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The Influence of Health Care Literacy on Socio-Economic Status with Special Reference to Santal Tribe in Mayurbhanj District of Odisha

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Abstract

The socio-economic status of a country is not only based on income of people of a country, it is also a complex existence of health status besides other factors such as education, employment etc. A country can also be influenced by its people's good or bad health practices. This study aims at discovering the influence of health care literacy on the socio-economic growth of the Santal tribe in the Mayurbhanj district with the help of a structured questionnaire. A total of 200 household samples were collected from the Dengam GP of Khunta block. The data was analysed using statistical package IBM SPSS 25 and Amos 21. Structural Equation Modeling (SEM) was used for data analysis. The findings of the study show that bad habits and beliefs have a negative impact on Santhal tribe's economic strength and the impact of health consciousness has a significant positive impact on Santhal tribe's economic strength. This can conclude that respondents with good knowledge of health literacy have greater economic strength than those who are not in care of health care awareness.

Keywords: Bad habits, Belief and practices, Health consciousness, Economic strength, Santal tribe.

1. Introduction

Health care literacy is considered to be a multi-dimensional fact that covers structure to meet complex of individual's health as well as one's capacity for interaction. Growing interest has been shown in the study that aims to determine the association between income

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and healthcare costs. A significant factor in determining how well people are doing economically is their income and health status. Poor food, emotional stress, inadequate lifestyle choices, and ill cleanliness all contribute to poor health. People must be responsible for their own health in order to save needless costs because the way of life is changing daily in response to the state of the environment. The healthy growth and development of everyone's body and intellect depend on maintaining good and healthy food. Everyone has a basic knowledge of health and the problems associated with it. People should refrain from bad behaviours like smoking and heavy drinking etc. Increased productivity and increased wealth per capita income depend on a healthy population. The majority of youngsters are falling towards bad habits like smoking, drinking, and engaging in other unhealthy behaviours alongside their family members.

Everyone wants to live longer, and this can be possible with good health conditions. Due to more concern about their health, they expect better financial strength and a higher saving rate. Better health practices and policies can influence a country's economy where an increase in income is correlated with one's better health. Tribal people with better health can be able to perform effectively and efficiently without any absenteeism. Employees, professionals, or health workers that have a consistent income give more importance to health awareness than economic consciousness. Tribal people, however, place a greater emphasis on economic strength due to their lower economic strength. People are more concerned about their uncertain income than they are about their health (Alini), [1].

2. Literature Review

Literature review on bad habits

Bad habits of the Santali people include the consumption of heavy drinks, taking alcohol before breakfast, etc. This is because the Santal tribes frequently consume alcohol as part of their daily routine. Many don't stay without first taking alcohol. Ssebunnya et.al [2]found drinking alcohol was universally accepted in all communities in Uganda and only frowned upon if a person made a nuisance of themselves or others. The relationship between drinking alcohol and weight was examined by Traversy et al. [3] and argue that moderate alcohol use on a regular basis may lead to a better lifestyle overall and prevent weight gain for the individual. The extra calorie intake linked to weight increase in certain persons over time has probably been influenced by alcohol drinking. Tsoumakes et al. [4] found that both males and females started drinking alcohol at the average age of 12 years. They also discussed that the relationship between age and hangover was significant where consumption of alcohol was a serious problem among teens in Greece. A similar study was done which influenced the education of the school going children. Koch et al. [5] conducted a study using data from the 1979–1996 NLSY (National Longitudinal Survey of Youth- Center for Human Resource Research) panels and showed how social linkages between alcohol consumption and education play a big part in deciding whether school-age children start drinking and whether they finish their schooling. If alcohol is used by the age of 14, the chances of successfully completing high school are reduced by 7% to 22%.Chaloupka et.al [6] found that alcohol costs were the only factor influencing young individuals' alcohol consumption. They explained that raising the overall price of alcohol might lower consumption as well as

alcohol-related violence, death, abuse, and other criminality. Many authors discussed how the consumption of alcohol influences so many things, like weight, policy, health, and socio-economic status across the country.

Literature review on beliefs and practices

Jidong et.al. [7] study on mental health conditions and traditional healing, there are still cultural beliefs that mental health issues are a spiritual curse, that traditional healing is the first line of treatment for mental health issues, and that people who seek help are stigmatised. Chukkali et.al. [8] discussed the six-factor structure that is distinguished by the 17-item superstitious belief scale, including common belief in good or bad luck, superstitions. Poologasingam et.al [9]discussed how buyers' superstitious beliefs influenced their problem recognition, information search, criterion for evaluating alternatives, making a purchase or purchase intention choice, and measuring of satisfaction with the residential property purchased. Dissa et.al [10]discussed the value of a specific type of superstitious practice and belief in Mali, China. They argued the economic importance of superstitions. Tradition and culture should not be mixed up with superstitions. People with illiteracy have confidence in phantasms. Even intelligent people act in this manner. It was very unacceptable that individuals believe in magicians in Mali. Rather than relying solely on spiritual processes to shift one's fortunes from transitory affluence to poverty, religious groups, religious leaders, and civic society must emphasise the importance of individual responsibility in determining one's chances. Khan et.al [11] discussed Superstitious beliefs have a negative impact on how society is structured and also exert power over how individuals act and understand. Pakhtoon ladies practiced superstitious beliefs where these ideas were passed down socially and culturally from one generation to the next.According to Barber et al. [12], the level of unbelief increased as the economy developed and as people's access to stable employment and medical care improved. In keeping with the uncertainty theory, they also demonstrated that religious belief decreases as existential security rises.

Literature review on health consciousness

Gillani[13] examined the infant mortality in Asian economies that can be improved by GDP per capita, supply of purified water and good infrastructures etc. According to a study by Jayadevan[14], Health human capital, can significantly boost economic growth if the right steps are taken to increase health spending, lifespan expectancy, and advancement of technology whereas lowering poverty levels, infant mortality rates, and fertility rates, particularly in developing nations. According to Edeme et.al.[15]also said that an increase in public health spending increases life expectancy and lowers infant mortality rates, while per capita income has no effect on health outcomes in Nigeria. Furthermore, there was a long-term equilibrium relationship between public health spending and health outcomes. Arthur et al. [16], health spending has a considerable but inelastic impact on Sub-Saharan African health outcomes, lowering mortality rates and increasing life expectancy at birth. Public health spending had a large impact on mortality rate declines, whereas private health spending had a major impact on increases in life expectancy at birth. However, in Sub-Saharan Africa, public and private health spending have a significant positive correlation. Suka et.al[17]examined Japanese people's health status, health behaviour, and access to health

information and discovered a strong correlation between health literacy and both information access and behaviour. Health literacy is essential for health promotion not only in less educated countries, but also in more educated countries. Bakare[18]. Examined that health care spending and the economy have been shown to be significantly and positively correlated in Nigeria. According to Ogundipe et al. [19], achieving good health should be a top priority for all governments (no matter what level), as well as a key component of economic growth and poverty eradication. Chern et.al. [20]examined the relative importance of determinants in predicting future health spending using structural equation models and concluded that health status is a powerful predictor of future health spending. Nixon et al. [21]studied that increases in health care spending are only slightly related to life expectancy but are significantly associated with large improvements in infant mortality.

Literature review on economic strength

Ridwan[22]studied to examine the influence of health on financial growth and argued that there is a positive influence of health on economic growth. Without good health, economic growth can be hampered. Li et.al. [23]studied that only 16.7% of urban individuals in Western China have acceptable health information literacy, Health information literacy was strongly correlated with various socio-economic factors such as educational level, ethnicity, and financial hardship. The lack of health literacy info serves as a stark example of the significant influence that socioeconomic status has on health information literacy. Nadi et.al. [24], higher socio-economic status was completely related to higher hectolitres. Furthermore, higher literacy is strongly linked to general health in the adult population. The effect of socioeconomic status on health achievement had a significant indirect relationship with overall health. Moreover, to According to Elmi[25], there is a long-term causal link between economic growth and health expenditures, and income has a significant impact on both the level and increase of healthcare spending in developing nations. While there is no evidence of a short-run causal relationship between health care spending and economic growth, there is a short-run relationship between GDP and health care spending. McTavish et al. [26]showed absence of maternal health care was related to one's age, education, living in an urban area, and household income.[27] Through a number of potential processes, including women's better social standing and increased labour involvement, higher national levels of female literacy may lessen income-related inequalities in use. [28]

Many researchers conducted the majority of the research on health information relationships with socioeconomic factors; mental health issues; beliefs and practices of bad or good luck; public health spending, and so on. It is necessary to maintain good health and proper monetary budgeting to maintain quality living standards.[29] However, many tribal people engage in bad habits in their daily lives, such as intoxication, preferring traditional healing practices, and so on. They spend their savings on things that are unnecessary and forget about their health consciousness. Furthermore, very few studies have been done on the topic. So, to boost their economic strength and create awareness is necessary for the Santal tribe.[30]

3. Significance of the study

The majority of the Santal tribes of the Khunta block are engaged in daily labour and agricultural occupations So, generally, they go to their daily work and forget about their health consciousness. This daily routine may affect their financial strength. So, in order to know the truth about the Santal people, this study reveals the influences of health literacy on the socio-economic growth of the Santal tribe in terms of their habits, beliefs, and practices as well as their consciousness towards health.[31]

4. Objective of the study

The current research objective is designed to understand the health literacy knowledge among the Santal tribe and to create awareness to improve their socio-economic strength.

Theoretical Structural Model of Hypothesis

Based on the review of literature the following theoretical framework and hypothesis have been developed.

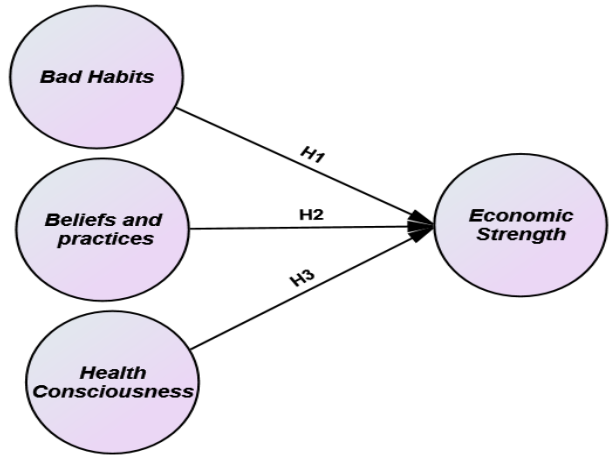

Figure 1. Structural modeling for hypothesis

Structural modeling is a statistical technique used to study the relationships between multiple variables and the underlying structure of these relationships. It involves analyzing the interrelationships between observed variables (indicators) and unobserved constructs (factors) in a model. The aim of structural modeling is to test theoretical hypotheses by assessing the goodness of fit of the model to the data and the significance of the structural paths in the model. One way to conduct structural modeling is through a Structural Equation Model (SEM), which allows for the modeling of both measurement and structural components simultaneously. Confirmatory factor analysis (CFA) is commonly used in SEM to establish the latent constructs and their corresponding indicators. CFA confirms that the chosen set of observed indicators are appropriate measures of the latent constructs. The application of SEM in various fields, such as psychology, education, marketing, and healthcare, has become increasingly popular due to its ability to provide a comprehensive view of the relationships among variables in a model. In conclusion, Structural modeling using SEM and CFA is a powerful tool for testing hypotheses and examining the relationships between variables in a

model. AMOS 21 is a commonly used software for conducting SEM analysis, which provides various fit indices to evaluate the goodness of fit of the model.[32]

The following hypothesis has been developed in order to achieve the objective of the study.
H_1: The impact of bad habits on economic strength is significant.
H_2: The impact of beliefs and practices on economic strength is significant.
H_3: The impact of health consciousness on economic strength is significant.

All the respective latent constructs of the four factors have been discussed in table 1 below.

Table 1: Variables Measurements

Components	Measurement Constructs
Bad Habits	BH1: Intoxicants can have a negative impact on health. BH2: Consuming intoxicants may cause financial stress. BH3: Using intoxicants may have no effect on earnings. BH4: Consuming intoxicants may have an impact on the standard of living. BH5: Using intoxicants may cause mental stress.
Beliefs and Practices	BP1: I believe superstition exists because it is less expensive. BP2: Traditional healing methods save money when compared to medical expenses. BP3: Modern medicine is prohibitively expensive for me. BP4: When modern medicine fails, traditional medicine is sometimes preferred.
Health Consciousness	HC1: I maintain good health to strengthen my living standard. HC2: I take responsibility for the state of my health when doing any activity. HC3: Good health takes active participation in any job. HC4: I'm concerned about my health all the time to avoid unnecessary expenses.
Economic Strength	ES1: My standard of living has improved. ES2: My income sources don't affect even an emergency ES3: I'm a financially stable person ES4: I can give money to someone during an emergency.

5. Method

Both primary and secondary data have been used in this study. The total sample was collected from 200 respondents with the help of a structured questionnaire, targeting only the Santal tribe in Dengam Gram Panchayat of Khunta block. All the questions have been finalised after conducting the pilot study in the field. The survey data has been gathered on the basis of bad habits, beliefs and practices, health consciousness, and economic strength i.e., BP, BH, HC, and ES respectively, from the households of Khunta block in Mayurbhanj, Odisha, India. Each questionnaire was questioned using a Likert scale (five-point). Data have been analysed using the Statistical Package for Social Sciences (IBM SPSS 25) software to test reliability, validity, and cross-tabulation. To analyse moment structures a Structural

Equation Model has been conducted using AMOS 21 and Confirmatory factor analysis (CFA) was used to establish the latent constructs.

6. Results and Discussion

Table 2: Gender and age distribution

Respondents Gender	Respondents Age							
	20 to 30 years		30 to 40 years		40 to 50 years		More than 50 years	
	Count	Percentage %	Count	Percentage %	Count	Percentage %	Count	Percentage %
Male	37	18.5%	53	26.5%	72	36%	12	6%
Female	3	1.5%	10	5%	12	6%	1	.5%
Total	40	20%	63	31.5%	84	42%	13	6.5%

Table 2 shows the age and gender distribution of the respondents. The highest number of males, about 36 Percentage, is between the age groups of 40 to 50 years, followed by 26.5 Percentage of the 30 to 40year age groups. Similarly, the highest number of female respondents (6 Percentage) falls into the 40 to 50 year age category, followed by 5 Percentage of respondents who are aged between 30 and 40 years of age. The highest respondents are from the age categories of 40–50 years, followed by the age categories of 30 to 40 years.

Table 3: Education and annual income distribution

Education	Annual Income							
	Up to 30K		31K-50K		51K-70K		71K-1L	
	Count	Percentage (%)	Count	Percentage (%)	Count	Percentage (%)	Count	Percentage (%)
Illiterate	3	1.5%	21	10.5%	16	8.0%	0	0.0%
Primary Level	2	1.0%	25	12.5%	15	7.5%	0	0.0%
Under Matric	3	1.5%	20	10.0%	22	11.0%	0	0.0%
Matriculation	1	0.5%	29	14.5%	16	8.0%	1	0.5%
College/ University	0	0.0%	15	7.5%	10	5.0%	1	0.5%
Total	9	4.5%	110	55.0%	79	39.5%	2	1.0%

Table 3 shows the educational qualifications and income distribution of the respondents. Most of the respondents (14.5 Percentage) have matriculation qualifications, whose annual income is between Rs. 31k and 50k, and are followed by primary level (12.5 Percentage). Similarly, 11 Percentage of respondents also have matriculated qualifications and they fall under the annual income categories of Rs. 51K to 70K. The highest number of respondents (55 Percentage) have an annual income of between Rs. 31K and 50K, and the lowest number of respondents (1 Percentage), whose annual income is Rs. 71K to 1L. So, it can be said that the number of respondents varied according to their educational qualifications and income level. The main reason behind their low annual income may be their less-than-stellar education qualifications.

Reliability and validity measure of constructs

To check the internal consistency and validity of the selected variables, Cronbach's Alpha and KMO tests respectively have been measured and the results are shown in below table 4.

Table 4. Result of Chonbach's Alpha and KMO test

	Bad Habits (4 No. of Items)	Belief and Practices (4 No. of Items)	Health consciousness (4 No. of Items)	Economic Strength (4 No. of Items)
Chronbach's Alpha	.780	.816	.812	.854
KMO Value	.763	.787	.786	.813

The variable of bad habits which consists of 4 indicators (Refer Table 1) and the Cronbach's Alpha and KMO value shows .780 and .763 respectively. The factor for belief and practice consists of 4 indicators whose Chronbach alpha and KMO value shows .816 and .787 respectively. Similarly, the variable of health consciousness which also consists of 4 constructs and the Chronbach's alpha value and KMO value is .812 and .786 respectively. The variable for economic strength which has four indicators and the Cronbach's Alpha and KMO test value is .854 and .813 respectively. The reliability of all variables is greater than .70 which indicates the internal consistency is good and also an acceptable range. Similarly, the validity test for all variables is also more than .70 which refers to an adequate sample size for further analysis.

Structural Equation Modeling (SEM)

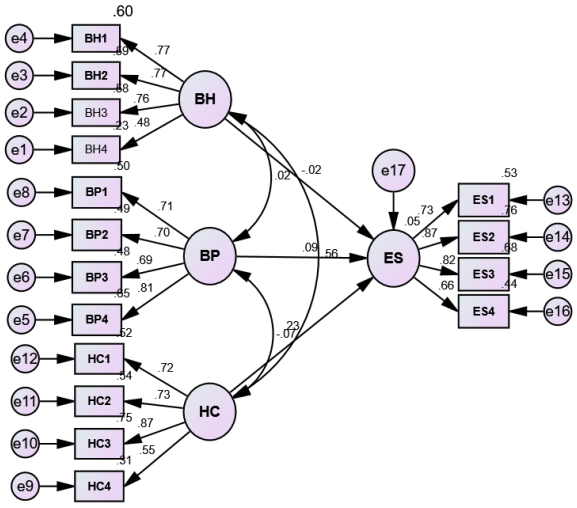

Figure-2. Structural equation modeling and path coefficients between the variables.

Figure 2 shows the structural equation modeling and path coefficients between the variables as well their respective indicators. The relation between bad habits (BH) and belief and practices (BP) is .02 which shows the good relation. Similarly, the relationship between belief and practice and health consciousness is -.07 which is a strong relationship. The relationship between bad habits and health consciousness is .09 which shows a strong relationship. The bad habits (BH-Independent Variable) predict the 23% of variance to economic strength (ES-Dependent variables). The belief and practices (BP-independent Variable) predict the 56% of variance to economic strength (ES-Dependent Variables). Similarly, the health consciousness (HC-Independent Variable) predicts the 23% of variance

to economic strength (ES-Dependent variables). The squared multiple correlation is 0.05 for economic Strength. This shows that a 5% variance in economic strength (ES) status is accounted for by bad habits, belief and practices and health consciousness.

The structural equation model is used in the study to predict the relationship of independent variables (bad habits, beliefs and practices, health consciousness) with dependent variables (economic strength). The goodness-of-fit of the variables that play a significant role in SEM. In this analysis, the chi-square was standardised by degree of freedom: CMIN/DF =2.951 (recommendation value > 2 and <5), GFI =.957 (recommendation value >.90), AGFI =.902 (recommendation value >.90), CFI =.959 (recommendation value >.90), RMSEA =.069 (recommendation value < .081). It shows good convergent indices and the goodness of model fit.

Table 5: Result of SEM and Hypothesis result

Structural Relationship	S. E	C.R	P-Value	Hypothesis	Decision
ES<--BH	-.025	-.232	.817	H1	Rejected
ES <--BP	.092	1.104	.269	H2	Rejected
ES <--HC	.227	2.077	.038*	H3	Accepted

* Significant at the 0.05 level (two-tailed test)

Table 5 indicates the result of structural equation modeling and the decision on hypothesis testing. The Santal tribes are mostly farmers and day workers who go to the field in the morning and return in the evening. Some respondents consume alcohol instead of eating breakfast before going to work. Some respondents consume alcohol even after eating breakfast. Every day, this exercise is carried out. They are used for both relaxation and energy. This results in unnecessary expenditures. Hence, the P-value is.817, which is more than 0.05 level of significance and the Critical Ratio (C.R) is -.232, which is less than 1.96, so the hypothesis (H_1) is rejected. According to the findings of SEM, the impact of bad habits (BH) on economic strength (ES) is not significant. This suggests that individuals who engage in bad habits practice having no economic strength or level of living. Those who do not engage in bad habits have strong economic strength as well as great living standards. Those that engage in bad habits in their everyday lives find that their economic strength and living standards are quite struggling.

Beliefs and practices are also linked to the Santal tribe's economic strength. As the P-value is .269, which is greater than 0.05 level of significance and the Critical Ratio (C.R) is 1.104, which is less than 1.96 so, hypothesis 2 (H_2) is also rejected. This means the impact of beliefs and practices (BP) on economic strength (ES) is not significant. Those respondents who don't believe and practice their economic strength have good and good living standards. Those who believe in and practice superstition prefer traditional medicine or witchcraft, and their economic strength is generally quite low, even by living standards. Generally, they prefer treatment based on traditional medicine, which lacks scientific evidence and is unnecessary, and it affects their savings as well as their living standards.

Consciousness about health is important for everyone and the strength of the economy. As per the result (table-5), the P-value is.038, which is less than 0.05 level of significance and Critical Ratio (C.R) is 2.077, which is more than 1.96. Hence, the hypothesis (H_3) is accepted. This means the impact of health care consciousness (HC) on economic strength (ES) is significant. It can be stated that those respondents who generally maintain an awareness of

health care or can afford health care services have greater economic strength and living standards. Similarly, those respondents are not taking their health care seriously because their economic strength is not good enough to meet their living standards. If the residents maintain their health and can do any work perfectly without being absent due to health-related problems, it can help boost their income as well as their living standards.

7. Conclusion

The respondents who take responsibility for their health have good economic strength as compared to those who don't take care of their health. Similarly, the respondents who practice bad habits and bad practices find that their economic strength is not as good as compared to those who do not believe it and do not practice it. It can be said that health consciousness is significant for the economic strength of the Santal tribes of the Mayurbhanj district. If they take good responsibility, there are fewer chances of disease and, finally, their medical expenditure will be less. The tribe should avoid bad habits like smoking or intoxication before breakfast time

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