability of primary prevention. In suicidal prevention, viewpoints should be liable to one of them is the extensiveness of depression as the point of reference to suicidal conduct. This is the developing issue that the health framework is responsible for and has not satisfactorily handled. The other is how different components and social issues impact on human development and individual transformation is linked with suicide that demand the need for the health system which associate with other social areas to produce genuine and encouraging groups of people and promote integral human development. In Pakistan, suicide is a criminal act under the Penal Code. The implementations of this Mexican Study can also be applied in Pakistan. There is a huge gap between the demand and the supply for mental healthcare services in Pakistan. With the advantage of basic medical education, GPs can be provided some additional training within the field of mental healthcare. This can enhance the supply net for mental health disorder. Crisis intervention centres and suicide prevention telephone hotlines play an important role in suicidal people. There is a need to establish such services in Pakistan.

Thus, achieving the health framework objective while assisting in reaching sustainable development. It is the responsibility of the government to focus on community-based programs and equivalent

distribution of financial assets to diminish the suicide rates. Further longitudinal studies are justified to assess the socio-economic factors on decreasing national and provincial suicide rates.

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