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The Effects of Family Size and Learning Achievement on Dropout Rate of the Students at Primary Level

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Abstract *In this paper the researcher observed about family size, learning achievement and dropout rate of the students at the primary level in Swat, Pakistan. A sample size of 170 respondents was interviewed from the total population of 700 (dropped students). To find out the effect of family size and learning achievement on dropout rate of the students. A logistic regression model was applied. The result indicates that majority of respondent's family size was above ten members and monthly income (4,000-7,000) PKR. Similarly, large family size was found highly significant "P = 0.000" and Low Learning Achievement was significant as "P = 0.011" with dropout from school. The study concludes that out-of-school (large family size) and in-school (low learning achievement) are the major causes of high dropout rate from schools at primary level.*

Key Words
Dropout; Family Size; Learning Achievements; Primary Education

Introduction

This paper has been planned to ascertain the relationship of large family size and Low learning achievement with dropout at the family level in district Swat.

In Pakistan, we have various kinds of family systems like single-family system, joint family system, etc. Almost in joint family system we have so many members, living together within one house. Hence, a large number of children interfere in one another matters. The atmosphere becomes unsuitable for learning and their learning capacity reduces and such children remain weak and face failure (Chohan and Qadir, 2013).

Today 90% of children go to school although primary school enrollment of children has reached 570 million, still 72 million are out of school. Education is the basic right for every human and a catalyst for, socioeconomic development and survival (World Bank, 1993). Education and culture play a starring role in physical, social and moral development of human beings. It is also a source of social existence as well (Sharma, 2007) although large dropout at primary level is still a milestone in educating people by schooling process (Bilquees and Saqib, 2004). Our country Pakistan has made great strides in adult education, but often encounters poverty, shortage of adequate food, ill-health and unsanitary conditions, lower or no income, inflation, joblessness, industrial sectors and animal grazing etc. All these out-of-school problems directly or indirectly related to the gigantic dropout (Ananga, 2011; Malik, 2002).

Sanctioned age for beginners/primary school students is between five and nine years in our country Pakistan. The population of the above-mentioned age group was about twenty 20 million in 2004. Of which 13.953 million children enrollment, the remaining 6 million girls were not going to school. Enrollment of 13.95 million people, of which 45% in different classes (1 to 5 class) dropped out. For several decades, the literacy rate has been improved significantly from 26.2% (Pakistani government, 1998) to 57.00 % in 2009 (Pakistan Government, 2010). However, about a quarter (50 million) of children in the country are not going to school and about 50% of those drops before it to complete primary education.

Moreover, the quality of education is at an unfavorable and deteriorate extent due to extreme poverty, backward infrastructure, social causes, religious beliefs, cultural adaptation, low parental

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acceptance and nowadays security threats and the war of terror. Such reasons restrict smooth flow of education, especially for girls. In light of this in 2009, a strategy was adopted and implemented from stateside to support schoolchildren financially for stopping this gigantic dropout (Naudeau, et al., 2012). On the other hand, due to extreme poverty in the country, most parents believe that it is important for children to learn basic skills (arts and crafts) and support the family in financial matters (NCHD, 2010). In South America enrollment is high but still few poor children are able to complete primary education, comparing this situation with south Asia and central Africa children of poor families never come to school (Chowa, Ansong, and Masa, 2010).

Many far-reaching steps are taken to improve primary education by the Khyber-Pakhtunkhwa, Pakistan government i.e. school curriculum modification, provision of best quality and free textbooks, hiring trained, qualified trainers and teachers and award of remunerations or financial assistance to the girl students. The target not fully achieved by 2018 because of the poor performance and participation of the respected stakeholders, which was one of the primary provisions of the National Action Plan (Government of Pakistan, 2005). Likewise, under the Millennium Development Goals (MDG, 2004) similar targets have been set for the developing countries. The goal of the (MDG 2) is to ensure that girls and boys will be able to complete primary school classes by 2015. The current goal of universal primary education (UPE) appears to be based on the current stakeholder participation in KP, Pakistan (Kadzamira and Rose, 2003).

Literature Review

Education and literacy play a starring role in socioeconomic advancement and prosperity of a country. Primary education builds a strong foundation. In this regard, Education for All (EFA) is the main concern of the Pakistani Government and it is (EFA) one of the primary tasks of the Government of Pakistan in the running decade. The sixth EFA goal is aimed at rural and urban vulnerable groups, laying the groundwork for the planning objectives of the National Action Plan (2001-2015). Multiple consultations with EFA and key stakeholders have contributed a lot for the improvement of the National Action Plan (2001-2010).

Children education is one of the most important factors in making the human race more civilized although certified data illustrate that school enrollment of population of age group 5-14 years have a tremendous variation among 1st and 2nd world nations. In 3rd world regions a lot of factors which still resist the household from spending on children education. The poor families consider that spending on education is the duty of rich people and they say that it is a luxury task therefore unaffordable for us (Basu and Van, 1998).

Applied behavior analysis focused on student curriculum contents, its modification, age of the students and skills learning level as well as the use of digital tools, modern technology and its proper use (Janet, 2018).

Prompt ups and downs and progress in modern digital tools have diverted the direction of learning environments from primitive to modern era. Everyone knows that computer applications play an essential role in the planning phase of teaching processes, and make it possible for technology to be used effectively (Dogan, 2009; Mitra and Steffensmeier, 2000; Seo and Bryant, 2009). Computer technologies are the most popular, widespread and effective technologies used today, and represent a huge potential in terms of providing solutions for problems related to education. Differing from other educational methods, computer-supported teaching methods provide unique opportunities for teaching and learning, and make it possible for the computer to be integrated into the classroom environment as a tool for teaching, managing, presenting and communicating (Yalin, 2001).

Each society passes the social heritage to the coming generation. An individual can achieve the multi-dimensional development of the soul and mind through education (Okumu et al., 2008). It encourages and guides people to consciously and consciously recognize the divine law of their choice (Godbole, 2001). The attendance of the child failed to complete the primary education cycle (which means failing to reach the fifth grade) is called dropout. Some children often fail every year and stay in the same class. This recurrence increases in the cost of education affect its lifelong benefits for the next generation and prolong the school progression period for the existing generation (Sattar, 1984; Gandara and Contreras, 2009). Pakistan's participation rate is approximately 50-60 percent in our country, and 48% of children leave schooling before the completion of primary phase (Pakistan Education Planning and Management Institute, 1985). Completely dropped out and partial withdrawal may lead to termination of the school (Wijk, 1983; Finn, 1989; Bennett, 2003).

Multiple factors are responsible for enforcing dropout; corporal punishment is also one of the main causes under the "in-school" objective. In Pakistan, corporeal punishment was 52 percent found among teachers with their students in 1989 which increase the ratio of dropout. Moreover, many researchers also declared poverty as a fundamental forcing agent for children education before the completion of primary phase (Harber, 2004). According to study in 1977, it was shown that 79% of dropouts were from those who have low-income. In addition to this low literacy of parents, combined family structure, bulky family size (more siblings), arrangement of school, its physical environment, social environment, geography of region and pre-school teaching pressure are contributing

more towards this gigantic dropout (Chug, 2011). Various studies have been conducted in Bangladesh which shows the different reasons for their school dropout. According to a study, dropout rates vary, and the socioeconomic status of students' "families" is not the same (Sattar, 1984; Pong and Ju, 2000). Poverty is said to be the main reason for disputes ill health, population increase and educational progress of the students as well. (Okpala, Okpala, and Smith, 2001) examined that the SES is directly related to the students' achievements. (El-Hassan, 1998) also highlighted that the economic status of parents shakes the educational level of their offspring. Sometimes parents, having low SES involve their children in labor after school timings, which affect their studies to a great extent. The report of (Canagarajah and Nielsen, 2001), showed that child laboring is also prevalent in unindustrialized regions of the world, due to which students cannot pay attention to their studies**.**

To achieve the "universal primary education" (UPE) a comprehensive policy. Primary school enrollment is high, but half of the children in many developing countries did not complete a comprehensive education (Lewin and Sabates, 2011) due to dropping out of school during school hours. The extraordinary school enrollment rate may not get the basic skills, this dropout may be due to the classroom is too crowded, learning materials, unqualified teacher. Children in the classroom are made up of different age categories, different mindset, social class, intelligence level teaching method accelerate students dropping rate (Alexander, 2008).

Theoretical Framework

This interesting study will rely on the two economic theories "Human capital theory of Becker (1975) and Malthusian Theory of Population (1798)". Similarly, Becker (1975) gave his famous Human capital theory, narrating that education and training is the best investment in human capital. This theory has its roots in a T.W. Shultz Nobel prize-winning article published in the sixties (Schultz, 1961). This article was the beginning of the knowledge economy, this way traditional economics shifted to a knowledge economy (Bouchard, 2008). While Becker, (1975) further suggests that the choice of educational attainment is based on the intersection of the marginal rate of return and the marginal cost of education (Jamal, H. (2015). In 18th century Thomas Robert Malthus warned that resources are finite. While the reproduction rate of human is higher than its ability to produce further resources for its survival. Poverty increases considerably with the rise in family size (Bouchard, 2008). In light these two theories this study will scan the consequence of family size and social status of the parents on the low learning educational attainment and dropping rate from schools before the completion of primary phase.

Methods

Data for this paper was primarily collected from Khawzakhela Circle of District Swat, Khyber Pakhtunkhwa. The total population of those families who dropped their children from school at the primary level was comprised of 700 households. According to the devised procedure of Uma and Sekaran (2003) for 700 households a sample size of 170 is enough. Moreover, for different population strata's proportional allocation formula, ($ni = n/N \times Ni$) derived by Chowdhary and Kamal (1996) was used. The data were collected on simple indiscriminate sampling technique from each of the strata of concerned population, through a well- well-thought-out interview guide by incorporating all marginalized aspects of the study. The data were analyzed through SPSS for analyzing the relationship between independent and dependent variables through Logistic Regression Model. The model used was ($Y= a+b1x1+b2x2+e$) in which "Y" is dependent variable (drop-out rate), "X1 and X2" are independent variables (large family and low learning) respectively while "e" stands for error and "b" is constant.

Results

At univariate analysis, the result expressed that the most of study respondents i.e. 26% family size were between (6-9) members, 52% respondents were (10 and above) while 22% were in between (2-5 members). Furthermore, the majority of respondent's i.e. 74%, monthly income were between (4000-7000 PKR) while the 78% respondent's monthly expenditure was (6000-10000 PKR). Moreover, majority of respondent's parents' literacy level was primary (Table. 01). A logistic regression model was run to test the relationship between dependent variable (Dropout) and independent variables (Large Family Size and Low Learning Achievement). According to the study results the independent variable "Large Family Size and Low Learning Achievement" were found highly significant as a whole ($P = 0.00$) at ($P<0.05$) level of confidence (Table. 02). The grouping variables explained 24.8% -34.6% variance in prediction variable is shown in model summary as; R^2 values of 0.248-0.346 (Table. 03). The exponential β value given in showed a unit increase in size of family leads to (8.292) times rise in the dropout while learning achievement had a negative influence on dropout rate i.e. 0.353 value by exponential β value but significant. Consequently, there is a less likelihood of dropout by up flowing the proficient transfer of learning achievements or efficient transfer of knowledge could reduce the chances of dropout by 0.353 times. The result showed two

core causes of dropout at primary level, in general, there may be many reasons for the school dropout but two main factors which directly lead to the discussed problem are: out-of-school (large family size) and in-school (low learning achievement) is responsible on the base of this study (Table. 04).

Table 1. Basic Information about the Respondents

Statements	Frequency	Percentage
Family Size		
2-5 members	37	22%
6-9 members	45	26%
10 and above	88	52%
Monthly Income in PKR		
Rs 4000-7000	126	74%
Expenditure in PKR		
Rs 6000-10000	133	78%
Educational Status		
Literate up to primary	98	58%
Illiterate	72	42%

Table 2. Model Coefficients of Omnibus Test

	χ^2	Df	Sig
Step	48.409	2	0.001
Black	48.409	2	0.001
Model	48.409	2	0.001

Table 3. Model Summary

-2 Log likelihood	Cox and Snell R^2	R^2
165.621a	.248	.346

Table 4. Influence of Large Family size and Low Learning Achievement on Dropout

Independent Variables	Unstandardized Coefficient		ExP 'β'	Wald Test	Sig.
	B	Standard Error			
Constant	0.0457	0.0362	1.580	1.601	0.206
Large Family size (out of school)	2.189	0.412	8.292	58.274	0.000
Low Learning Achievement (in-school factor)	-1.041	0.407	0.353	6.536	0.011

Discussion

The above results are in line with the work of as follow; According to the research of Chen (2017) on "relaxed population policy, size of family and investment of education in rural China" he elaborates that the number of children increasing investment decreases. Another study conducted by (Becker, G. S. (2017) narrates that there is a close link between human capital investments in children and parental decisions about family member number. It is because of the fact that parents divide their income between their children. Consequently, big size of family is blamable for poor performance of the offspring leading to dropout at primary level. Family size, family members and their behavior generally affect students' performance (Sahin and Gülmez, 2000).

The contemporary studies results reveal that when the number of children increases, their academic achievements become lower, these results are endorsed by another study conducted by Kugler, A. D., and Kumar, S. (2017) elaborates that offspring from families having large number have poor learning achievement and are less likely to join up school. Similarly, other researchers Chohan, B. I., and Qadir, S. A. (2013), advocated that a child who remains more satisfied will concentrate more on his/her studies, while families, where the number of children is large, may not able to take keen interest in their studies. Tsaneva, (2017) work declared that assuring Indonesian

offspring for financial instability is because that more schooling takes more time and consume more amount. This education assuring policy protect the poor, needy and marginal children who are dropping out due to resource limitations. Chatterjee. 2018 work on Indian primary school enrollment, learning outcomes, infrastructure up-gradation, teachers' quality and costs of education is in progress while the numerical and reading skills of those children whose age is 8-11 years is worsening. This research sheds light that learning outcomes are a global issue.

Conclusion

This study concludes that out-of-school factors being a major cause of the high dropout rate should be addressed by government and Non-government organizations through broad-spectrum policies and action plans. Moreover, they should target poverty reduction through income generation initiatives and controlling family size through mass media and public awareness campaigns. However, in-school factors are easy to tackle. It can be overcome by establishing a link between the family and the school, avoiding the teacher's choice of teachers, checking and balancing policies and the preference and nepotism of girls' special priorities, and banning children with facilities such as financial subsidies and transport. This study recommends some important steps which the government should focus such as; a) to develop the quality of the school infrastructure as well as curriculum. b) The teachers should be trained and use those recommended approaches which involve students in getting knowledge, preparing them for future and helping them for quality academic performance. c) The policy should be implemented for the discouragement of corporal punishment at school and domestic level. d) To ensure security and protection in the area, mostly for the female schools, especially after the wave of recent militancy. This will increase enrollments and will be an important step in achieving universal primary education in Khyber-Pakhtunkhwa. If the Khyber-Pakhtunkhwa wishes to improve literacy rate, the government should focus the subject dropout at primary level on urgent basis. Although, the causes for dropping out vary depending on the area, condition, however, the main factors such as; "Out-of-School" and "In-School" which may result this issue.

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