



THE INFLUENCE OF EDUCATION AND HEALTH ON RURAL HOUSEHOLD POVERTY: A MODERATING ROLE OF CULTURE IN PUNJAB, PAKISTAN

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ABSTRACT

The purpose of this study is to conceptualize the impact of education and health as a chief socio-economic determinant on rural poverty moderated by the role of Culture. An exhaustive literature has been explored the nexus between education, health and rural poverty, which provides a foundation for the further research. The findings of this paper indicate that the education and health create a strong impact on the alleviation of rural poverty. This study presents a brief overview for the alleviation of poverty to the policy makers in Pakistan. The findings for this paper can be adopted by the educational specialist for the development of proper educational policies and health strategies. Education and health show the significant impact on rural poverty and culture is a strong determinant that effect the rural poverty strongly. The empirical investigation of this paper could offer the base to the ministry of education to invest in education. This is a useful paper which propose a useful testable model for the study in Pakistan rural areas to fill the gaps of rural poverty literature.

Keywords: Education, Health, Rural Poverty, Culture, Punjab

JEL Codes: I10, I20, I30

1. INTRODUCTION

Poverty is spreading all over the world as a global issue (Khatun, 2015), including developed and developing countries, not only in rural but also in urban areas (Akerlele, Momoh, Adewuyi, Phillip, & Ashaolu, 2012). Study conducted by M. Iqbal et al. (2018a) mentioned that one of the most populous regions of the global world is South Asia, which accounts the one-fifth of the whole population of world, among this 1.2 billion are still poor and living under the one dollar a day. Success of Sustainable Development Goals can be achieved by poverty alleviation (Sutter, Bruton, & Chen, 2017; Yusuf, Shirazi, & Mat Ghani, 2016). Hence, poverty is global issue not only the issue certain regions. General phenomenon of poverty is supposed to mean “*different things for different people at different places and different time*”. Poverty is a situation where an individual or household is incapable to fulfil their basic needs or basic life necessities, which includes consumable and non-consumable things (Ogwumike, 2001). Various studies, referred that poverty is condition of deprivation which could in the form of isolation, powerlessness, physical weakness and social inferiority (Singh et al., 2013; Ogwumike, 2001; Odusola, 2001).

The World Bank defines poverty as ‘*Poverty is not having access of food*’ (World Bank, 2009a). However, poverty is also lack of shelter, health facilities and education. Poverty is not having employment (Usman, 2009). No access of basic needs of life such food, shelter, water and clothing is called poverty (Akerlele et al., 2012). In the term of economics low per capita income of country, region or household is the indication of poverty (Khatun, 2015). Poverty may be measured in terms of ‘*absolute poverty*’ and ‘*relative poverty*’ (Fry, Firestone, & Chakraborty, 2014). According to the International Poverty Centre (2006), absolute poverty means individual and group of individuals are poor or in poverty when they have lack of income, low level of education, substandard living conditions. While, relative poverty defined as, when individual and group of individuals having insufficient resources of life in comparison of other society members (Foster, 1998; Hameed & Karim, 2016). In recent past poverty has been measured by single element of income. However, modern

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concept of poverty is multidimensional such as income, education, health, population, employment and environment etc (Alkire & Foster, 2011; Alkire & Seth, 2015; Alkire & Sumner, 2013; Feeny & McDonald, 2016; Ferreira & Lugo, 2013; Yansui Liu et al., 2017; Yanhua Liu & Xu, 2016; Ali and Naeem, 2017; Ali, 2011; Ali, 2015; Ali, 2018; Ali and Bibi, 2017; Ali and Ahmad, 2014; Ali and Audi, 2016; Ali and Audi, 2018; Ali and Rehman, 2015; Ali and Senturk, 2019; Ali and Zulfiqar, 2018; Ali et al., 2016; Imran et al., 2021; Ali et al., 2021; Ali et al., 2021; Ali et al., 2015; Arshad and Ali, 2016; Ashraf and Ali, 2018; Imran et al., 2022; Audi et al., 2022; Audi and Ali, 2017) and cannot be eradicated with one thrust (Li, Su, & Liu, 2016; Yansui Liu, Liu, & Zhou, 2017). For example, well-being of nation cannot be measured by income (Shams, 2014). According to studies of Wlodzimierz (1999) and Hameed & Karim (2016), the major poverty reduction components are health, education, wealth and living standards. Most of the studies focused on the education, health, population, and income as a contributing factors of poverty. However, the present study has been considered culture as an additional variable. Moreover, it shall be use multiple dimensions to measure the culture of rural areas. Hence, the major purpose of this study was to explore the impact of socioeconomic determinants (education and health) on the rural household poverty with moderating role of culture in the Punjab, Pakistan.

II. LITERATURE REVIEW

The poverty has been a central issue of development efforts among the nations of the world for a long time (UNO, 2008). According to the World Bank (2009b), eighteen percent of the total developing world population was extremely poor and thirty-three percent was poor. Similarly, poverty is a basic rural issue in Pakistan (Iqbal et al., 2018b) where large population (almost seventy percent) lives in rural areas (Singh et al., 2013). Issue of poverty in rural areas is more severe in contrast to urban areas (Arif & Iqbal, 2009; Iqbal & Nawaz, 2017; Singh et al., 2013). In Pakistan, the Punjab reflects the highest rural population where households are facing deficiencies regarding clothing, income, health care, housing and facilities of education. Hence, the poverty involving various contributing factors is the central issue in the Punjab. Poverty is a serious threat to sustainable livelihoods by affecting income and productive resources, hunger and malnutrition, health, access to education, increased morbidity, mortality rate, homelessness and inadequate housing, unsafe environments and social discrimination and exclusion. It is also characterized by lack of participation in decision making in civil, social and cultural life. It occurs in all countries: as mass poverty in many developing countries, pockets of poverty amid wealth in developed countries, loss of livelihoods as a result of economic recession, sudden poverty as a result of disaster or conflict, the poverty of low-wage workers, and the utter destitution of people who fall outside family support systems, social institutions and safety nets.

Poverty may be defined as the instability to purchase necessities required by nature or custom or the lack of the ability to achieve the minimum living standards (Liu & Wang, 2019; Audi and Ali, 2017; Audi et al., 2021; Audi and Ali, 2016; Audi et al., 2021; Audi et al., 2021; Audi et al., 2021; Haider and Ali, 2015; Kaseem et al., 2019; Roussel et al., 2021; Senturk and Ali, 2021; Mehmood et al., 2022). According to the study of Kiriti-Nganga (2008), poverty is a lack of basic necessities of life, opportunities and services for the development of nation and also poverty is a condition in which community and person is deprived of, or less essentials for the minimum standards of life and well-being. Poverty may be described in term of material resources or social resources. Material resources such as food, cloths, shelter, and safe drinking water. On the other hand, access of information, education, health care, social status or the opportunities to develop effective social contacts in the society. Poverty was defined as "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services" stated by United Nation 2008. Study conducted by Iqbal and Awan (2015), Education is the basic key for change in society. Education also plays a vigorous role in bring economic proposity and social cohesion (Becker, Murphy, & Tamura, 1990; Mankiw, Romer, & Weil, 1992; Nawaz & Iqbal, 2016; Choudhry at el. 2019). People living below poverty line are unable to change their conduct easily not only for the reason that they have less avaiability of resources, but also it is lack of knowledge about their own environments and less avaibiltiy of education, illiteracy and survival techniques (Amjad & Kemal, 1997; Anka, 2009). Everyone needs to be educated including both males and females. In the development of every nation, education plays an important role (Tasleem, 2020). Attainment of high educational can infer a more set of services chances which may cause to reduce poverty (Cameron, 2000; Chaudhry, 2009; Chaudhry & Rahman, 2009; Vijaya, Lahoti, & Swaminathan, 2014; Zahra & Zafar, 2015).

The Education Sector in Pakistan especially in rural areas suffering from the inadequate financial input, implementation of programs with low level of effectiveness and bad management quality, supervision, monitoring and teaching. Therefore, Pakistan has low level of literacy rate in the whole world and also lowest among those countries which having same resources and economic/social situations and conditions (De Talancé, 2017). For the development of individual empowerment and new opportunities, education is an important element. Bayter and Bustelo (2019) stated that education is necessary for the reduction of poverty. From the governmental point of view is the investment in education for the alleviation of poverty. Investment in education is directly proportional to the economic development. Studies also showed that government investment in public education have high social returns. Eradication of poverty circle could be addressed by the investment and increase the quality of education.

According to the results by Usman (2009), in the rural area the condition of education has been worse than in urban area. There is lack of basic facilities like “sitting chairs, teacher’s availability, drinking water and boundary walls. The school’s buildings are dilapidated and used as Deras (drawing room) by local Waderas (Land owners) and children have no opportunity for education. This state of affairs raises poverty. The education attainment depends upon the head of household. Those households whose heads have education have lower poverty. But those households whose heads have no education have the highest incidence of poverty.” Base of development of country is *Education* in both social and economic view. Poor system and quality of education is one of the most significant reasons that underdeveloped and developing countries don’t grow. In the rural region of Pakistan, the education quality is on the decline in spite of the fact that the present. Teachers quality is still questionable especially at primary level. It is confirmed that without transformation of teachers we cannot transfer the system of education for improving and increasing the education quality (Memon, 2007; Rasool, 2007). For the empowerment of women, education is very important especially for girls in everywhere. In the rural region of Pakistan there is different enrolment rate for boys and girls, enrolment of boys are more rather than the girls. According to UNESCO (2004), “*primary school enrolment for girls stands at 60 per cent as compared to 84 per cent for boys. The secondary school enrolment ratio is even more discouraging, 32 per cent for females and 46 per cent males*” (Salik, ZHU, & LIU, 2014).

In addition to education, health is the part of human capital which contribute in the reduction of poverty at individual and community level (M. Afzal, Malik, Begum, Sarwar, & Fatima, 2012; Hameed & Karim, 2016; Naveed & Islam, 2012). “*Health endowments of the individuals are the necessary and important components of human capital which make them productive and raise their standard of living*” (M. S. Awan, Malik, Sarwar, & Waqas, 2011; Mughal, 2007). Healthy persons are likely to be more productive. Health discusses to physical health and mental health of people (Usman, 2009). When there are no proper health facilities for the human being, such state of affairs has the insignificant impact on the efficiency and incomes of the poor (Durrani, Usman, Malik, & Shafiq, 2011; P. Z. Janjua & Kamal, 2014). Study conducted by Woo, Yu, Cheung, and Lai (2020) studied on poverty and health. Researcher stated that poor are suffering poorer health facilities and conditions and die younger especially in the developing countries. They have limited resources and higher number of diseases but for the social production and health a smaller number of resources available. They have higher child mortality and maternal. In the rural areas, they have gender inequality, because of this poor women and girls are not getting the health facilities. For the poor people, health is the big economic asset. When a poor person is injured or suffering from any disease then the entire family trapped the cycle of poverty due to the lack of income and also due to higher cost of health care. This situation is very worsening when the head of household is women. Every year more than five hundred thousand women die at the time of pregnancy because of complications. These complications of pregnancy are occurring 99 percent in the rural areas of developing countries. Baby are also dying first week of their life. Annually, four million are almost died. Every year, billions of people died due to many other diseases. Medical facilities are not provided in the rural areas of country, greater population lives in the rural areas, they are remains deprived from the health and medical facilities. Poor people have no access for these basic facilities. Poor people cannot afford medical services because these services are very expensive and not reachable for the poor people. When poor people did not get proper treatment in the government hospitals, they move towards the private hospitals. Specialist and doctors charge high fee, this situation is very hard for the poor people. Such situation has a negative effect on the efficiency and incomes of the poor. Due to lack of basic facilities of health and medical facilities, poor are suffering in poverty especially in the rural areas.

In rural areas, malnutrition; high growth of population and Poor health are widespread that badly affecting productivity. According to an estimate, 30-50 million people are malnourished (Banharak, 2017). Appropriate facilities for healthy activities are not available in rural areas. So, the frustrated young people indulge in obnoxious activities such as drug addiction, robbery, murder, etc. (De Gruyter, Saunders, Stavreski, Jennings, & Circulation, 2019). Traditional Quacks are play an imperative role in rural areas of Pakistan, which have been the main threat towards the system of health for quite long but currently, new kinds of quacks are rising that contain religious persons who are not only giving the blessings but also provide their own medicines (Padda & Hameed, 2018). In rural areas of Pakistan, health system can also demolish due to “Midwives or Traditional Birth Attendants (TBAs)”. TBAs are non-trained and uneducated completely. They don’t unaware of their limits but also never understand the importance of the referral network. They are the major reason of maternal morbidity and mortality. They cause damage to newly born baby and mothers due to less skills and knowledge. They don’t know the importance of sterilization and use unclean hands on newly-born baby and women. They use unsterilized knives, dirty clothes pieces or thread during the treatment. They insert harmful weeds and their own made medicines in the vagina and freely inject Oxytocin as a tonic injection before the delivery (Sarfraz et al., 2016; Withers et al., 2018). Locally trained nurses also know down the system of health in rural zones of Pakistan. Most available Variety in rural region of Pakistan is nurses that are locally trained. Most of locally trained nurses are middle pass and some of them are high school pass or less. They are not properly trained and educated. The work in hospitals and clinics in hospitals. Seniors among them work as a lady doctor and are also involved in criminal abortions (Ahmed et al., 2019; Shaikh, 2015). Urban cities get more health facilities rather than rural areas, while the population in rural areas are greater than the urban areas but rural areas remains received less facilities and medical services (Nlerum, 2013).

III.I. CONCEPT OF ABSOLUTE POVERTY AND RELATIVE POVERTY

There might have different ways to assess the poverty which can be separated into two broad categories: relative poverty and absolute poverty (Fry et al., 2014; Hameed & Karim, 2016; Khan, Rehman, & Haq, 2015). According to the International Poverty Centre (2006), absolute poverty means individual and group of individuals are poor or in poverty when they have lack of income, low level of education, standard of living is poor and other resources that are important to get better condition of life and Relative poverty defined as, when individual and group of individuals having insufficient resources when compared with other society members (Foster, 1998; Hameed & Karim, 2016). Average income of the general public and Absolute poverty can be destroyed, if there is higher monetary development, which decreases appropriation of pay, financial development is the key determinant of poverty alleviation, when the poor become profitable then poverty alleviation is conceivable (Anwar, 2005). Absolute poverty is also called material poverty, material poverty is also known as income poverty or expenditure per capita poverty and Relative poverty is called non-material poverty, non-material poverty defined in terms of education, health, unemployment, culture (Khan et al., 2015).

Idea of absolute poverty is more appropriate and pertinent in the poor nation, Concept of relative poverty and developing countries is applicable and appropriate to the industrialized countries (Roy et al., 2018). According to Sen (1990), absolute poverty refers to a state of deprivation and identifies hunger and malnutrition. He argues that poor person’s food consumption often does not meet the minimum calorie and nutritional requirements. Absence of enough food, shelter and water for being is absolute poverty. The base bin of assets where one is expecting to endure is Absolute poverty. The relative poverty is assets and living conditions in the general public in relations to other people. In this way, total poverty is appetite, hardship, and absence of training, sick wellbeing and enduring (Anka, 2009; Anwar, 2005; Anwar & Qureshi, 2002; Usman, 2009)

Additionally, the situation in which the basic needs cannot be met can be described as absolute poverty. The societal resources and living conditions in relations to others is known relative poverty. The associated with a matter of social equity and the unequal distribution of resources known as relative poverty. The matter is linked with social exclusion and average income of the society (Khatun, 2015).

III. OPERATIONAL DEFINITIONS

The definitions of the important terms are being presented in the upcoming sections.

III.I. POVERTY

Poverty is regarded as “lack of access to basic necessities of life such as food, water, shelter, and clothing as well as inaccessibility to the social, cultural and means necessary to guarantee, productivity, social reproduction, and everyday life of the society” (Akerele et al., 2012). The government of Pakistan defined

poverty “a state or condition in which a person or community lacks the financial resources and essentials to enjoy a minimum standard of life and well-being that's considered acceptable in society” (M. Iqbal et al., 2018b). Poverty means – “a person is poor if, and only if, his or her access to economic resources is insufficient to acquire enough commodities to meet the basic material needs adequately” (Khatun, 2015). The definition of poverty later simplified as the lack of the ability to achieve the minimum living standards (Yansui Liu et al., 2017).

III.II. RURAL POVERTY

The rural population can incline to be not as much of educated and not as much of health, also limited opportunities and to go through inferior services distribution. Meanwhile a substantial portion of financial activities in low-income rural areas has been dedicated to the staple foods and making availability of basic supplies for which the income elasticity of demand was low, a reduction of poverty has required the change of activities to production of different services and goods with more income elasticities of demand and momentous growth in productivity (Klasen & Reimers, 2017).

III.III. SOCIAL ECONOMIC DETERMINANTS

Social economic determinants provide data on education, health, income, population, poverty, culture and other economic indicators (Roy et al., 2018). Social economic determinants provide a background to understand the scenario of poverty in a country. Its deprivation shall be measured in terms of education, health, population, income and culture.

III.IV. EDUCATION

Education is the most important factor in the development of human capital. It is thought to be a way out of poverty. Education plays a vital role in determining the productivity of an individual. Therefore, the present study has considered deprivation in education as one of the indicators of poverty. Its deprivation shall be measured in terms of the years of education, quality of education and child enrolment status (Idrees & Baig, 2017). This study focusses on the rural poverty which refers to Education (E). In the context of this research study, Likert scale will be used, “on the Likert scale (5) stand for strongly agree and (1) stand for strongly disagree”

III.V. HEALTH

Health is another fundamental unit of wellbeing. Healthy persons are likely to be more productive. The present study shall consider deprivation in health as another indicator of poverty. Deprivation in health shall be measured in terms of women health and child health (Idrees & Baig, 2017). This study focusses on the rural poverty which refers to health (H). In the context of this research study, Likert scale will be used, “on the Likert scale (5) stand for strongly agree and (1) stand for strongly disagree”

III.VI. CULTURE

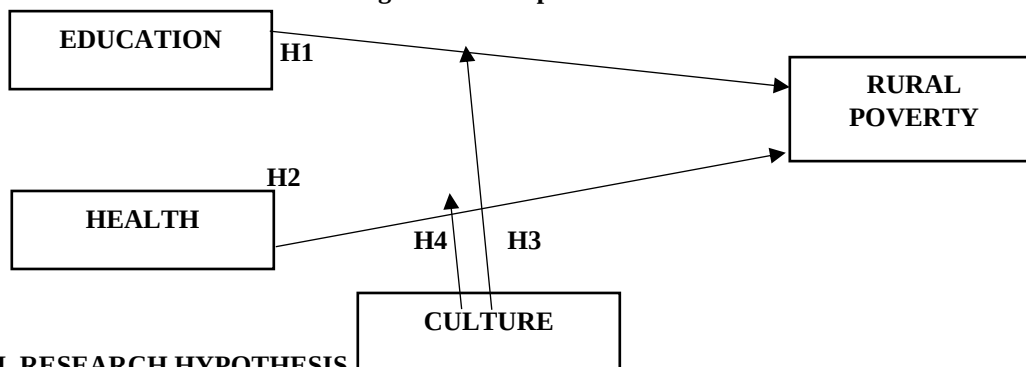
Culture is the one of the most important indicators of poverty. According to the studies conducted by Bradshaw, McDonagh, and Marshall (2006) defined culture as “Culture is the set of beliefs and values passed from the generation to generation”. Differences in culture also effects the poverty. Culture shall be measured in term of traditions, family's rules and laws and religion. In this study culture play the role of moderator.

IV. CONCEPTUAL FRAMEWORK

The base of any research plan is the research framework which is the focal point of all the study (Ennis, 1999). The interrelated set of concepts which gives a course to the study is called the theoretical framework (Creswell, 2014). Research framework demonstrates the dependent and independent variables and also moderator. Socio-economics determinants (Education and Health) are independent variables and rural poverty is dependent variable and culture is Moderator of the research study. Education is a key to success. Education is key concern determinants of rural poverty. Increase in the level of education, reduce the rural poverty. Like education, health are also the important determinants of rural poverty that removes or alleviate the poverty from the rural areas of a country. These determinants support in the easing of poverty. A poverty measure usually starts from the notion of fundamental human requirements such as health and nutrition as reflected in the works of J. Roy et al. (2018). Health situation and access to health services are other major challenges to Pakistan (Ashraf, 2017). Culture is also the one of the most important indicators of poverty. According to the studies conducted by Bradshaw et al. (2006) defined culture as “Culture is the set of beliefs and values passed from the generation

to generation”. Differences in culture also effects the poverty. Culture shall be measured in term of traditions, family’s rules and laws and religion.

Figure 1: Conceptual Framework



IV.I. RESEARCH HYPOTHESIS

Following hypothesis are formulated,

H_1 : There is an association between education and rural poverty.

H_2 : There is an association between health and rural poverty.

H_3 : There is an association between education and rural poverty moderated by culture.

H_4 : There is an association between health and rural poverty moderated by culture.

IV.II. RESEARCH METHODOLOGY

Methodology is defined by Holloway (1997) as “*Principles and philosophy on which researchers base their procedures and strategies, and the assumptions that they hold about the nature of the research they carry out.*” Research is an effort to investigate the solution to a problem. It is a multi-step process which is systematic and organized (Sekaran & Bougie, 1992). This study was conducted by using survey method in rural areas of Punjab Pakistan i.e., Multan division and Bahawalpur division. The questionnaire was personally be administered in the four big districts of division Multan and division Bahawalpur. For this study, data collection was carried out for several weeks. For the collection of data, self-administered questionnaire was used from the households of rural region of Punjab. Using quantitative methodology provided an opportunity to establish an up-to-date perspective of Pakistani household’s regarding rural poverty towards socioeconomic determinants. Data was collected via cross-sectional survey involving the distribution of structured questionnaires among the households of rural districts of urban areas of Multan and Bahawalpur divisions.

For the researcher knowledge, the calculation of sample size is imperative. For the successful research, sample size is very important in planning and designing. As established by Fink (1995), “*A sample is a portion or a subset of a larger group called a population. The population is the universe to be sampled. A good sample is a miniature version of the population - just like it, only smaller.*” It is essential that the properties of the sample should be the same as that of the population. The representative sample is important because the results obtained from the study will represent the decided population. Multan and Bahawalpur were selected as sample because they are major rural areas having large population in Punjab. The estimated rural population of Multan and Bahawalpur is 8,871,382 and 8,639,041 respectively (Census Report, 2017). The sample size of 444 is suitable for the population by using the G-power software. G-power is a recently used technique for determination of sample size. G power is program which is used to for power analysis and for calculating the sample of respondents required for the analysis. This program offers power analysis for frequently used tests namely t-test, F test, z test, chi-square as well as exact tests (Faul *et al.*, 2007).

V. RESULTS AND DISCUSSIONS

The data was obtained from the rural zones of Punjab, Pakistan. According to the design of the study it was found appropriate to survey 444 general households in rural areas across the Multan and Bahawalpur division. The researcher overcame the issues of late respondents by collecting the data personally from the households directly at the Multan and Bahawalpur divisions. Attaining 100% response rate by receiving all the questionnaire back. Out of 444, 22 questionnaires were found incomplete response and the total valid result is 95%. Table 1 shows the response rate summary.

Table 2 shows the respondent profile. Total of 444 respondents were put to analysis. The results display that 58.6% of respondents were male who participated in the survey however, remaining 41.4% of the participants were females. The male respondents are greater in number as the study is related to socioeconomic determinants of poverty and impact on rural poverty as well as the data was collected from rural areas of Punjab, men were more likely to be encountered. Most of the household decisions are made by males in the country. Furthermore, 58% of the participants of the study possessed high school education and 1.7% possess masters. This shows clearly that most of the participants were not well educated, not enough to understand the purpose of the research.

Table 1: Summary of General Response Rate

Distributed (Questionnaires)	444
Returned (Questionnaires)	444
Unreturned (Questionnaires)	0
Ratio of response rate	100%
incomplete (Questionnaires)	22
final usable (Questionnaires)	422
Ratio of valid response rate	95%

Table 2: Respondent Profile

Demography	Indicator	Frequency	Percentage
Gender	Female	184	41.4
	High School	257	58
Education	Intermediate	151	34
	Bachelor	28	6.3
	Masters	8	1.7

Table 3: Descriptive Statistics

Construct	N	Minimum	Maximum	Mean	Standard Deviation
Culture	422	1	5	4.108	0.7077
Education	422	1	5	4.104	0.5748
Health	422	1	5	3.821	0.8351
Rural Poverty	422	1	5	4.053	0.6878

Five points scale 1= strongly agree, 5= strongly disagree

Table 3 shows the descriptive analysis and all values lie in tolerable range. The outcome shows the mean of all variables lies between the range of 3.821 to 4.108 and standard deviation shows the range of 0.5748 to 0.8351, which are also acceptable. It can be explicitly established that all the variables possess an adequate and reasonable level of implementation.

V.I. HYPOTHESIS TESTING RESULTS

We adopted Structural Equation Model (SEM) introduced by Hair et al., (1998) using smart PLS version 3.0 to analyses the data. Partial Least Square (PLS) is appropriate to examine the complex but predictive model having multiple variable constructs. The PLS execute the outer and inner model. Whereas the model determines the overall psychometric properties of the scale used to measure variables, the structural model determines the predictive relationship between the variables. Moreover, the smart PLS version three can handle reflective and formative constructs in one model at same time. In this research, PLS techniques are applied to assess the quality of the data. The above Table 4 shows the summary of all the main hypotheses.

Table 4: Path coefficients of Direct Paths (Main Hypotheses)

Hypo.	Relationship	β -Value	STD	T-Value	P-Value	Decision
H1	E -> RP	0.254	0.062	4.121	0.000	Accepted

H2	H → RP	0.095	0.041	2.308	0.011	Accepted
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H₁: First hypothesis of the study states that education has a positively significant impact on rural poverty. Bootstrapping results provides support to the hypothesis ($\beta = 0.254$, $t = 4.121$, $p = 0.000$).

H₂: Health casts a significant impact on rural poverty. The results reveal that there exists a positively significant nexus between health and rural poverty. ($\beta = 0.095$, $t = 2.308$, $p = 0.011$), hence accepting the hypothesis.

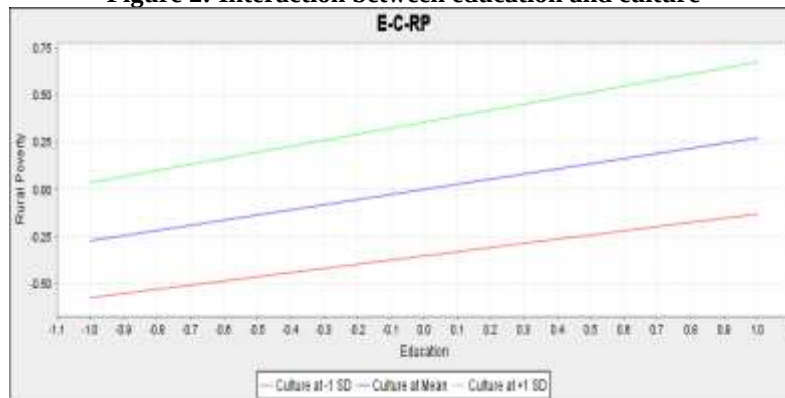
Table 5: Interaction Path coefficients and Significance Level

Hypo.	Interaction Effect	B-Value	STD	T-Value	P-Value	Decision
H3	E × C	0.270	0.054	5.035	0.000	Accepted
H4	H × C	0.073	0.043	1.712	0.044	Accepted

Table 5 shows the path coefficients along with the p-values which show the impact of culture as a moderator.

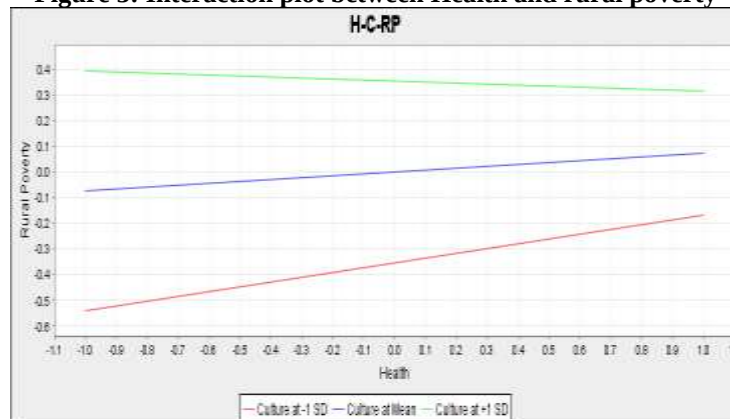
H₃: As the results reveal that the interaction effect for Education H3 is supported ($\beta = 0.270$; $t = 5.035$; $p = 0.000$). The results indicate that high level of culture regarding the education. The results have been depicted in the interaction graph Figure 2. The graph has been plotted by using Microsoft excel using line graph options. The values of dependent variable have been plotted against the y-axis and the levels of independent variable has been plotted on x-axis. The graph lines show the levels of the culture.

Figure 2: Interaction between education and culture



H₄: The next hypothesis of study under discussion is that culture moderates the relationship between the health and rural poverty ($\beta = 0.073$; $t = 1.712$; $p = 0.044$). However, the outcomes reveal that culture does moderate this relationship, hence accepts the hypothesis.

Figure 3: Interaction plot between Health and rural poverty



VI. FINDINGS OF THE RESEARCH STUDY

The main object of the research study is to *determine the impact of socio-economic determinants on rural poverty*. The first research objective under the main objective was to determine the impact population as a socio-economic determinant on rural poverty. The first hypothesis of the study H₁, was accepted using PLS

bootstrapping and algorithm technique. The prevalence of positive and significant nexus between education and rural poverty can be ascribed to the likelihood that education as a socioeconomic determinant is considered as an essential for the alleviation of poverty. Education is the key of the development of nation. The result of the hypothesis shows that there is a significant relationship between education and rural poverty. These results are in line with the outcomes of Batul et al., (2019) and Afzal et al. (2012) whose findings reveal that education casts positively impact on rural poverty significantly. Study conducted by A. Afzal, Mirza, and Arshad (2020), education is a strong relationship with poverty. High level of education accomplished greater set of opportunities of employment, which play a chief role to decrease the poverty. Education not only eliminate the poverty but also provide the chances of employment, employment is the step towards the development of nation (Vijaya et al., 2014).

The second hypothesis H_2 of the study proposed that health impacts the rural poverty significantly. The hypothesis was accepted. The positively significant nexus possibly emerges from the fact that Pakistani rural households is becoming health conscious, they expect the value of healthy person and for the health, health facilities are very important. The result of the study agrees with the findings of F. M. Awan et al. (2020) who claimed that the health is the essential for human development. And have direct relationship with rural poverty of country and also the findings of Saleem, Shabbir, and Khan (2019) and (Akhtar, Liu, & Ali, 2017) mentioned in their research that health is key element of progress and development of nation. The second main objective of the study was “*culture moderates the relationship between socio-economic determinates and rural poverty*”. In an attempt to achieve this objective two hypotheses were articulated. According to Barron and Kenny (1986) moderator is a third variable which impacts the direction and strength of relation between independent and dependent variable.

The subsequent hypothesis H_3 of the study proposes a significant interaction effect of culture on the relationship between education and rural poverty was found to be supported. The observed interaction impact of education reveals that with changing levels of household's culture, rural poverty towards the education. The hypothesis H_4 proposed that culture moderates the relationship between health and rural poverty. The hypothesis was seen to be supported by the analysis of study. The prevalence of moderating effect shows that with the varying in culture of households also fluctuates the rural poverty. Study conducted by (Parveen, Juzer, & Madani, 2017) mentioned in their study that culture in both social and economic dimension play a strong and powerful role in the alleviation of poverty.

VII. CONCLUSION

Poverty is the chief issue for global world. Poverty is defined in different measurement and ways but it is clear that poverty is multidimensional and complex issue. The effort for poverty reduction seems great important than ever, but the estimated outcomes from initiatives such as the MNCs as well as Millennium development goals have not had the anticipated impact in developing countries. In the developing countries, economic growth had translated into poverty reduction and poor become poorer and rich people become richer. For the solution of poverty, efforts need to increase the basic necessary of life including income, education and health facilities. The overall research findings can be concluded as, socio-economic determinants overall possess a significant and positive impact on rural poverty. Education showed a significantly positive impact on rural poverty. The next socio-economic determinant which is tested in this study is health which exhibited a positively significant relation with rural poverty. Culture is a moderator variable being employed in the study; who's overall impact came strong. However, culture acted as a moderator in the relationship of education and health with rural poverty. As a wave of using socio-economic determinants is recent in Pakistan hence the impact of culture came out to be comparatively strong. As a concluding remark, socio-economic determinants are the key of poverty alleviation and development in country especially, in rural areas of Pakistan.

VIII. CONTRIBUTION

Findings could eventually make significant contributions to improving education and health conditions, particularly for rural Households living in poverty. Batul et al. (2019) stated that education research has gradually improved the content and context of poverty-related policy considerations. A. A. Janjua and Awan (2020) who claimed that the health is the essential for human development. And have direct relationship with rural poverty of country. The findings of this study could help develop new policies and programs for the development specially in the rural region of Punjab to improve the education as well as health status. This

study was also a contribution toward filling the gaps in knowledge, hoping that a better understanding of these elements simplified the test of making well-informed governmental decision over such a critical issue.

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