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**PATRIARCHY, MILITARIZATION, AND THE GENDER GAP IN
EDUCATION: THE CASE OF PAKISTAN**

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Abstract

This study investigated the effects of patriarchy and militarization on women's educational attainment in Pakistan, where the literacy rate is among the lowest in the world, roughly two-thirds of all women cannot read or write, and even modest goals of girls' primary school enrollments seem elusive. Some progress has been made toward universal primary school enrollment, but by and large, secondary and tertiary education has remained beyond the reach of women in many parts of South Asia, including Pakistan.

Efforts to improve women's education in Pakistan have focused on issues related to underdevelopment, poverty, and religious fundamentalism. Consequently, most literature addresses school, family, and community factors as the primary barriers to participation in education. My thesis represents the first attempt at exploring the power relations emerging from patriarchy and militarization, and their collective contribution to gender differences in educational attainment in Pakistan.

Using data from the Adolescent and Youth Survey of Pakistan, conducted by the Population Council and the government of Pakistan in 2001-2002, I have investigated the reasons for persistence in women's low educational attainment. I used binary logistic regression to analyze three dependent variables: currently attending school, primary school completion, and ever attended school.

Results of this study suggest that girls are at a distinct disadvantage relative to boys in educational attainment. Girls are also far less likely to seek an education because of perceived social undesirability of schooling and lack of empowerment to make decisions regarding their lives. A further analysis reveals that the disadvantages increase during the

military government. The findings of this study have implications for providing policy direction toward achieving gender parity in education as a first step and subsequently striving for universal primary education in postcolonial conflict zones. More specifically, the findings point to a need to look beyond establishing girls' primary schools for a solution to the education crisis.

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*Dedicated to the memory
of my parents*

*and the future
of my children*

Chapter 1

Introduction

In Pakistan there are about 20 million children between five and nine years of age, the school-going age. But only about half of them are currently enrolled in primary school. And little girls make up much less than half of that number. One outcome of this is that illiteracy in this nation of 152 million people is among the highest in the world—half the adult population is not literate, while more than two thirds of Pakistani women cannot read or write.

World Bank Report on Pakistan, 2005a

Significance of the Study

Existing scholarship on developing countries often heralds the role of women's education in enhancing the welfare of families and communities as a panacea for poverty and underdevelopment. Much of this scholarship has been based on the discovery of a direct link between education and gender-related factors, such as fertility control or maternal and infant mortality (Cochrane, 1979; Sathar & Casterline, 1998). Consequently, most efforts to understand women's status have been largely limited to the determinants of women's reproductive function (Kenkre, 2005). While most countries in North America and Europe have managed to close the gender¹ gap in education successfully, the majority of Sub-Saharan and South Asian countries lag far behind. In these regions of the developing world, staggeringly disproportionate numbers of women are without access to what has been universally recognized as a basic human right (Tomaseveski, 2003).

¹ In this study, I have used women/men, male/female, girls/boys to refer to the sample in my research. While I remain cognizant of the differences assigned to these words in the literature, my use of the terminology is contextual and age-related. Gender and sex are clearly distinguished in scholarly work to refer to a social and cultural construction and a biological fact respectively. I have elected to use the term gender because the social and cultural norms associated with the sexual stratification are inherently gendered by nature.

In countries where illiteracy² and poverty are rampant, studies have consistently established that formal education allows women greater mobility, lowers physical violence, and gives them greater economic freedom (Kenkre, 2005). Based on this and other similar findings, the United Nations and many international and national organizations, including a multitude of NGOs, have embarked on the elusive mission of achieving gender parity in education in Pakistan. UNESCO has reestablished its commitment to Education For All (EFA) by 2015, but also acknowledges that many countries are far from achieving this goal (UNESCO, 2006). While some countries in South Asia have made progress on this measure, Pakistan is one of the countries not on target to meet the UNESCO goal of universal primary education by 2015.

Women in Pakistan stand at the nexus of poverty and illiteracy, and their educational attainment is of serious concern both nationally and internationally. By some accounts more than 70% of women in Pakistan are not literate (*Human Development Report*, 2004); the situation in the rural areas is much worse, with literacy rates persisting in the single digits.³ According to the authors of the *World Bank Country Gender Assessment Report* (2005b), girls' primary school enrollment ratio had historically almost kept pace with the projected Millennium Development Goals (MDG) and was considerably higher than the Poverty Reduction Strategy Paper (PRSP) targeted in the late 1980s. In the early 1990s, the enrollment ratio started to decline, falling below both the PRSP target and the MDGs. By

² Over 60% of the illiterate in the world are women. A large majority of the world's illiterate live in Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria, and Pakistan (Abadzi, 2003).

³ Definitions of literacy vary widely making it difficult to make comparisons across countries and within a country over time. In Pakistan, literacy has been variously defined as the ability to read and write one's name or being able to read a three-line paragraph in a local or regional language. According to the United Nations, adult literacy rate refers to the percentage of people (total, male, female) ages 15 and older (out of the whole population ages 15+) who can, with understanding, both read and write a short, simple statement about their everyday life. (Source: Estimates from the UNESCO Institute for Statistics <http://devdata.worldbank.org>)

2005, girls' enrollments were almost 10% below the modest goal of 82% set out in the Poverty Reduction Strategy Paper (World Bank, 2005) (see Figure 1.1).

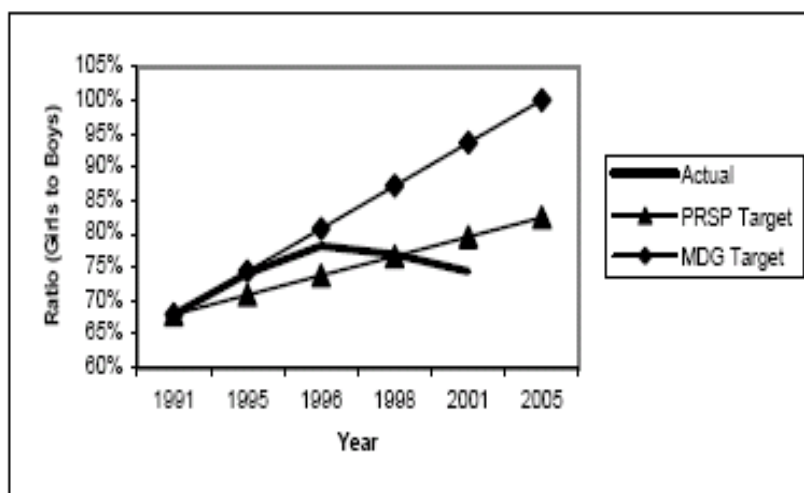


Figure 1.1: Primary Gross Enrollment Ratio and MDG Target for Pakistan

Source: World Bank. (2005). *Pakistan Country Gender Assessment. Bridging the gender gap: Opportunities and challenges*

Note: PRSP-Poverty Reduction Strategy Paper; MDG-Millennium Development Goals

Education, or lack thereof, is not the only serious issue concerning women in Pakistan. Compared with other South Asian countries, including Bangladesh, women in Pakistan are worse off on virtually every socioeconomic indicator. While Bangladesh has achieved gender parity, only 74% of girls in Pakistan are enrolled in primary school (World Bank, 2008a). Blood (1994) reported that among women age 25 and over in Pakistan, the average schooling was 0.7 years compared to 2.9 years for men. Relative to neighboring India, Pakistan lags behind in both literacy and school attendance. The gross enrollment

ratio⁴ in primary and secondary schools has also lagged behind the two neighboring countries.

Table 1.1

Education Indicators of Selected Countries in South Asia (2001-2005)

	2001	2002	2003	2004	2005
Pakistan					
Ratio of girls to boys in primary and secondary education (%)	68	69	73	73	75
Primary completion rate, total (% of relevant age group)	..	..	..	..	63
School enrollment, girls, primary (% gross)	72	73	76	82	87
School enrollment, girls, secondary (% gross)	26	25	25	27	27
School enrollment, girls, tertiary (% gross)	..	3	3	3	5
Literacy rate, adult total (% of people ages 15 and above)	..	43	..	..	50
Bangladesh					
Ratio of girls to boys in primary and secondary education (%)	104	106	106	103	..
Primary completion rate, total (% of relevant age group)	81	73	73	76	..
School enrollment, girls, primary (% gross)	108	107	106	109	..
School enrollment, girls, secondary (% gross)	51	52	51	47	..
School enrollment, girls, tertiary (% gross)	7	6	7	6	6
Literacy rate, adult total (% of people ages 15 and above)	47	..	..	..	..
India					
Ratio of girls to boys in primary and secondary education (%)	78	80	88	88	89
Primary completion rate, total (% of relevant age group)	76	79	84	89	90
School enrollment, girls, primary (% gross)	98	99	107	116	119
School enrollment, girls, secondary (% gross)	48	50	52	54	57
School enrollment, girls, tertiary (% gross)	10	11	11	12	11
Literacy rate, adult total (% of people ages 15 and above)	61	..	..	..	..

Source: World Development Indicators, The World Bank Group

Table 1.1 shows a comparison of education indicators for Pakistan, Bangladesh, and India between 2001 and 2005. In Bangladesh there have consistently been more girls than boys in primary and secondary schools, and in India the gender gap has narrowed considerably over the five years. In sharp contrast to these two countries, Pakistan has lagged

⁴ Gross enrollment ratio expresses the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. On the other hand, net enrollment is the number of age appropriate enrollments as a percent of the corresponding age group.

behind in closing the gender gap, with a ratio of 75 girls to every 100 boys in primary and secondary schools in 2005. The comparison also shows large disparities in gross enrollment at the primary, secondary, and tertiary levels among the three countries, indicating considerably lower levels of overall educational attainment in Pakistan. Though girls' gross primary school enrollments improved between 2001 and 2005, from 72% to 87%, the gross secondary and tertiary enrollments did not reflect any substantial changes.

Statement of the Problem

Several decades of focus on poverty and issues of access have resulted in only nominal gains for women's education in Pakistan. Pertinent issues such as economic poverty, domestic violence against women—both within the home and outside, poor health and nutrition, and social class stratification are uniquely gender-biased and can be attributed to the current power structure based on patriarchy and militarization. It is therefore critical to explore the power relations emanating from patriarchy and militarization and their collective contribution to gender differences in educational attainment. Despite the significance of patriarchy and militarization, efforts to educate women have historically focused largely on poverty alleviation and privatization of schools largely due to pressure from the Millennium Development Goals (MDG),⁵ and emphasis on poverty alleviation by agencies such as the World Bank, United Nations (UN), and International Monetary Fund (IMF). This approach is not surprising since privileging of masculinity in a militarized state is not a subject often

⁵ At the United Nations Millennium Summit, September 2000, world leaders agreed to a set of eight measurable goals called the Millennium Development Goals (MDGs). The goals, targeted for 2015, are: to Eradicate Extreme Poverty and Hunger, Achieve Universal Primary Education, Promote Gender Equality and Empower Women, Reduce Child Mortality, Improve Maternal Health, Combat HIV/AIDS, Malaria and other Diseases, Ensure Environmental Sustainability, and Develop a Global Partnership for Development (<http://www.mdgmonitor.org/>).

talked about or given prominence in the research agendas of development agencies that frequently focus on calculations of private and public returns to education. It is time to critically examine why these efforts have not been effective and to evaluate, instead, the “underlying cause of gender asymmetries in power” (Stromquist, 2001, p. 47) as a result of patriarchy and militarization.

While much scholarly work exists on the effects of colonization and feudal practices, not much empirical research has been conducted about the symbiotic relationship between patriarchy and militarization and their detrimental effects on the status of women. Until the early 1990s, little data were available regarding women’s access to and participation in education in developing and conflict prone countries. Consequently, most policy makers and funding agencies had relied for direction on research conducted in the Western hemisphere (Kabeer, 1995). These studies, while useful, shed little light on the major barriers to women’s education in countries such as Pakistan, where (de)colonization, feudalism, nationalism, patriarchy, and militarization of civic institutions play an important role in the (non)education of women. Academic research, mostly conducted within institutions of higher education in the West, is only now beginning to deconstruct these issues in the context of the Third World countries (Kabeer, 1995, Mohanty, 2000). However, for the most part, the focus of current research efforts is on countries in sub-Saharan Africa where issues of poverty, healthcare and nutrition are considered paramount.

Effects of patriarchy and militarization on women’s education in Pakistan date back to colonial India where the British had devised an education system to create a cadre of men who could be subservient to the rulers and women were considered to have no place within

this system (Fanon, 1963; Memmi, 1965; Mohanty, 2003). The feudal system of society and the agrarian system of production that predate the British were equally complicit in promoting and reproducing patriarchal institutions. After decolonization, and subsequent independence, patriarchy became more entrenched in civic institutions because of the frequent and sometimes violent takeover of the government by the military, as well as repeated internal or external armed conflicts and insurgencies.

This study is an attempt to understand the reasons for women's persistent lack of education and low literacy rates. I have investigated some of the power asymmetries and causes of gender inequality in education that have not received significant attention in previous scholarly research. The intent of my research was to explore how women's status in society has been reproduced through patriarchy and how women's education was affected during repeated military dictatorships, especially during the most influential and longest military rule between 1977 and 1988. This particular phase of military rule is crucial not only because it brought about significant changes in the legal and social status of women, but also because it represents the aggressive continuation of the foundations laid during the first military regime that seriously curtailed women's human rights and undermined human security⁶ in Pakistan (Mirza, 2002; Rouse, 2004).

Because power is a difficult concept to quantify, the standard design of data sets utilized within the social sciences does not easily lend itself to an analysis of the structural determinants of power relationships. However, when supported by relevant theories, quantitative individual-level data can be used to understand how social determinants manifest

⁶ "While national security focuses on the defense of the state from external attack, human security is about protecting individuals and communities from *any* form of political violence" (Human Security Center <http://www.humansecurityreport.info/content/view/24/59/>).

themselves in creating and perpetuating social structures. Mapping changes in girls' educational attainment and in parents' perceptions regarding girls' mobility and empowerment will explicate how patriarchy has worked in tandem with militarization to make women in Pakistan complicit in defining their own social status. It is worth mentioning that in this study I do not seek to distinguish between despotic and civilian rule nor do I attempt to establish causality. My aim is to investigate the status of women's educational attainment during the last half century in light of patriarchal and militaristic agendas.

Research Questions

I have used data from the Adolescent and Youth survey of Pakistan (AYP) 2001-2002 for my study. The study constitutes the largest nationally representative survey jointly conducted by the Population Council⁷ and the Federal Bureau of Statistics in Pakistan using the sampling frame of the 1998 Pakistan Population Census.

Through this research, I seek to understand why education has remained an inaccessible goal for most women in Pakistan. Three critical and interrelated questions emerge from this overarching question:

1. What is the status of educational attainment of adolescent girls? How does it compare to the educational attainment of adolescent boys?
2. How is primary school completion influenced by patriarchy above and beyond other family factors such as geographical location, socio-economic status (SES/asset index), and parents' literacy status?

⁷ The Population Council, established in 1952, conducts research worldwide to improve policies, programs, and products related to HIV and AIDS; poverty, gender, and youth; and reproductive health.

3. How does school attendance for girls and boys under civilian government differ from that under military government?

The dissertation is divided into eight chapters. In this chapter I have presented the significance, statement of the problem, and research questions of my study. In the second chapter I present a brief overview of the historical social, cultural, and political background, as well as elaborate on the status of women's education in Pakistan. The third chapter is a literature review relevant to women's education in Pakistan and an examination of the effects of patriarchy and militarization on women's education. The fourth chapter outlines Pakistan's system of education and traces the development of education policies in the political context. The research questions, variables, and analytical plan are outlined in chapter five. The sixth and seventh chapters present descriptive and multivariate analyses. The final chapter provides the summary, discussion, policy recommendations, suggestions for further research, and limitations of the study.

Chapter 2

Context of the Study

Almost half of the world's poor live in South Asia and the region has the world's largest conflict affected population (World Bank, 2007). The region of South Asia is comprised of eight countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka with a combined population of over 1.4 billion. Pakistan, with a population of over 160 million, is the second most populous country in South Asia and has its proportional share of the poor in the region.⁸ Women rank almost at the bottom in terms of productivity and welfare (Chowdhury, 1996, World Bank Edstats, 2008b).

In addition to its strategic significance in the “war on terror” and the rapidly deteriorating social indicators, Pakistan has also gained recent global attention because it is surpassing most other South Asian countries in terms of population growth. Between 1980 and 2005, while the less developed regions of the world grew at the rate of 1.4%, Pakistan's population growth rate was close to 3%. Over the course of the next 25 years, the world's population growth is expected to slow down to less than 0.5%, while Pakistan's population growth rate is projected to be closer to 2.0%. At this rate of increase the population of Pakistan will grow to be 272 million by 2030 (see Table 2.1).

⁸ Current population estimates (millions): India 1,139, Pakistan 164, Bangladesh 159, Afghanistan 27, Nepal 28, Sri Lanka 19, Bhutan 0.7, Maldives 0.3.

Table 2.1
Regional Population Comparisons

Region	Total Population (millions)			Annual Growth Rate (%)	
	1980	2005	2030	1980-2005	2005-2030
World	4,435	6,454	8,130	1.1	0.3
Less developed regions	3,352	5,245	6,888	1.4	0.4
Asia (excluding Japan)	2,515	3,790	4,766	1.1	0.6
South Central Asia	981	1,615	2,192	1.9	0.4
Pakistan	81	161	272	3.0	1.8

Source: Lloyd, C. (n.d.). *The changing transitions to adulthood in a comparative perspective: A case of Pakistan.*

Notes: Population estimates for 2005 and projections for 2030 are for United Nations median variant (United Nations 2003)

South Central Asia includes Afghanistan, Bangladesh, Bhutan, India, Iran, Kazakhstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan and Uzbekistan.

Over 97% of the population of Pakistan is estimated to be Muslim with the small minority comprised mainly of Christians, Hindus, and Zoroastrians. There are large variations among the Muslim population related to language, religiosity, culture, and regional customs and traditions. Many customs stemming from the Indian system of land ownership have become assimilated into religious practices. The agrarian form of production has helped retain the feudal practices, especially among the rural population, by allowing the small minority of landowners increasing control over the lives of the working poor.

It is particularly noteworthy that Pakistan has a high dependency ratio⁹ and that approximately one third of the people in Pakistan subsist below the poverty level of one dollar a day. Most girls are destined for early marriage, child bearing, child rearing, and the role of primary caregiver for the entire family. In addition, son preference is extremely

⁹ Dependency ratio represents the proportion of persons 6–14 years in age in the overall population and provides a useful estimate of potential demand for education services in the short to medium term. It also provides an indication of the relative size of the taxable workforce. Dependency ratios are highest in countries such as India, Pakistan, Nepal and Bangladesh, which also have lower primary education participation rates. http://www.unesco.org/education/efa/efa_2000_assess/regmeet.shtml

prevalent. According to the Demographic and Health Survey of Pakistan (1992), among currently non-pregnant women who wanted another child, 49% preferred to have a boy and only 5% indicated preference for a girl. To understand the significance of this tendency in today's globalizing world, and specifically in regards to women's education, it is appropriate to present a picture of Pakistan in the context of its neighboring countries or other less developed regions of the world.

Geographical Context

Pakistan is the second largest and fastest growing country in South Asia, bordered by India on the east, Afghanistan on its west, and China to the north. During the last two decades it has been catapulted into the global limelight due to its strategic geographical location adjacent to Afghanistan and as the most convenient access by sea and air to the rugged terrain of the Hindu Kush¹⁰ mountain range leading into Afghanistan, China, and Central Asia (see Figure 2.1).

There are large disparities between the urban and rural areas in terms of social and civic institutions and physical infrastructure. A significant portion of the rural population is engaged in subsistence farming with only one-third of the population residing in the major urban centers. The country is comprised of four major provinces (Punjab, Sindh, North West Frontier Province, and Baluchistan), the Federally Administered Tribal Areas, and the disputed territory of Azad Jammu and Kashmir. Punjab and Sindh are the more economically stable of the four provinces because of the availability of water (River Indus) for irrigation in Punjab and the only seaport (Karachi) in Sindh.

¹⁰ Hindu Kush is the mountain range in central Asia where the narrow Khyber Pass connects Pakistan with Afghanistan and was used historically by the Moguls and other invaders of India.



Map created using ESRI Business Map

Figure 2.1: Regional Map of Pakistan, Bangladesh, and India

Note: The disputed territory of Azad Jammu and Kashmir is to the northeast of Pakistan.

Source: Author (2007)

Punjab has one of the oldest educational institutions in the country—the University of Punjab.¹¹ Despite the fact that five major and distinctly different languages (Punjabi, Sindhi, Pushto, Baluchi, and Urdu) are spoken in the country, the official language of government and commerce continues to be English—a legacy of the colonial past. English is also the language of instruction in most major institutions of higher education.

Very often the social, political, and cultural analysis of Pakistan is truncated beyond the time of independence from British India presenting a very ahistorical picture (Ali, 2001). However, to understand the underlying determinants for women’s lack of education it is important to situate women’s social status within historical, cultural, and social contexts that

¹¹ In 1857, the British established one university each in Calcutta, Bombay, and Madras, followed by the Punjab University in Lahore in 1882 (Nurullah & Naik, 1951).

transcend this major political marker. The following discussion provides a context for the study of formal system of education for women in Pakistan.

Historical and Cultural Context

Pakistan came into existence in 1947 when the British were forced to leave South Asia and India was divided into two countries. The independence and partition of India resulted in large displacements of populations and is said to have been the largest migration in recorded history (Barsamian, 2000). Consequently, one thousand miles of “enemy territory” (India) geographically divided East and West Pakistan, which were created on the basis of Muslim majority. Religion did not prove to be a coalescing force for the two separate parts of the country as social and economic stratification immediately started to take shape. After a long and bloody struggle for autonomy, in 1971, Bengali East Pakistan seceded from its union with West Pakistan, creating what have since been known as the nations of Pakistan and Bangladesh. In the meantime, Pakistan suffered the devastation and setbacks of three wars¹² and many more violent regime changes, assassinations of democratically elected leaders, and repeated military dictatorships.

Pakistan inherited a turbulent history in which women’s exclusion from education dated back to the Vedic period¹³ of about 1000 BC. During this time, reading of the Vedas—the sacred texts—was an important aspect of life. Training was rigorous and demanded total devotion to learning the Vedas in the oral tradition. Women and the lower castes were

¹² Pakistan fought three wars with India in 1948, 1965, and 1971. The third war was accompanied by a civil war that resulted in what is now Bangladesh.

¹³ The Vedic period refers to the phase in the history of India during which the first Sanskrit texts were composed. The phase is estimated to have lasted from the second to the first millennium BC.

considered unworthy of educational privileges and were forbidden to read the Vedas (Naurullah & Naik, 1951). Not long after, Buddhists established Viharas for the transfer of knowledge to Indians. Local dialects emerged and the first formal university, the Nalanda University, was established around the fifth century. No documentation on whether women were admitted to Nalanda has been found, but from accounts of Chinese travelers to the monastery it appears that the university was the seat of learning exclusively for monks (Ghosh, 2001).

Subsequently, India experienced a wave of invaders from Central Asia starting with the Turks in 1000 AD and culminating with the invasion of India by the Moguls in the early sixteenth century. The Turks started the Slave Dynasty in India and introduced Islam. The Turkish rulers and their military rule were perceived as threats to the by then well-established social fabric of Indian society. The Moguls introduced a new language, *Urdu*, to India. Akbar, the second Mogul ruler, attempted to bring the Muslims and Hindus together by himself marrying a Hindu princess and encouraging religious tolerance by founding *Din-e-Ilahi*—a religion combining the tenets of both the Hindu and Muslim faiths.¹⁴ While the Mogul empire flourished in India, two other developments were taking place. Externally, the Portuguese, Dutch, and British were starting to arrive on the coasts of India for trade purposes; internally, the *Marhatas* (local chiefs) were beginning to rise against the Mogul Empire. Internal strife weakened the Mogul Empire, finally resulting in the colonization of the Indian subcontinent by the British in 1757.

Incentives for the British government to develop formal education in India were decidedly self-serving. The colonial administration modified the education system to create a

¹⁴ See <http://www.indembassyhavana.cu/culture/culture-history-aryans.htm>

cadre of lower-level male staff for government service jobs, adding to the accepted social norm of female seclusion.¹⁵ At first reluctant to change the prevalent opposition to women's education, the British eventually felt pressured to fund elementary education for girls. Through the Dispatch of 1854, special girls' schools were started where possible. However, for most Indians, girls' schooling beyond the age of eight or twelve was virtually unthinkable. The British established universities in major cities as elite seats of learning for western culture, classics, history, literature, and the arts. The impetus for this curriculum has also been described as self-serving for the colonial rulers. The universities were used as vehicles for relieving the pressure of bringing service personnel from Britain to serve the Crown (Chintis, 1996).

For the greater part of the British rule, women in India experienced colonization through both patriarchy and imperialism (Chintis, 2000). During the colonial period social class, religion, and culture prevented women from having access to education. Although practices such as *sati*¹⁶ and child marriage were declared illegal, the effects of *purdah*¹⁷ and the related concepts of female chastity and honor continued to have a huge impact in terms of distrust of coeducational institutions and early withdrawal of girls from school.

¹⁵ For details regarding the explicit policies on education in British India see "Thomas B. Macaulay's Minute on Indian Education" <http://www.geocities.com/bororissa/mac.html>

¹⁶ Sati refers to the Hindu custom of burning a widow on her husband's funeral pyre. It is believed that the life of a widow was then so difficult that women preferred to be burnt alive rather than suffer the humiliation of having survived their husbands.

¹⁷ *Purdah* designates the wide range of female behavior, considered modest, that secluded women within the domestic sphere in the late nineteenth and early twentieth centuries and that still colors the lives of most South Asian women (Maskiell, 1984). Contrary to popular belief "purdah" or the seclusion of women is a custom commonly practiced by both Hindus and Muslims in India and does not emanate from religious beliefs in one religion or the other.

Since universities were designed to prepare men to take on clerical roles in the British government, there was little or no room for the study of sciences or for local languages and culture. Though the British did not openly discriminate against women, most Hindus and Muslims were too skeptical of education in a foreign language and thus hesitated to send their daughters to these universities. Women's education was emphasized mostly to prepare them for their traditional roles as wives and mothers. Education was the purview of the elite "bourgeois" class and often private tutors were hired to teach girls at home while they waited to be given away in marriage. At the other end of the spectrum were the women in the lower-income groups or the lower castes that were denied access to education for economic and social reasons. Thus, under no circumstances were women formally prepared to play any role in the male-dominated world. Due to mounting pressure from the Crown, to include women in the formal system of education, a differentiated curriculum supported by the Education Commission of 1882 was designed based on the view that certain subjects were more suited for the desirable roles girls were expected to play in society with the sole purpose of preparing them for marriage. Private girls' schools, established by missionaries and those run by social reformers emphasized subjects such as hygiene, needlework and domestic science, and did not include teachers trained in the sciences. No efforts were made to reform the social underpinnings of the status of women in Indian society.

Though initially the British wanted to maintain the status quo in India, they were also under pressure from the Crown to take on the responsibility for education (Nurullah & Naik, 1951). The British sought to inculcate in the Indians a love of western literature, philosophy, and science, and allocated funds for this specific purpose (Chaube, 1990). This again was a self-serving prophecy with the intent to make the colonized subject revere and respect the

culture and traditions of the Empire and, as a result, ascribe themselves to an inferior role (Memmi, 1967). The medium of instruction was changed to English, resulting in distrust of the education system by the locals. Education, especially at the post-secondary level, was the prerogative of the wealthy, elite males of the British Colony. Muslims and Hindus alike extricated their daughters from the education system in order to keep them from being “contaminated” by foreign ideologies. Few, if any, women attended college or participated in political or social life outside the home.

Thus, while reformers advocated educating girls, they did not envision women’s education as an equal right of a citizen. There was no suggestion of any change in the traditional role of the woman as wife and mother. On the contrary, the reformers expected education to better prepare women for fulfilling these roles. Nor did the reformers visualize that women would participate in outside employment or welfare activities (Desai, 1993).

During the conquests and pillages caused by repeated invasions and war, India’s social and cultural fabric experienced a tumultuous evolution. Among other things, the need to protect women and children from the invaders was acutely felt by the native people.¹⁸ At the same time, the population was fragmented into distinct factions emanating from vastly different religious beliefs. Developing complexities of the Hindu caste system and the orthodox belief systems of the Muslims in India demanded the removal of women from the public eye and the sequestering of young girls and women within their homes under surveillance of the elders in the family. The Muslims in India developed their own system for the education of boys based on the teachings of the Quran. With the exception of a small

¹⁸ For a detailed description see Ghosh, R., & Talbani, A. (1996), “India,” in Mak, G. *Women, education, and development in Asia: Cross national perspectives* (pp. 165–186) (New York: Garland Publishing, Inc.).

number of women who received schooling at home or in special religious schools, women in India were largely deprived of formal educational opportunities (Nurullah and Naik, 1951). These religious schools were to later develop into the madrasa system in Pakistan.

In general, the gender stratification put in place by the feudal system of agrarian production and reinforced by the British colonial policies remains ingrained in the current education system in Pakistan. Girls fortunate enough to attend school are still receiving an education that is designed to help them fulfill the ascribed gender roles of wife and mother. In an ethnographic study conducted in Pakistan, Weiss (2001) found college-level teaching materials to be explicitly gender-biased. The textbooks contained little or no information about the role of women in recent history, the activist organizations,¹⁹ or the threats to women's rights instituted through the courts. For the large part, if the opportunity cost of sending girls to school can be borne by the family, it is considered an investment toward a better marriage prospect, not to provide them with the tools to break away from the patriarchal system (Chanana, 1988).

Current Status of Women's Education

Gender disparities in access to and participation in education have persisted in many developing countries around the world. In a comparative study of six different countries, Lloyd (2004) found vast differences in the educational attainment of both girls and boys in several of these countries. While Bangladesh and Indonesia have reversed the gender gap and

¹⁹ Women's Action Forum was one such organization started in 1981 with the explicit aim to advocate for women's rights and to spearhead activism.

India has narrowed the gap considerably, Pakistan and Nepal continue to show a persistent gender gap in enrollment—albeit one that has narrowed over time (see Figure 2.2).

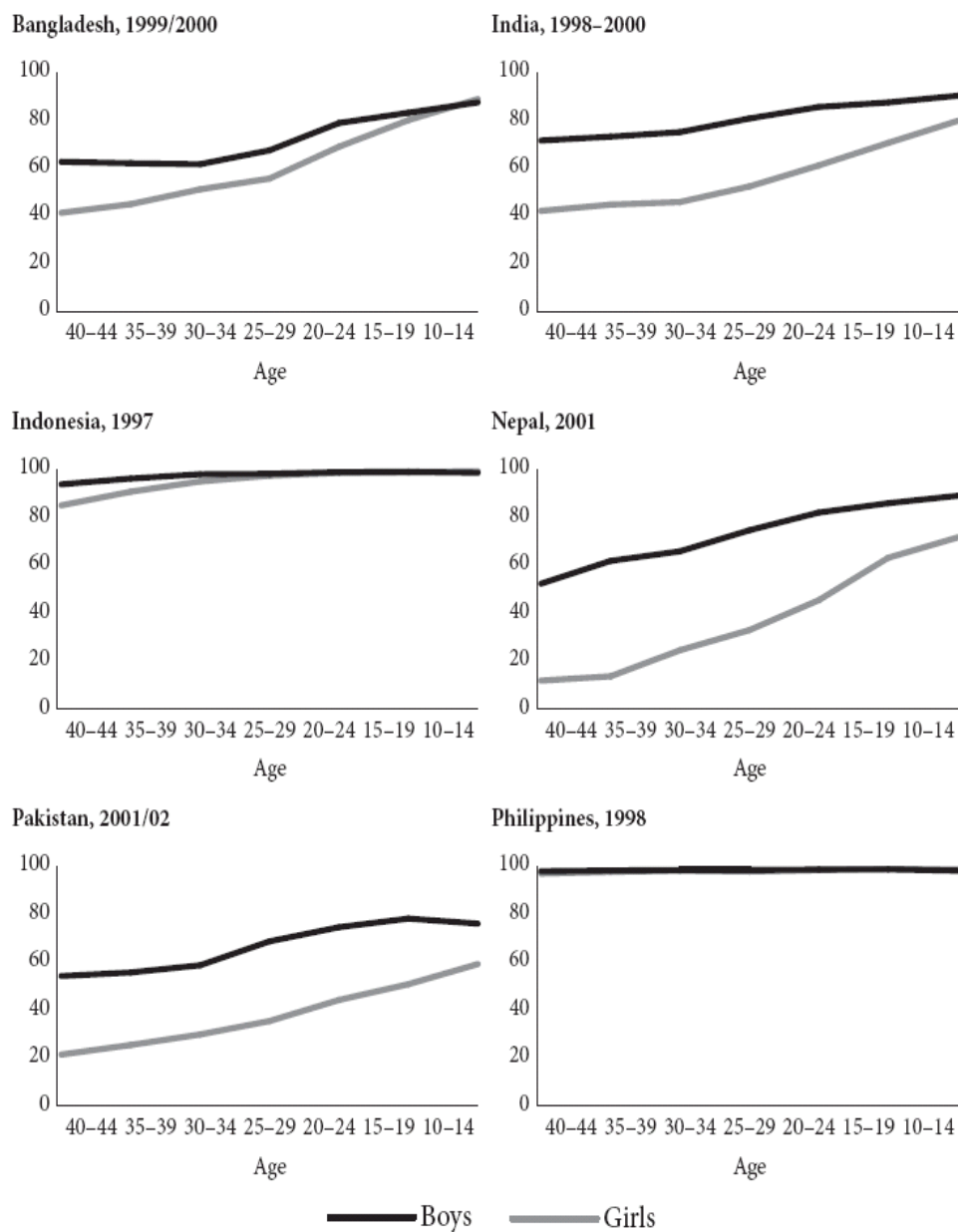


Figure 2.2: Percentage of 10- to 14-year-old girls who ever attended school in selected countries

Source: Lloyd, C. (2004)

Internationally, much discussion and debate have ensued regarding the perceived oppression of women in Pakistan and Afghanistan, to the extent that the veil has become synonymous with subjugation of Muslim women (Eisenstein, 1996; Mohanty, 2000). In the most simplistic illustration, western political discourse depicts the veil as a sign of Islamic backwardness, which is translated into oppression and is consequently considered tantamount to depriving women of education. The argument only begins to scratch the surface of this complex phenomenon when one realizes that in different times and geographies the veil has assumed different symbolic representations. Badran (1995) pointed out that in Egypt all women—irrespective of religion—wear the veil, and in Iran women in recent history chose to wear the veil to protest against Reza Shah Pahlavi’s extremely pro-western policies (Moghadam, 2005). In both these countries the female literacy rate is considerably higher than in Pakistan.

Another aspect of human security and mobility that comes into play with respect to women’s education is the availability of female teachers for girls. Ghuman and Lloyd (2007) found that, when compared with similar developing countries, Pakistan is unique in having single-sex schools with same-sex teachers. They also found high levels of absenteeism among women teachers in girls’ schools. Their study concluded that female teachers who live within the community are substantially more likely to continue in their jobs longer and be absent less frequently. This presents a structural impediment for the education system in Pakistan since the adult women’s literacy rate in most rural communities is so low that it is nearly impossible to find qualified women teachers from within the community to teach in the local girls’ schools.

To alleviate this situation, funding agencies have advocated privatization and an emphasis on establishing more schools for girls in rural areas to address the shortfall in enrollments. By some accounts the proliferation of private, for-profit schools in Pakistan has led to large increases in the supply side of the education equation (Faizunnisa & Ikram, 2002; Lloyd, 2004; Pakistan Poverty Reduction Paper, 2004). However, Lloyd (2005) found that the presence of a local female teacher has a greater impact on girls' school enrollments than establishing a school in an area where none had existed.

Over the course of the last several decades, gross primary enrollments have trended upwards for both girls and boys and the literacy rate has improved, albeit minimally. Recent studies have claimed that the gender gap between girls and boys enrollment has narrowed. That said, not much attention is paid to the fact that much of the gap reduction was caused by a decline in male enrollments and not by a net increase in girls' participation in primary education (Lloyd, n.d.; PSRP, 2004). Additionally, the drop in boys' enrollment has been attributed to the rise in madrasas²⁰ as a major provider of education for boys. According to the *Country Gender Report, 2005*:

The gender gap in primary school enrollments did not narrow appreciably during the 1990s. For most of the decade, the primary GER (gross enrollment ratio) for girls remained approximately 20 percentage points below that for boys, except during the start of the 1990s, when the gender gap was slightly higher at 25 percentage points. A noteworthy and worrying trend is that in periods when the gender gap has narrowed, the decrease has been due to a decline in male enrollment rather than a rise in female

²⁰ Madrasas, as a place of learning, have had a long-standing tradition in India and Pakistan. The term has recently gained notoriety in association with fundamentalism, jihad, and terrorism.

enrollment. A similar trend is also observed if net enrollment ratios (NERs) are compared over time (p. 8).

A recent study conducted by Lloyd, Mete, and Grant (2006) in the rural areas of Punjab and North West Frontier Province was the first longitudinal study conducted in 12 rural villages in Pakistan with data collected from a panel in 1997 and again in 2004. The researchers found that while grade retention had improved, dropout rates for girls remained fairly high, with one-third of girls who had started school dropping out before completing primary school. They concluded that both household and school factors were statistically significant determinants of girls' schooling, indicating that merely inflating the supply of schools was not going to solve the education crisis.

There are, no doubt, numerous challenges that have to be addressed if women's educational status has to improve. Patriarchal social construction of women's status has contributed to the seclusion of women within the confines of the home. While laws against practices such as child marriage and bride price have been put in place, the ideological underpinnings of *purdah* and the related concepts of female chastity as symbolic of both tribal and family honor continue to influence parents' decision to not send their daughters to school (Maskiell, 1984).

The constitution of Pakistan guarantees gender equality, but in reality the barriers to education for women persist. The World Bank (2005b) has identified restricted mobility²¹ as the main contributor to women's lack of education in Pakistan. It is important to highlight

²¹ In social science literature, mobility generally refers to transition between various levels of social or economic strata of society. However, the World Bank report has used this term to refer to physical movement—specifically the ability to get to and from school or other places where social interactions could occur.

two significant issues related to mobility. First, since physical mobility is a behavioral outcome, it cannot be addressed as the primary underlying structural determinant that gives rise to this pattern of behavior among women. Second, studies have shown that there is an inverse relationship between education and mobility. In a study conducted with 7,000 ever-married women in Bangladesh, Balk (1997) found that women's education is negatively associated with mobility. Balk also found a negative effect of husband's education on mobility. Since mobility is controlled from within the household, an increase in women's mobility is not directly proportional to their level of education nor is it a potential aid in increasing their access to education. Stromquist (2001) also asserts that while a higher level of education translates into higher income for women it does not improve women's autonomy and decision-making powers within the household.

Another significant issue given much importance in the context of women's education is the general unavailability of healthcare. Women have a high mortality rate as a result of poor nutrition, child bearing at an early age, and poor pre- and post-natal healthcare. Healthcare is either not available or inaccessible for a large portion of the population. Women suffer the most because of restrictions on their mobility and social and cultural taboos surrounding medical practices. These facts are borne out by the United Nations statistics on human development and gender development (see Table 2.2). Of the 177 countries ranked on development indices by the United Nations Development Program (UNDP), Pakistan ranks 142nd on the Human Development Index (HDI) and 120th on the Gender Development Index (GDI). Bangladesh, which ranks just above Pakistan on the Human Poverty Index (HPI), is considerably higher on the rankings for both the GDI and the HDI and also has much higher participation rates for women in education.

Table 2.2

Demographic Statistics from Human Development Report 2004, UNDP

Indicator	India	Pakistan	Bangladesh	U.S.	
Population 2002 (millions)	1,049.5	149.9	143.8	291	
Population projection (2015)	1,246.4	204.5	181.4	329.7	
GDP per capita (U.S. \$)	487	408	351	35,750	
HDI (Rank)	127	142	138	8	
HDI (Value)	.595	.497	.509	.939	
GDI (Rank)	103	120	110	8	
GDI (Value)	.572	.471	.494	.936	
Gender Empowerment Measure (Rank)	-	64	76	14	
Gender Empowerment Measure (Value)	-	.416	.218	.769	
Human Poverty Index (Rank)	48	72	71	17	
Estimated Earned Income (U.S. \$)	Female	1,442	915	1,150	27,338
	Male	3,820	2,789	2,035	43,797

Source: http://hdr.undp.org/reports/global/2004/pdf/hdr04_HDI.pdf

Notes:

Human Development Index (HDI) and Gender Development Index (GDI): A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge, and a decent standard of living. The four variables in the Human Development Index are: life expectancy at birth, adult literacy rate, enrollment rate at all educational levels, and real GDP per capita.

Gender Empowerment Measure (GEM): A composite index measuring gender inequality in three basic dimensions of empowerment—economic participation and decision-making, political participation and decision-making, and power over economic resources.

Gender Development Index (GDI): A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge, and a decent standard of living—adjusted to account for inequalities between men and women.

Political balkanization and hegemony notwithstanding, there remain overpowering social, cultural, and religious legacies that transcend geographical and political boundaries, resulting in low educational attainment of women. These practices have continued to permeate the bounds of formal education and have hampered women's access to education and other social institutions. It is ironic that while Pakistan, and neighboring India and Bangladesh, have produced women heads of state—Indira Gandhi, Benazir Bhutto, Sheikh Hasina Wajid, and Khalida Zia—there is very little participation of women in politics, education, and the formal labor force, relegating them to a life of economic poverty, illiteracy and most often domestic violence and spousal abuse (SIDA, 2002).

Chapter 3

Literature Review and Conceptual Framework

Research has shown that women's education in Pakistan has suffered from serious neglect despite concerted efforts to ameliorate this situation. In this literature review, I briefly discuss some of the widely accepted and well-researched causes of gender gap and solutions that address girls' lack of education in developing countries. I then explicate the two alternative explanations that form the focus of my research—patriarchy and militarization and their intersection with the education of women in Pakistan. Finally, I examine pertinent theories and scholarly work that form the underpinnings of my research, as well as discuss the failure of education policy to address the absolute and relative gaps in women's educational attainment.

Literature Review

Numerous factors contribute to women's lack of education. Prominent and often cited as one of the most critical reasons for the supply and demand of women's education in Pakistan is underdevelopment. Since the late 1990s, valuable scholarly work has been conducted in the area of development and related issues of healthcare, fertility transition, and transition to adulthood in Pakistan (Falah & Nagel, 2005; Hoodbhoy, 1998; Jeejebhoy & Sathar, 2001; Kabeer, Bines & Morris, 2001; Kabeer & Subramanayan, 2000; King, 1993, Lloyd, Mete, & Grant 2006; Rouse, 2004, Sathar, 2002). Although these studies have made

significant contributions to furthering awareness of gender issues in Pakistan, they have stopped short of analyzing the underlying reasons for the lack of education for girls.

In 1990, speaking about the status of women, Amartya Sen (1990) wrote:

The numbers of "missing" women in relation to the numbers that could be expected if men and women received similar care in health, medicine, and nutrition, are remarkably large. A great many more than a hundred million women are simply not there because women are neglected compared with men. If this situation is to be corrected by political action and public policy, the reasons why there are so many "missing" women must first be better understood (p. 17).

Sen was referring to his calculation that more than 100 million women have perished due to inequality in resource distribution and neglect in South Asia and North Africa. In a follow-up study Klasen and Wink (2003) confirmed that while the situation had improved relative to the total population in absolute numbers, even more women were "missing" a decade later. Klasen and Wink found that "scarcity of economic resources is a necessary but not sufficient condition for gender bias in mortality" (p. 21). Their findings indicated that gender-based differential treatment in resource allocation is a common practice in communities faced with scarcity. Research has found a direct correlation between women's health, their educational attainment, and the subsequent education of their children (King and Hill, 1993). The inequality in resource distribution is a serious issue in Pakistan, with grave implications for girls' health, as well as education.

Most research on education in developing countries is grounded in human capital theory (Schultz, 1963; Becker 1964). Subsequently, investment in education is based on cost-benefit calculations (see Psacharopoulos, 1981). The implication is that the social return on investment accrued at a later time justifies the cost incurred to educate. The resulting rate of return on education has been used to guide education policies and international funding of education in developing countries (Arnove, 2003; Zhang, 2007). Using this economic model, many developing countries, including Pakistan, have shifted the responsibility of education away from the public sector, giving rise to privatization of education and a fee-based structure. This approach has been criticized for making the assumption that parents will incur the cost of schooling in anticipation of the social return at a later time. However, in most developing countries, unless the parents accrue a direct benefit to education they are unlikely to send the child to school, and especially not the girls (Stromquist, 2003; Tomasevski, 2003).

In Pakistan, with an almost negligible rate of secondary school participation for girls, the social and opportunity costs of education may be too high for any possible market-based return on investment. Families may not have the capacity to forego the potential income contribution of girls. Additionally, since women's participation in the formal economy remains in the single digits there is little or no potential to recoup the investment on education (Bray, 1983). This makes it nearly impossible to base any investment decisions on rate of return formulas or market-based benefits of education.

Subsequent research in developing countries has acknowledged non-market benefits of education. Research conducted by King and Hill (1993) revealed that women's educational attainment and the gender gap in education are important determinants of family wellbeing and

social mobility. Educated women are healthier, making them better able to “exercise their rights and responsibilities” (p. 29). King and Hill (1993) described these rights as political participation, landownership, and protection from violence, which are all directly associated with increasing levels of educational attainment.

Economists and social scientists have used four different conceptual models to explain the role of development theories as they pertain to women: Women in Development (WID), Women and Development (WAD), Gender and Development (GAD), and Women, Culture and Development (WCD) (Singh, 2007). The first three of these concepts were based on the premise that women’s welfare is important for the economy. Hence these theories focused on equality of opportunity for women in the labor market and promoted education as a vehicle for women’s increased participation in the economy. A slightly different focus was placed on women’s education by social scientists, especially proponents of population planning. King and Hill (1993) observed that, “a better-educated mother has fewer and better-educated children. She is more productive at home and in the workplace. And she raises a healthier family, since she can better apply improved hygiene and nutritional practices” (p. 12). Gender and Development (GAD) theory helped to shift the focus away from women serving as a means to an end in national production and familial reproduction to patriarchy and marginalization of women.

Singh (2007) added yet another typology more pertinent to developing countries, termed “identities of women,” which emphasized the role of agency women have in bringing about change. This new paradigm is based on the premise that women’s needs and capabilities are contingent upon and conditioned by the environment at the micro level. Thus, it “builds its framework around women’s agency within their individual contexts” (Singh, 2007, p. 105). The

Identities of Women framework negates the essentializing forms of development theories that measure women in developing countries with the same yardstick as those in developed countries. This approach is a significant departure from earlier theories used to support the need for education of girls and women in developing countries where school attendance is not mandatory, but is highly influenced by household and societal characteristics (Lloyd, 2007; Moyi, 2006). It not only puts the woman at the focus of the debate, but also acknowledges the uniqueness of the local environment and contextual variables. This departure heralds a radical approach to addressing the needs of women with significant implications for addressing women's educational needs. However, the focus is on economic uplift and does not address the multitude of factors that are the foundational barriers to women's access to education.

To redress the shortcoming of the development theories, researchers have focused their attention on a broader range of social and cultural issues. More specifically, scholars like King and Hill (1993), Lloyd (2006, 2007), Buchman and Hannum (2001) and others, have investigated social factors like socioeconomic status, family size and structure, and family decision making as instrumental in leading to educational inequalities in developing countries. On the other hand, funding agencies, such as the World Bank, UNESCO, and the International Monetary Fund (IMF) have emphasized supply and demand issues in the context of development.

King and Hill (1993) conducted a comprehensive analysis of the social and cultural factors that contribute to gender gaps in education in a large number of developing countries. Based on data from 152 countries, King and Hill (1993) identified that family, community,

and schools play a significant role in school enrollments and attendance.²² The authors found that, “the degree to which many of the benefits of women’s schooling are social, whereas many of the costs are private, accounts for the persistence of the gender gap in education” (p. 29), indicating that the benefits of education do not accrue directly to the family. This finding was also supported by Stromquist (2001) in her research in Latin America. The opportunity cost of education, especially for girls, becomes a serious consideration for families with limited resources.

Following this finding, Khan (1993) identified two composite factors affecting girls’ education relevant to countries in South Asia: the first comprised of family and community influences (poverty, and religious and cultural practices), and the second of school factors (distance to school, physical facilities, female teachers, quality, and curriculum). In a comprehensive review of the literature on education stratification in developing countries, Buchman and Hannum (2001) found that family, community, and school play a large part in shaping educational inequality in addition to macro-structural forces that pertain to national conditions, state policies and geo-political interventions. The major problem with the traditional model was that it did not take into account gender differences in forces affecting education. In short, most literature on education in developing countries has focused on some variation or combination of family, community and school factors (Figure 3.1).

²² School enrollment and attendance are differentiated in literature as two distinct matrices for measurement. In developing countries, like Pakistan, enrollments do not necessarily translate into attendance. However, attendance data is much harder to access.

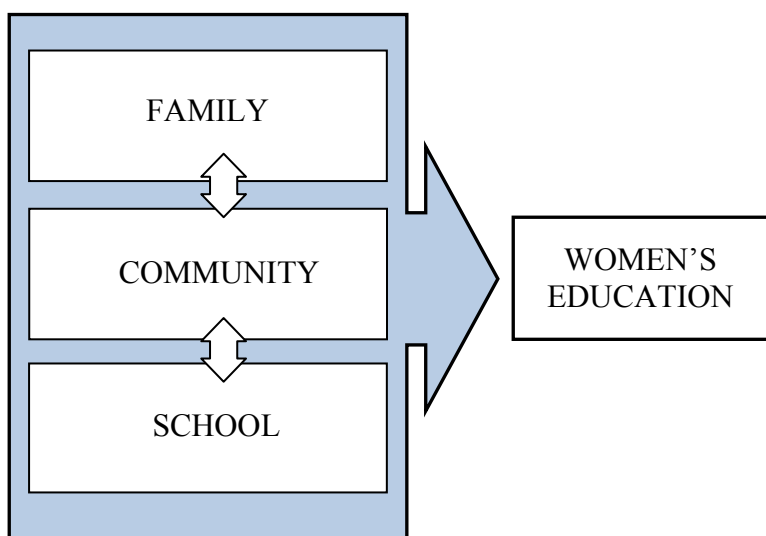


Figure 3.1: Traditional Model of Factors Affecting Women's Education

In the following section I discuss the three factors from the literature in the context of women's education in Pakistan. For this discourse I have combined family and community into one group because of the interrelated issues of poverty and religion that underlie the umbrella issues. Under school factors I have discussed the supply and demand of schooling as it relates to girls' education.

Family and Community Factors

Poverty and Education: Pakistan is one of the most economically impoverished countries in the world and is rapidly getting poorer (see Table 3.1). Data showed 17% of the population living on less than \$1 a day and 74% living on less than \$2 a day in 2003. It is also important to note that each of these indicators has worsened over time in the decade between 1993 and 2003. There is a large segment of the population living below the national poverty line. While 24% of the urban poor lived below the national poverty line during this decade, 36% of the rural poor were below this level. The reasons attributed to the lack of response from

developing countries, specifically Pakistan, in terms of increased school enrollments, are often centered on poverty (Knodel & Jones, 1996).

Table 3.1
Poverty Levels in Pakistan

Indicator	1993	1999	2003
Population living with less than \$1 a day	-	13.5	17.0
Population living with less than \$2 a day	-	65.8	73.6
Rural population living below national poverty line	33.4	35.9	-
Urban population living below national poverty line	17.2	24.2	-

Source: Social Watch (<http://www.socialwatch.org/en/portada.htm>)

No doubt, the essential role of poverty reduction in education has been universally acknowledged as a major impediment to education all over the developing world (Torres, 2004). Stromquist (2001, 2003), Kabeer (1994), Torres (2002, 2004), Sassen (2000), and Bines (2001) have all made a case for development through poverty alleviation, with special emphasis on the education of women, in developing countries.

Bhola (2005) defined poverty as, “a lack of livelihood, or insufficiency of income and lack of assets to change the economic situation, and more often than not (is) accompanied by illiteracy, ill-health, lack of self-worth, loss of status and a sense of powerlessness” (p. 6). Others have defined poverty in much harsher terms—as stripping away human dignity and relegating the poor to the margins (Stromquist, 2001). There is no doubt that “men and women experience poverty differently and unequally” (Kabeer 1994, p. 141), as is evidenced in unequal educational attainment in the case of Pakistan. The EFA Country Report for Pakistan highlights poverty as one of the major reasons for low gender parity in literacy and enrollment in basic education, emphasizing that the women are only allowed to get an education if there is no financial cost to the family.

A comparison by Weiner (1991) of primary school survival rates in countries in South Asia and other regions with economies similar to Pakistan showed that the social construction of gender greatly exacerbates the impact of poverty. Weiner suggested that parents could be convinced to keep their children in school despite extreme poverty. Weiner cited the example of Sri Lanka, a country with a similar socio economic and political structure to Pakistan, where the education system is characterized by high enrollment and retention rates for both girls and boys. Almost 100% of Sri Lankan girls enroll in school and over 90% complete their primary education (World Development Indicators, 2006).

Moyi (2006) found no differences in educational attainment between girls and boys in a comparative study of Ghana and Kenya, leading him to conclude that poverty did not have a differential effect on the education of children within a family. Another significant finding of this study related to levels of poverty. Moyi found that despite being poorer, children in Kenya were more likely to attend school than children in Ghana. He attributed this difference to the different level of commitment the two governments have shown toward the education of girls and boys. This is a significant finding in that a parallel can be drawn between Pakistan and Bangladesh—both countries exhibit similar levels of poverty, yet in the case of Bangladesh, state, NGO, and external funding have enabled more girls than boys to attend school—in stark contrast to girls' enrollments in Pakistan.

As in other poor countries, women in Pakistan bear the brunt of economic poverty. The most obvious way in which poverty afflicts women is through food deprivation. When households are faced with limited resources, women scour and scrounge for food while men feel entitled to their “fair share.” Poverty is also inextricably linked to personal security and

violence in the home and on the streets for women (King and Hill, 1993). In her study of gender relations in Bangladesh, Kabeer (1994) found that the gendered nature of poverty makes women vulnerable to sexual harassment and domestic violence. She went on to say, “in a society where family honour is linked to the virtue of its female members, sexual harassment and rape are often used in property feuds and factional disputes to humiliate opponents” (p. 149).

Through her qualitative study of women in the Walled City of Lahore, Pakistan, Weiss (1992) validated the fact that women who venture outside of the house bring disgrace to the family and invite sexual harassment and violence, putting their family’s *izzat* (honor) at risk. Weiss also found that while these traditional perceptions are changing positively for the more affluent women, they remain prevalent among working-class women for whom the paradox of protecting the family honor while supplementing the household income remains most intense. Both of these studies emphasize the fact that women have to compromise their personal security for the economic welfare of the family.

Expanding on the definition of poverty helps to explicate the fact that issues of personal security, individual and family honor, and threat of physical and sexual violence override the limitations exerted by poverty. It is not just that the family does not have the money to send girls to school, but that all other social and cultural ills take on profound and insurmountable proportions as a result of economic poverty. While education has the potential to relieve the family of economic constraints, girls are frequently not able to go to school because the families cannot ensure their personal safety and security, making school affordability a secondary issue and launching the family into a vicious cycle. Providing more

schools or creating school subsidies will only make it possible for girls to get an education if the other mitigating factors are satisfactorily addressed.

The relationship between poverty and education is complex and needs to be further explored in the context of South Asia. It is however not clear if economic poverty alone is the real cause of the lack of education. Stromquist (2001) states that, “the assumption of causality between poverty and education may be misread” (p. 43). This is evidenced by the differential rate of educational attainment in some of the poorest countries in the world. Most scholars do agree on the gendered role of poverty in defining educational attainment and outcomes (Kabeer 1993; Stromquist, 2001, Zhang, 2007). When poverty is coupled with societal and religious pressures education of girls suffers more than that of boys.

Religion and Education: In recent years there has been a renewed emphasis on the role of religion in many Muslim countries, including Saudi Arabia, Egypt, Morocco, Pakistan, Afghanistan, Libya, Iran, Iraq, Syria, Indonesia, and Malaysia (Lee, 2000). Correspondingly, there has also been a high level of scholarly activity exploring the relationship between gender and religion. In Pakistan, as in some other developing or Third World countries, women’s lack of civic and economic participation and their low educational attainment is attributed largely to fundamentalist religious beliefs and girls’ lack of education is written off as a manifestation of the collective barriers erected by religion. As will be shown later, some of the countries mentioned, such as Bangladesh and Malaysia, have achieved gender parity in education despite poverty and religion. Yet, in the case of Pakistan, fundamentalist Islamic

belief systems are still used as an excuse for the persistent gender biases and lower educational attainment.²³

To the contrary, in a comparative study of Muslim and Hindu women from two different regions in India and one in Pakistan, Jejeebhoy and Sathar (2001) found little support for the argument that Muslim women are disadvantaged in terms of autonomy,²⁴ at least when compared to Hindu women from the same region. This study was based on a survey of women in Tamil Nadu in South India, Uttar Pradesh in North India, and Punjab in Pakistan. The samples represented both Hindu and Muslim women in the relatively more progressive Tamil Nadu and similar groupings in the conservative regions of Uttar Pradesh and Muslim women in Pakistan. The study found gender differences in education levels that could not be attributed to religious beliefs. They concluded that women in Tamil Nadu had attended school in much larger numbers than women in either Uttar Pradesh (India) or Punjab (Pakistan). The significant finding of this study was that women's educational attainment was only marginally related to their religious beliefs. These findings challenge the commonly held belief system of feminist Orientalism that juxtaposes a civilized west against a primitive east (Bahramitash, 2005) and holds religion responsible for the lack of education among women in Islamic countries like Pakistan.

Malaysia is an example of a country where religion played a big part in policy formation in the 1960s, 1970s, and 1980s. In a concerted effort to "Islamize" the country, the

²³ Pakistan was created as an Islamic state for the Muslims in India. But it is no secret that the political struggle for Pakistan was founded on secular principles of governance (Jalal, 1990). This ideological contradiction provided the basis for much controversy and demands to "Islamize" the constitution and civic institutions.

²⁴ Jejeebhoy and Sathar (2001) defined autonomy in terms of control women have over their lives and the extent to which they have: decision-making rights within the home, economic freedom, access to education, empowerment to make decisions, and a high degree of physical mobility.

government promoted Islamization in all personal and public domains. In schools, the government introduced religious studies as part of the curriculum to encourage the *Bumiputras*²⁵ to attend school (Lee, 2000). Pong (1993), in her study of preferential policies in Malaysia not only found almost universal primary enrollment but also virtually no gender differences in the transition to secondary schools. This example of gender parity, through focus on religion, very clearly contradicts the assertion that religion is an insurmountable barrier to women's education.

Similarly, another country where religion plays a significant part in policy formation and everyday life is Indonesia—a country with a predominantly Muslim population and also the largest Muslim country in the world. Despite its political and social instability, Indonesia has been able to achieve a gross primary school completion rate of 101%²⁶ with gender parity (WDI, 2007).

School Factors

Supply and demand: In an economy of scarcity, supply and demand of schools is an important policy issue. The World Bank Report on Gender (2005) has investigated both supply and demand side barriers to girls' education in Pakistan. According to the Country Report on Gender (2005):

²⁵ Literally translated this term means “son of the soil” and is used to refer to the indigenous ethnic groups in peninsular Malaysia.

²⁶ Estimates of over 100% occur because gross enrollments are not restricted to age appropriate enrollments. A number over 100 indicates that many of the children attending school are above or below the designated age for the grade-level.

...the practice of restricted female mobility plays a large role in perpetuating gender gaps in school enrollments. School attendance for girls is very sensitive to school proximity.... This sensitivity to school proximity worsens as girls grow into adolescence. Qualitative studies suggest that concerns over safety and norms of female seclusion are the primary factors behind the precipitous drop in enrollment beyond age 12. (p. 14)

According to the report, supply issues pertain to availability of school (location), quality of physical infrastructure, and availability of teachers and administrators, while demand issues relate to family determinants and differential return on investment in education based on gender. The World Bank has argued that while supply of schools can be addressed by opening new schools, the demand for schools is contingent upon how secure parents feel in having their daughters travel back and forth to school.

The World Bank has proposed establishing more and easily accessible private schools as a short-term solution to alleviate the problems of mobility and achieve the goals set out in the first National Education Policy. Studies conducted by Andrabi, Das and Khwaja (2002) and Ghuman and Lloyd (2007) have supported the World Bank proposition by demonstrating improved primary school enrollment for girls with the establishment of private schools in selected rural areas of Pakistan. That said, Ghuman and Lloyd emphasized the effects of the multicollinearity of socioeconomic and location variables in this finding. They assert that location of private schools is motivated by profit margins and not related to need; private schools are located only in areas where the propensity for girls' education already exists, further exacerbating the gaps in educational attainment.

The Bank proposed a solution based on providing stipends to low-income families so they could secure transportation, or hire chaperones to accompany young girls to and from school. This program was spurred by the successful implementation of the Female Secondary School Stipend Program (FSSSP) in Bangladesh that is credited with large-scale secondary school enrollments in that country (World Bank, 2008a). This seemingly simple solution may not be so applicable in Pakistan since the report emphasized that the most critical barrier is girls' limited empowerment within the family home. Most girls are not allowed to make decisions without the explicit approval of an adult male member of the household and are not able to venture outside of the house unless accompanied by a parent or a male sibling, even one much younger in years. Weiss (2001), during her fieldwork in Pakistan, found “that whenever a woman has been stopped—from going to school, from applying for government assistance, from traveling, from taking a job, even from walking down a street alone—the initiative for stopping her has always come from a man in her family” (p. 68).

Needless to say, the answer may not simply lie in creating more schools, privatizing education, or providing stipends, because the total absence of empowerment within the home will continue to remain a pervasive and unaddressed issue. It is therefore essential to unpack the reasons for the apparent lack of empowerment. Moreover, the creation of private schools does not address the very important issues of the responsibility of the state to provide accessible education, nor does it take into consideration the opportunity cost to the family of educating girls.

These examples raise the question: why have successes in educational attainment not been achieved in Pakistan? One possible explanation could lie in how scholars and

researchers have chosen to view the issues and how policy makers have chosen to address the need. To recapitulate, the existing literature and research regarding the forces that contribute to the lack of women's education in Pakistan is focused on economic poverty, religious fundamentalism, and underdevelopment with few exceptions. Notwithstanding the vast contribution these studies have made to issues pertaining to education, they have remained distant from the more intangible; yet pervasive issues that control the lives of women and consistently contribute to their extreme lack of education.

Conceptual Framework

Conventional wisdom dictates that family, school, and community determinants directly impact women's educational attainment, and scholars have sought to illustrate those relationships through research studies. However, as recounted in the earlier chapters the social, cultural and political context of Pakistan plays a significant role in redefining these relationships. The conceptual model I have developed shows that each of these determinants is in turn directly impacted by conflict, human security, and the legacy of colonization. The effect of these forces on family, school, and community cannot be ignored. However, (de)colonization, issues of human security and armed conflict are byproducts of patriarchy and militarization (Figure 3.2). The remainder of this chapter will discuss the implications of patriarchy and militarization in the context of my conceptual framework.

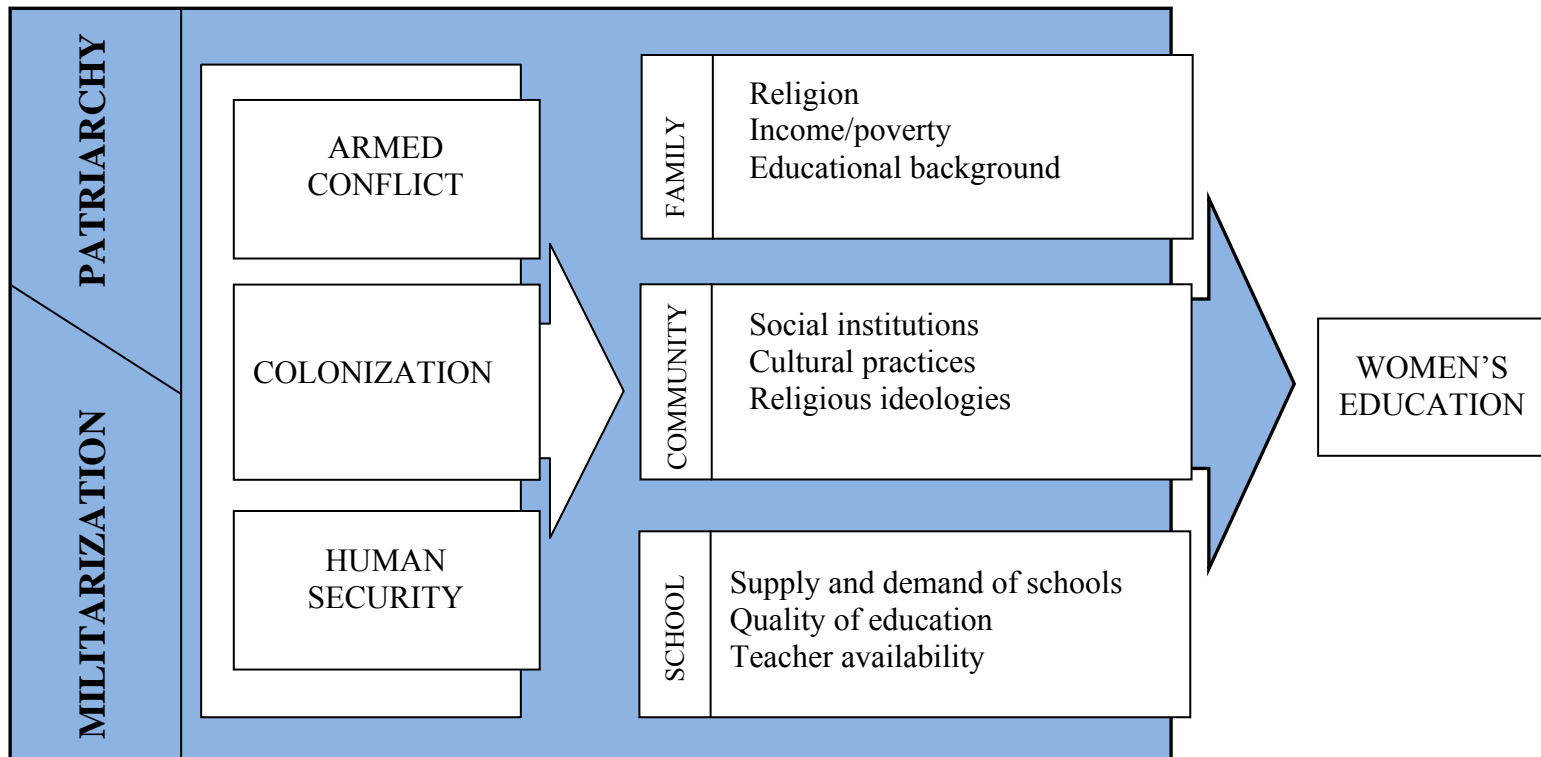


Figure 3.2: Conceptual Framework: Relationship of Major Forces Acting on Women's Education

Patriarchy

Walby (1990) defined patriarchy simply in terms of a “system of social structures and practices in which men dominate and exploit women” (p. 20). The ideological dimensions of patriarchy are considered much more complex. Eisenstein (1979) and Mies (1998) argued that patriarchy is a tool for the fulfillment of capitalist agendas and that the two cannot be separated. Walby disagrees with this linkage and argues that patriarchy and capitalism are two distinct mechanisms that work to subordinate women. Walby (1990) further categorizes patriarchy into six distinct, but interrelated social systems: “the patriarchal mode of production, patriarchal relations in paid work, patriarchal relations in the state, male violence, patriarchal relations in sexuality, and patriarchal relations in cultural institutions—such as religion, the media, and education” (p. 20).

Walby acknowledges that her thesis is based in the western context and cannot be applied directly to other situations. An adaptation of Walby’s typology of patriarchy is highlighted by Mohanty (2000) in her anthology on feminist thought, *Feminism Without Borders*. Mohanty maintained that the colonial rulers through gender-biased land reform, and laws concerning marriage and inheritance that were designed to be exclusionary, reinforced patriarchy in pre-independence India and Pakistan. In addition, the colonizers through reengineering of the formal system of education further strengthened patriarchy. As mentioned earlier, this was done with the intent to make the colonized subjects revere and respect the culture and traditions of the Empire and ascribe themselves to an inferior role (Memmi, 1967). Men were encouraged to acquire education and learn the language spoken by the colonizer so they could be productive in the service of the Crown. Because women

were not expected to make good civil servants, they were not encouraged to participate in education (Sangari & Vaid, 1990).²⁷

Patriarchal resistance to the education of women manifests itself in the form of violence and sexual crimes against women, creating a vicious cycle of repression. Threats to personal security create a heightened level of anxiety and fear. Despite the rhetoric, centuries of religious beliefs, caste inequalities, and colonial subjugation continue to be reflected in the education system without ever allowing for the questioning of the established roles of women as wives and mothers (Kenkre, 2005). Social and cultural norms and values are constructed to obstruct women's access to institutions outside the home, including schools (Mirza, 2002; Patel, 2003; Rouse, 2004).

Women in Pakistan have come to be regarded as purveyors of chastity and symbols of honor for the family. The burden of preserving the *izzat* (honor) of the *biradri* (clan or community) rests squarely on the shoulders of women (Rouse, 2004; Weis, 1985). Women are commodified, bartered for cash or kind, constantly watched, and monitored. The threat of bringing dishonor to the family, through their actions, looms large, especially for young unmarried women. Communities still practice *karo-kari* (honor killings)²⁸ and *watta satta* (bridal exchange).²⁹ A study conducted by Jacoby and Mansuri (2007) found that the practice

²⁷ Many critical theorists have criticized the role of donor agencies, over the last half-century, in helping to perpetuate the oppression of women by subscribing to the same cultural ideals. For a discussion see Stromquist (2001).

²⁸ For a detailed description of the practice and implications of honor killings see Amnesty International (1997).

²⁹ Karo Kari is the murder of a family member as a result of perceived adultery. Most often women are murdered by their male next of kin for having brought dishonor to the family. Watta satta is the custom of bridal exchange prevalent in rural areas of Pakistan whereby one set of brother and sister are married to another set of siblings. See Weiss (2001).

of watta satta is so prevalent in rural Pakistan that 43% of the women in their sample were in an exchange marriage situation. Their study found that in some cases the watta satta arrangement went so far as to determine the marriage partner prior to the birth of a female child. At all stages of their life women are dependent on the male members of the household and are marginalized in all social, political, and economic spheres. These practices severely inhibit women's participation in education.

Women who challenge the commonly held standards of morality and the "proper" way of conduct are ostracized and threatened with violence ranging from cat calls on the street to severe physical and sexual violence or death, both within the home and outside. Studies have shown that the more educated or affluent women are more likely to conform due to fear of bringing dishonor to the family since there is an implicit, direct relationship between the honor of the related-male members of the household and women's sexuality. Men's honor and "respectability" are deeply coveted and heavily guarded in the culture, but the gauge is controlled and measured exclusively by the actions of women associated with or related to the male members of the clan.

Studies have shown that the patriarchal percepts have become so much a part of the grammar of schooling that gender-specific roles and women's subjugation are reinforced through the school curriculum. In a content analysis of primary school textbooks, conducted jointly by UNICEF and the Aurat Foundation, it was found that 40% of the illustrations are of boys compared with 7% of girls (Jafri, 1995). In addition, most professions are ascribed to men—men are referred to as doctors, carpenters, business owners, and law enforcement officers while women are characterized by their domestic roles of mothers, sisters, aunts and

grandmothers. Men are referenced by their name and “proper” salutation while women are referred to as the male member’s daughter, wife, or mother.³⁰

Women who have to work outside the home for economic reasons are often subjected to extreme forms of objectification. One form of women’s economic activity that is “invisible” in the social and cultural fabric is the sex trade. Due to the severe stigma attached to the sex trade, it remains largely undocumented, unrecognized and invisible, and the women who are engaged in this form of subsistence remain immeasurably uneducated, indebted, intimidated, exploited and controlled (*Human Security Report*, 2005). Mira Nair’s debut film, *Salaam Bombay!* (1988), perhaps best exemplifies the plight of women in the dark and musty alleys of South Asia. Nair has been criticized for dismantling the illusions of grandeur and allure of India by showing the real street life in the busy city synonymous with Hollywood.

Along the same lines, Louise Brown’s account of the red light district in Pakistan, based on several years of ethnographic research, highlighted the evolution of the sex trade as a result of changing clientele. She references the effect of the infusion of capital from the Middle Eastern states and transnational corporations, as well as the export of women from Pakistan for the sex trade. There is not much documentation or research available on the size of the female population that is engaged in this trade. Suffice it to say that the phenomenon of sex-trade inculcates fear, insecurity, and the intense need to keep women and adolescent girls confined and “protected,” thus rendering them incapable of asserting their autonomy and individuality and meeting their basic human needs.

³⁰ This stark reality is aptly illustrated in the movie *Osama* (2003) where women characters go nameless but for their titles as mother or grandmother of the protagonist.

Maskiell (1994) described the patriarchal structure as encouraging a life of dependency throughout the entire life span of a woman. That is not to say that women do not play a part in the social construction and reproduction of this role. According to Enloe (2004), “No patriarchy is made up just of men or just of the masculine. Far from it. Patriarchal systems have been so enduring, so adaptable, precisely because they make many women overlook their own marginal positions and feel instead secure, protected, valued. Patriarchy depends on women’s acceptance or complicity to operate” (p. 5). Rouse (2004) underscored the fact that women in Pakistan are complicit in the gender role construction ascribed to them. In fact, research has shown that educated women are most likely to subscribe to the gendered roles and also act as enforcers of the rules. Whether this is because the “ideals” are reinforced through schooling or through some other intervening factors has not been established, but the fact remains that the only way out is for them to break out of the gender stratification. Kabeer (1994), Mies (1998), and Maslak (1999) pointed out that while women have a role to play in the construction of their subordinate roles, they do not always understand the reasons that contribute to this role definition, nor do they have the agency to bring about change in their ascribed social status. The fact that women are not educated is a tremendous force behind their lack of agency, their inability to wrest control of their lives or to bring about any semblance of change.

It can also be argued that women cannot be assumed to have an awareness of issues emanating from male privilege. However, in a qualitative study conducted by the World Bank, it was found that women “strongly supported the idea of female education in general, and of their daughters in particular; despite concerns that going to school might compromise the honor (30%) or physical safety (15%) of girls; or that educating girls had no material

benefit, because even educated girls could not work and contribute financial support to the household (10%)” (CGA, 2005, p. 70). This is indicative of differences in perceptions and aspirations between men and women regarding the education of girls.

One area in which men exercise total control over women is through the gendered roles within the family. Speaking of the familial structure in Pakistan, (Weiss, 2001) observed that in the absence of any social, institutional, or legal infrastructure, “families provide a virtually complete package of economic and social support provided that members abide by its norms” (p. 68). The boundaries of what women can or cannot do are very clearly defined based on the family status and tradition, often leading to instances of severe forms of physical and sexual abuse either meant as punishment to the perpetrator or deterrent to other women. Despite the fact that the Family Law Ordinance of 1961 provides safeguards against divorce and polygamy, men continue to take on several wives and discard them at will. Women’s worldview is shaped by the men who command their lives, or other women they are permitted to socialize with in their immediate community or families, thus reproducing and perpetuating the patriarchal institutions.

Even though gender relations are constantly renegotiated and cultural norms are reformulated in both the public and private domains, women in Pakistan continue to subscribe to a gendered, subordinate role. For the most part, this is the result of two issues: at the personal level, women lack the education (both knowledge and credentials) to exercise their power; and at the state level, the power of the ruling elite and the military-bureaucracy demands that women remain subjugated (Weiss, 2001). If women are educated, they can potentially upset the power balance by questioning the established norms and cultural

constructs. Thus, patriarchy functions to maintain the gendered hierarchy within the home and outside. The following section will illustrate how the military governments capitalized on this social construction of woman's status.

Militarization

If there is little research regarding the effects of patriarchy on the education of girls in Pakistan, there is even less on the role of militarization. Enloe (1983) defined militarization as, "a process with both a material and an ideological dimension. In the material sense it encompasses the gradual encroachment of the military institution into the civilian arena....The ideological dimension is...the degree to which such developments are acceptable to the populace, and become seen as 'common-sense' solutions to civil problems" (p. 10). The negative effects of militarism and the constant presence of a war-like condition go beyond the military establishment and affect the social fabric at large.

Enloe's description links militarization both to the public and private sphere of women's lives. In the public sphere, militarization relates to an over-extension of the national budget into defense expenditures, usurping resources from civil institutions such as healthcare and education. In the private sphere, it works through mechanisms such as patriarchy to exercise hegemonic control over the lives of women. In the context of national security the military assumes the role of the protector to reinforce the social and political marginality of women in all public and private institutions. The effects of militarization on the lives of women is an emerging field of study, but virtually no empirical studies exist on the impact of militarization on the educational status of women in Pakistan or in most other conflict zones. Due to its history of armed conflict and the proximity to India, one aspect of

militarization that has been extremely glorified in Pakistan is the fervor surrounding nationalism.

Nationalism has been rampant in Pakistan since its inception; the war with India in 1965 over control of the disputed territory of Kashmir strengthened that movement. In nation states where armed conflict is predominant the army becomes an essential part of the civic fabric and pervades all social institutions (Golan, 1997). The military as an institution has insidiously encroached upon the civil institutions in Pakistan as well. On the ideological front, while the nation sang praise of the valiant mothers who had sent their sons to defend the country, the education policies designed to help women achieve greater independence were sidelined in favor of the war. In the words of Enloe (1995), "...nationalism—not inevitably, but with notable regularity—can grease the wheels of militarization, a process that ultimately marginalizes women" (p.14).

The turbulent internal political conditions in the nation-state since its inception have given rise to another significant challenge not addressed in studies on the education of women. Pakistan came about in the aftermath of decolonization, and has not been able to recover from the resulting economic and social upheaval (Kazi, 1987). A few years after the tumultuous break-up of the country into Pakistan and Bangladesh, the military ruler, Zia ul Haq, came to power, in 1977, by overthrowing the civilian government of Zulfikhar Ali Bhutto. This coup d'état was a particularly significant turning point in the history of Pakistan for women's rights. The slogan used by Zia,³¹ "*chadar aur chardiwari*," (veils and

³¹ For a detailed discussion of women's social status in Pakistan during the Zia regime see Weiss (1990).

walls/boundary) in sharp contrast to Bhutto's *roti, kapra aur makan*³² (food, clothing, and shelter), was the culmination of restrictions placed on women and curtailment of their legal and social rights in the name of religion. The literal translation of Zia's slogan represented an ideology that was the epitome of confinement and seclusion for women. The word *chardiwari* literally translates to "four walls," but metaphorically the word has strict masculinist and patriarchal connotations. It was during this time that the gender gap in post-primary drop-out rates increased sharply. Blood (1994) noted that in 1975 no gender gap existed in the dropout rates, but by 1979 more boys than girls were dropping out of primary school (25% and 16% respectively). After the military takeover of the government by Zia, dropout rates for boys went down to 7% and those for girls increased sharply to 15% (Blood, 1994).

When the Soviet Union invaded neighboring Afghanistan in 1979, the United States supported the Afghan resistance movement with aid funneled through Pakistan. This was a turning point in the history of Pakistan due to the influx of refugees from Afghanistan and access to foreign aid. As early as 1983, there were 2.5 million Afghan refugees in 300 camps in the Northwest Frontier Province and in Baluchistan (Morgan, 1996). The Zia regime aided the Islamization of Pakistan and the resurgence of fundamentalist religious factions through foreign aid, not in the least due to events unfolding in neighboring Afghanistan. Thus, the regional situation was also the historical marker that changed the legal and social status of women in Pakistan as the problems of an already militarized state were compounded by external pressures.

³² Literally translated, *roti, kapra aur makan* refers to food, clothing and shelter. This slogan had clear socialist connotations based on equality of opportunity.

The constant pretext of threats to personal and national security enabled the military to permeate all facets of life. Lines between the military and civic institutions were blurred to the point that large segments of physical space in universities, hospitals, and government offices were occupied and run by the military.³³ Serving or retired officers of the armed forces were appointed to head specialized social service agencies, regional law enforcement agencies, and health care and education ministries and institutions. The *Fauji Foundation* (army), with 2005 assets amounting to 43 billion Rupees, became, “one of the largest industrial/commercial conglomerates in Pakistan.”³⁴ The Army Welfare Trust, *Shaheen Foundation* (Air Force) and *Bahria Foundation* (Navy) were equally endowed (Siddiq, 2007). Currently, each wing of the armed forces manages its own elite and heavily subsidized educational institutions at all levels of education. According to Rouse (2004), the increasing militarization of public space is a direct result of the geopolitical situation and the construction and portrayal of religion as a protective force. Rouse went on to say that this infiltration of public space by patriarchal and military institutions has significant implications for women because in Pakistan the military is strictly a male domain.

Effects of militarization within the home are no less severe with respect to women’s rights and social status. Patriarchy plays an integral role in reinforcing and legitimizing this effect of militarization. In many ways the military resembles other patriarchal institutions that affect women in negative ways (Enloe, 1983). In Pakistan, the subsequent cycles of civilian and military governments have been accompanied by drastic changes in the family laws concerning women, especially since the late 1970s through the early 1990s. Women’s

³³ For a more detailed description of the militarization of social institutions in Pakistan, see Ali (2003).

³⁴ Information accessed from the Fauji Foundation website: <http://www.fauji.org.pk/index.htm> on [March 5](#), 2007.

rights to inheritance and to bear witness have been completely curtailed. Particularly significant, during the early part of the military regime of Zia, debates about the status of women culminated in the passing of the Hudood Ordinance in 1979³⁵ and the Law of Evidence³⁶ (*Qanun-e-Shahadat*) in 1984, which aided in legalizing the subordination of women (Mumtaz & Shaheed, 1984). Both of these ordinances were instituted in the name of religion. Under the Hudood Ordinance a woman alleging rape was required to produce four male witnesses or be charged with adultery herself. Similarly, the Law of Evidence required two female witnesses in lieu of one male witness in the court of law. Notwithstanding the contradictions inherent in these laws, some estimates indicate that 80% of women in prisons are there because they were not able to produce the requisite number of witnesses while others may have lost their lives or been subjected to severe physical and emotional punishment.

The Demographic and Health Survey of Pakistan (DHS) conducted in 1992 concluded that women who were currently working were also the least educated, indicating that women's participation in the labor force did not increase with higher levels of educational attainment (Adolescent and Youth Survey of Pakistan, 2001). A study of fertility transition in Pakistan found that a vast majority of women continue to experience restrictions on spatial movement outside the home and have limited decision-making agency within the household (Sathar, 1998). These restrictions result in high drop-out rates for girls from primary schools as early as age nine or ten.

³⁵ For a detailed discussion see Mumtaz and Shaheed (1987).

³⁶Ibid. The Protection of Women Act (2006), designed to override the Hudood Ordinance and make forensic evidence admissible in cases of rape, failed to become law due to intense opposition in parliament.

Pakistan has the world's eighth-largest armed forces, equipped with fleets of US and European weapons and technology (U.S. Department of State).³⁷ The government is limited in its ability to modernize the equipment and training capabilities. The United States has filled this gap with \$10 billion in aid since 2001. A significant portion of this aid has been allocated to the maintenance, upkeep, and security of the nuclear facility in northern Pakistan.³⁸ It was the existence of this nuclear program that led the United States to start to withdraw its military assistance to Pakistan in the early 1990s, escalating to very strict economic sanctions after the nuclear testing in 1998. Since 2001, the “war on terror” overshadowed the need to keep Pakistan’s nuclear power in abeyance, sanctions were lifted, and U.S. “aid” flowed freely into Pakistan.

National Security, Human Security, and Education

Despite claims in the *Human Security Report* (2005)³⁹ that the total number of armed conflicts in the world is declining, the two conventional wars started as a result of the “war” on terror (in Afghanistan and Iraq) have had a very direct and devastating impact on Pakistan. When the United States attacked Afghanistan in 2001, Pakistan was pegged as an important ally providing access, intelligence, and resources to the Allied Forces. Meanwhile, the country had not had a chance to recover from the debilitating effects of partition, two protracted armed conflicts with India, and the civil strife resulting in the cessation of

³⁷ Bureau of South and Central Asian Affairs, U.S. Department of State, accessed November 15, 2007 from <http://www.state.gov/r/pa/ei/bgn/3453.htm>

³⁸ “Bush has made it clear that he is standing by Musharraf, offering only muted criticism of his actions and refusing to consider any significant cuts in U.S. assistance, which has totaled more than \$10 billion since 2001.” [Michael Abramowitz](#), *Washington Post* Staff Writer Sunday, November 18, 2007; page A01

³⁹ The Human Security Report Project (HSRP) is part of the [School for International Studies](#) at Simon Fraser University, Vancouver.

Bangladesh. The persistent climate of major conflicts and fear of foreign insurgencies have resulted in a definite tension between national security interests and human security concerns in Pakistan.

Human security is a relatively new concept that is distinctly different from national security in that the referent requiring security is the individual as opposed to the state in issues of national security. However, human security is related to national security since armed conflict undeniably exacerbates human suffering. In *What Women Do in Wartime*, Turshen (1998) explained, “the entrenchment of violence creates new daily insecurities for women—constant and overwhelming fear, exposure to abuse and obscenities, and threats of rape, kidnapping for themselves, their children and other relatives” (p. 8).

The concept of human security incorporates basic human needs such as food, shelter, health, education, freedom from violence, safety during natural and man-made disasters, democracy, good governance, and respect for human rights with major emphasis on gender equality (The United Nations Interagency Committee on Gender and Equality). In order to address gender equality goals and objectives effectively, there are five specific and inter-related issues that need to be incorporated into the discussion of human security: violence against women and girls; gender inequalities in control over resources; gender inequalities in power and decision-making women's human rights; women (and men) as participants, not victims. The basic percept of human security is that states have a responsibility to invest resources in the well-being of their citizens and that this responsibility cannot be compromised in the interest of national security.

Table 3.2
Expenditure on Education and Defense

Year	As % of GDP ¹	
	Education (%)	Defense (%)
1981-82	1.4	-
1982-83	1.5	-
1983-84	1.6	-
1984-85	1.8	-
1985-86	2.3	-
1986-87	2.4	-
1987-88	2.4	-
1988-89	2.1	-
1989-90	2.2	34.5
1990-91	2.1	35.6
1991-92	2.2	34.5
1992-93	2.4	31.9
1993-94	2.2	31.8
1994-95	2.4	31.4
1995-96	2.4	28.1
1996-97	2.5	27.5
1997-98	2.3	27.2
1998-99	2.2	26.3
1999-00	2.1	23.4
2000-01	1.6	24.8
2001-02	1.9	25.0
2002-03	1.7	25.4
2003-04	2.1	26.9
2004-05	2.1	23.1

Sources: ¹Siddiq (2007); ²Social Watch (<http://www.socialwatch.org/en/portada.htm>)

In Pakistan, where a quarter to one third of the GDP has been spent on national defense during the last two decades, only two and a half percent or less of the GDP is spent on education (see Table 3.2). According to UNESCO figures reported by USAID Pakistan had the lowest investment in education in all of South Asia in 2005.⁴⁰ Along with the paucity of funding for education, other essential social services such as health care, clean potable water, disaster preparedness, and personal safety have also been compromised. Women are directly affected by a lack of basic services such as healthcare facilities and clean water

⁴⁰ Expenditure on education as percent of GDP in countries in South Asia (2005): Bangladesh 3%, Bhutan 7%, India 3%, Maldives 8%, Nepal NA, Pakistan 2%. Source http://quesdb.usaid.gov/cgi-bin/broker.exe?_program=gedprogs.ged_country_une.sas&_service=default

supply, creating hardships that cannot be overcome easily. More importantly, the minuscule education budget leaves little or no room for innovative ways to improve women's access to education.

The combined effects of patriarchy and militarization have contributed heavily to women's low levels of educational attainment in Pakistan. Friedlander's (1995) description of fundamentalism in India could easily reflect the situation in Pakistan:

Central to (Hindu) fundamentalism is the call to arms in defense of the motherland and the purity of its women. Women are vested with the role of boundary keepers; they are the bearers of tradition and represent the purity of the group. As such they must be kept under careful surveillance lest their transgressions endanger group cohesion and purity. They are the potential enemy within. (p. 53)

Based on the foregoing discussion of patriarchy and militarization in conjunction with my conceptual framework, I return to my overarching research question of why women in Pakistan have such low levels of educational attainment. I address this situation in the next chapter through a series of three interrelated questions. The first question focuses on the status of educational attainment of adolescent girls and how it is different from that of boys. This question provided the foundation for the two follow-up questions. The second question investigates how patriarchy affects gender differences and the final question analyzed educational attainment during the two types of government.

Chapter 4

Education System and Policies

Education System

Consistent with the British legacy, the current education system in Pakistan is similar in many respects to those of India and Bangladesh. For the most part there are two dominant and distinctly different channels in existence simultaneously: the madrasa system and the modern school system (Figure 4.1). The madrasas are primarily designated for religious education. While originally intended exclusively for male education, madrasas are now becoming a common means of education for girls of all ages. The madrasa system was patterned largely after the religious schools in India. Most school-aged boys attended the modern public or private schools and additionally chose to attend a madrasa for religious education. This system served a small segment of the population until the 1980s. At this juncture, with events unfolding in Afghanistan, the United States and Saudi Arabia became immensely interested in using the madrasas as a source for training and recruiting Mujahedeen (freedom fighters) for the war with the Soviet Union. From then on, madrasas, profusely funded and encouraged by the three governments (Pakistan, United States, and Saudi Arabia), began to play a significant role in the education of boys for the specific purpose of training them as “freedom fighters”.

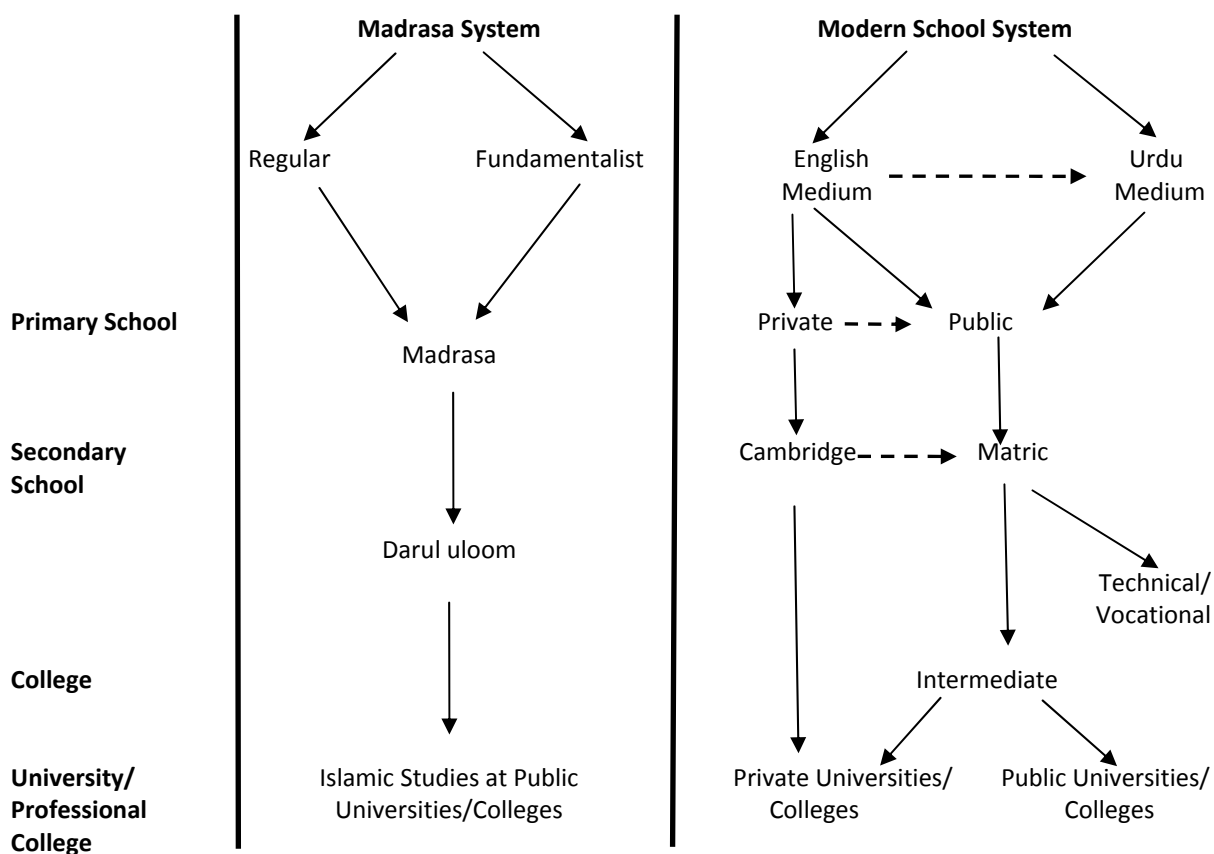


Figure 4.1: Contemporary Education System

Adapted from: Hussain, I. (2008). Education, Employment and Development in Pakistan.

The madrasas were welcomed by a large majority of the poor families in both urban and rural settings because they provided boarding, lodging, clothing, and religious education for boys of all ages. The Afghan refugees, entering Pakistan in the aftermath of the Russian invasion of Afghanistan in the early 1980s, relied heavily on the madrasas for food, shelter and religious education. Madrasas provided security in the absence of social infrastructure and the support of extended families in the absence of next of kin. According to a 2002 report published by the International Crisis Group (ICG), over one and a half million children

attended philanthropy-run madrasas in Pakistan.⁴¹ The madrasas have continued to supplement the supply side of the education system despite cuts in external funding sources and restrictions from the government. In fact, madrasas have expanded their mission and scope to include the education of girls and women in both urban and rural areas of Pakistan during the last decade despite the limitations placed on them. According to Andrabi, Das, Khwaja, and Zajonc (2006), there were 43 girls for every 100 boys enrolled in 450,000 madrasas across Pakistan. That said, Hussain (2008) points out that enrollments in madrasas accounted for less than one percent of the total primary school enrollments in 2002 and should not be viewed as challenging to the public system of education, as a surrogate or complement to formal education.

The modern school system, though mandated to teach Islamic and nationalistic ideologies, distinguished itself from the madrasas by following curricula introduced by the British in India. There is further distinction in the modern school system based on the language of instruction and the public-private funding streams. Any movement within and between the two systems is almost always unidirectional. For instance, if a child starts school in the modern system it is possible to move to the madrasa, but the reverse is not possible. Similarly, within the modern system, if a child starts in an English medium or a private school, they could transition to the Urdu medium or the public school system. On the other hand, for a child to start in the Urdu medium or the public school and later transfer to the English medium or private school would be almost impossible.

⁴¹ Andrabi et al. have disputed the claim made by ICG, stating that this number is overstated by a factor of 33.

The modern system of education is segmented into Urdu and English medium schools. The English medium system is further divided into the *matric* or the Cambridge systems. Children are expected to start school at the age of five or six and attend primary, middle, and secondary school for ten years (5+3+2). Once children start school in the Urdu medium it is almost impossible to transfer to the English medium system and, likewise, within the English medium system it is almost impossible to transfer from the matric to the Cambridge system. Streaming in *science* or the *arts* takes place at the upper secondary levels. Upon graduation from secondary school, students can enter the college level for two years, which further streams them into the arts, commerce, pre-medicine, or pre-engineering. There are few options for vocational or technical training. After completing the intermediate level, students can choose to attend the university or its affiliated colleges for two years of college work (tertiary level) or enter professional colleges. They graduate with a Bachelor of Arts or a Bachelor of Science after two to three years or with a degree in engineering or medicine in four to five years (*EFA Country Report, 2000; Hussain, 2008*).

The Cambridge system, ironically also affiliated with the British system, has become popular for a negligible percentage of the very wealthy elite class. Many other former British colonies like Canada, Malaysia, and India, still subscribe to the same system. Students are streamed at a very early age for either the traditional or the Cambridge system with little cross-over between the two. Within this system, students stay in school for eleven years instead of ten and then take the British “O-Level” examination. Another two years of schooling makes them eligible for the “A-Level” examination. A large percentage of students graduating from these schools either go abroad for higher education or enter one of the elite, private, professional, or business schools. Lloyd, Mete, and Grant (2007) reported that the

gender gap in the elite, urban schools (where these schools are traditionally located) is largely negligible, if not absent. Notably, the government funded school system shows a significant gender gap quite in contrast to the elite system.

Government supported or public institutions are not able to meet the demands for physical facilities or to provide a satisfactory quality of education (Khan, 2005). In fact, a large part of the emphasis on meeting the educational needs during the Sixth Five-Year Plan in Pakistan was placed on the mobilization of the private sector to assume a greater responsibility for education (Isani, 2001). By 2000 there were reported to be 32,000 private schools in Pakistan, an almost ten-fold increase in less than two decades (Andrabi, Das, & Khawaja, 2002). Andrabi, Das and Khwaja (2002) maintained that 35% of primary school enrollments were in private schools and that the likelihood of enrolling in school increased with the increased availability of private schools.

The assertion that private schools help improve access to education for girls has been challenged by some scholars. Lloyd, Mete, and Grant (2007) argued that private schools locate in areas where there is a higher propensity for girls to enroll in school and therefore do not help alleviate the paucity of schools for girls in areas of great need. Using data from the Adolescent and Youth Survey 2001-02, Lloyd, Mete and Grant concluded that the higher the gender equity in existing schools, the greater the likelihood that the community will have a private school. They stress that “communities are seen to be more suitable to private school formation when the gender disparity in enrollment is relatively narrow, ensuring entrepreneurs of more potential clients” (p. 109). Their study underscores the need for locating state-funded primary schools in rural communities.

The problems besetting education are compounded by the lack of infrastructure support for public education. The national budget can barely spare 2% for education in Pakistan, where mass rural-urban migration has increased unemployment and poverty and over 70% of the population lives on under two dollars a day. Ironically, the government pays about twice as much for debt service than its total expenditures on education⁴² (Bines, 2001). The shortfall in funding is met through loans and grants from international, bilateral, and multilateral agencies. This aid was projected to amount to US\$ 1.4 billion between 2000 and 2009 (Donors' Directory, 2005).

Education Policies

Planning for nation building in Pakistan has been conducted through Five Year National Development Plans designed as blueprints for planning and development, but education has figured only marginally in these plans. This neglect was largely due to other pressing issues, such as national security and internal political instability. Goals and targets for universal primary education and adult literacy were set during each planning period then missed, rewritten, and revised with the result that universal primary education still remains a goal in the most recent National Education Plan. More recently, the Five-Year Development Plans have been abandoned and education policies are guided by the First National Education Policy (1998-2010) and the Poverty Reduction Strategy Paper (2001).

For the purpose of policy analysis, the history of Pakistan is divided into six distinct phases, each characterized by a basic difference in how the government came into power.

⁴² Public expenditure on education from 1995–1997 was 2.7% of GDP (see http://www.undp.org/hdr2001/indicator/cty_f_PAK.html)

The following is a brief description of the six phases that formed the context for education policy development (see Table 4.1).

Table 4.1

Chronological Timeline of Significant Political Events and Policy Developments in Pakistan Since Independence in 1947

Phase	Planning Cycle	Significant Developments
Caretaker government (1947-58)	No plan (1947-1950)	1947 Decolonization and creation of separate states of India and Pakistan based on religious majority 1948 First war with India over Kashmir
	Six-Year Plan (1950-1956). Not implemented	1951 First Prime Minister (Liaquat Ali Khan) assassinated
First military regime (1958-71)	First Five-Year Plan (1955-1960). Not implemented	1954 State of emergency declared
		1956 Iskandar Mirza appointed president. First constitution 1958 Iskandar Mirza declared martial law 1958 First military coup. Ayub Khan deposed Iskandar Mirza
	Second Five-Year Plan (1960-1965). Privatization of education	1961 New constitution under Ayub Khan 1965 First elections. Ayub Khan elected, martial law lifted 1965 Second war with India
First civilian government (1971-77)	Third Five-Year Plan (1965-1970)	1969 Ayub Khan resigned and handed over power to General-Yahya Khan. Martial law declared
		1970 First general elections
Second military regime (1977-88)	Fourth Five-Year Plan (1970-1977). Abandoned, nationalization of education	1971 Third war with India. Creation of Bangladesh. Yahya Khan relinquished power to Bhutto
		1972 Nationalization of educational institutions
		1973 New constitution. Elections held. Bhutto elected Prime Minister
		1977 Zia deposed Bhutto. Constitution suspended. Martial law
Second military regime (1977-88)	Fifth Five-Year Plan (1978-83).	1979 Hudood Ordinance passed Move toward denationalization of educational institutions. Islamization of education. Soviet invasion of Afghanistan
	Sixth Five-Year Plan (1983-1988). Education privatized	1984 Law of Evidence passed 1985 Constitution restored by Zia. Martial law lifted. Elections for National Assembly
Second civilian government (1988-98)	Seventh Five-Year Plan (1988-1993)	1988 Zia "assassinated". Benazir Bhutto elected Prime Minister
		1990 Benazir deposed. Nawaz Sharif elected Prime Minister. US Aid to Pakistan cut off.
		1992 Social Action Programme
		1993 Bhutto reelected
	Eighth Five-Year Plan (1993-1998)	1994 Taliban movement in Afghanistan 1995 United States eases sanctions 1996 Bhutto dismissed on charges of corruption

Phase	Planning Cycle	Significant Developments
		1997 Nawaz Sharif reelected Prime Minister. Pakistan recognized Taliban government in Afghanistan 1998 India and Pakistan carried out first nuclear tests. Economic sanctions by US and Japan
Third military regime (1998-2008)	<i>First National Education Policy 1998-2010</i> <i>Poverty Reduction Strategy Paper 2001</i>	1999 Kargil conflict. Musharraf took over government. Constitution suspended. Martial law imposed 2001 World Trade Center attacked. US attack on Afghanistan 2003 Constitution amended. Musharraf to hold both the public office and the office of Chief of Army Staff 2006 Protection of Women Act passed 2007 Protection of Women Act repealed Martial law imposed (November 2007). Bhutto assassinated (December 2007)

Note: Shaded areas indicate the two cohorts analyzed in this study

Caretaker Government (1947–1958)

After independence the country remained without a constitution for the first nine years until 1956, but there was a fundamental shift in the governments' policies toward women. The National Conference on Education which convened in 1947 determined that the country would have free, universal, and compulsory education within a decade for boys and shortly thereafter for girls (Ahsan, 2003; Bray, 1983). The new political agenda promised to accord women equal rights in the constitution. Attempts were made to eliminate the gender-specific duality of the school curriculum in which the purpose of female education would be recognized as being the same as that for male education. That said, the colonial system of education remained intact and the policies designed to eliminate gender gaps went unimplemented.

The government earmarked 4% of the education budget for establishing new engineering and medical colleges, as well as vocational and technical institutes. Nineteen professional colleges were opened in 1949, of which two were for women (Jalil, 1998). Though this was a positive step in acknowledging women's right to higher education, in an environment in which coeducational institutions were not allowed to exist, it also revealed the large gender-related disparities in funds allocation.

Soon after independence, the First Six-Year Plan (1950–1956) was crafted. This plan focused on investment in technical, vocational, and professional fields (Jalil, 1998). In the postcolonial context this emphasis on technical fields of study did not serve women's education well since these fields were considered exclusively male domains. In reality, the First Six-Year Plan and several subsequent plans, along with the education policies and goals, were shelved with each successive regime change and military coup.

First Military Regime (1958–1971)

In 1958, General Ayub Khan took over the government, imposed martial law, and signed on to be a U.S. ally in the Cold War. His policies focused on the legitimization of military power in the country by creating a nationalistic fervor directed against India. The First Five-Year Plan (1955–1960) was abandoned and the Second Five-Year Plan (1960–1965) developed. Khan's education reform plans included the introduction of secular education in madrasas, similar to that of the public primary schools. Turbulent and unstable internal politics and external influences prevented the government from focusing on education beyond an effort to bring madrasas into the mainstream. Political tensions with neighboring India resulted in the War of 1965, which signaled the deterioration of the Khan

regime. In 1969, he handed power to his namesake, Yahya Khan, yet another General, for a two-year period.

Political unrest, nationalistic fervor, renewed foreign interest in Pakistan, and emerging geopolitical alliances, all gained momentum subsequent to the war with India. The then foreign minister, Zulfikar Ali Bhutto resigned, declared his opposition to the military government and founded the Pakistan Peoples Party. Bhutto subsequently led a grassroots civil disobedience movement, organized through the institutions of higher education, which culminated in the first national elections for the country and in the resignation of Yahya Khan. The elections of 1969 led to polarized results in East and West Pakistan with Sheikh Mujibur Rahman's Awami League sweeping in the eastern wing of the country and Bhutto's People's Party emerging as the major victor in the western wing. The tense political situation in the two wings of the country was the impetus for the formation of Bangladesh as an independent nation state.

First Civilian Government (1971-77)

In 1971, Bhutto⁴³ became the first democratically elected prime minister of Pakistan. Bhutto, himself from a feudal family, had a "socialist" agenda and nationalized education, banking, and industry, very much to the chagrin of the landed aristocracy and against the feudal societal structure. In 1972, Bhutto announced his education policy with a major focus on nationalization of educational institutions. Jones and Jones (1977) summarized a description of the Bhutto education policies, published in an official communiqué, as follows:

⁴³ The elder Bhutto, Zulfikhar Ali, was the father of Benazir Bhutto who later became the first woman prime minister of Pakistan in 1988.

...nationalist in content, developmental in design and radical in spirit. Infused with ambitious egalitarian rhetoric, they promised to bring about a wholesale restructuring of values, local participation in educational affairs, equal access to education, and eradication of illiteracy. However laudable, these objectives were more visionary than realistic under Pakistan's social and economic conditions. But there was one practical measure—that of nationalizing private educational institutions—that could be enacted promptly so as to convey the resolve of the new government to use education as a vehicle for promoting national cohesion and demolishing the system of social privilege. (p. 2)

Under Bhutto's government, women and girls' education was given relatively greater importance in the political agendas and rhetoric. One significant change in education planning in the mid 1970s was the shift in the government's emphasis away from higher education and toward primary and secondary education. This change was evidenced in the financial layout of funds for the Fifth Five-Year Plan (1978–1983) in which funding for primary and secondary education almost doubled (Isani, 2001). Bhutto aimed to equalize opportunity by making education more accessible to the middle and lower socioeconomic classes, with particular emphasis on meeting the education needs of women. Nationalization of education, however, came with the stigma and perils of poor quality and bureaucratic corruption as well as growing opposition, from teachers unions and an unprecedented drain on the public coffers.

Second Military Regime (1977–1988)

In 1977, Bhutto was overthrown by Zia ul Haq and executed two years later. Meanwhile, Zia suspended the constitution and installed himself as the chief martial law administrator. The first education reform Zia promulgated was the privatization of education, but above all, the Zia period was the turning point for women's social status in Pakistan. He initially pledged to hold elections but reneged in 1978, promising "Islamization" and accountability of politicians instead. Zia used the situation in neighboring Afghanistan to strengthen his militaristic agenda as he prepared to deal with the influx of over three million Afghan refugees. The "Islamization" process, reinforced by the Jihadi movement, created hostile and militarized sectarian groups that threatened human security at the personal level (ICG, 2002). All civic institutions were militarized under the guise of Islamization and patriotism. The military established bases and headquarters in higher education institutions and became a constant presence in civic life.

The Sixth Five-Year Plan was formulated in 1983, but contained no specific proposal for improving women's education. This state of affairs is not difficult to understand as the country was again under a military government, which, this time, was engaged in the process of "Islamization." The stated goal of the Sixth Five-Year Plan was to improve literacy from 27% to 48% and to expand primary education from the 48% targeted in the previous plan to 75% by 1987–1988.⁴⁴ Education was privatized and, in the absence of physical infrastructure, mosques were designated to be used as proxies for primary schools and to house mass functional literacy programs, especially targeted to reduce the rural-urban gap. To meet these

⁴⁴ Lessons from the Sixth Five-Year Plan accessed on March 10 from <http://www.mopd.gov.pk/five%20year%20plans/7th/Part%20I/part%2010001.pdf>

goals more than 12,000 public and private primary schools and 17,000 mosque schools were opened. Due to these efforts, participation rates at the primary school level went up to 63% (boys, 80%; girls, 46%). While private schools saw an increase in girls' enrollment (Andrabi, 2006), the reliance on mosques as proxies for schools did not serve women's education well in the public realm. Mosques in Pakistan are traditionally considered an exclusively male domain, so that the infrastructure needs for girls' education were unfulfilled. Despite these efforts, there was only a 3% increase in literacy, and the primary enrollment goal fell short by over 12%.

Second Civilian Era (1988–1999)

In 1988, Zia's purported⁴⁵ assassination brought the second military regime to an end and launched a decade of chaos during which the governments of Benazir Bhutto and Nawaz Sharif were elected, dissolved and deposed in quick succession. Over the next ten year period, Bhutto was prime minister from 1988-90 and 1993-96 while Sharif was in office from 1990-93 and 1997-99. The two leaders were not able to surface from under the control of the military, which continued to assert its power on the pretext of national security. Bhutto took a stand against the military because of the treatment meted out to her father and sought to decrease the role of the madrasas in her education policies, but Sharif saw no reason to not align his policies with the military. Despite the cyclical changes in the government there was a considerable shift in the education policies.

⁴⁵ Zia died in an aircraft crash, along with several army generals and the US ambassador to Pakistan. The cause of the crash was never confirmed but it was largely believed to be related to an assassination plan.

In response to the Millennium Development Goals (MDGs),⁴⁶ Pakistan announced the New National Education Policy in 1998. The major components included the National Education Policy (1998–2010), the Social Action Programme Phase II (1997–2002), the Pakistan 2010 Programme, and the Eighth Five-Year Plan. The budget allocation for education for the first year of the plan was 2.2% of GDP. A significant amount of importance was given to literacy programs and policies in these documents. The Education for All (EFA) Country Report for Pakistan, highlighted the literacy components as follows (*EFA Country Report*, 2002):

- Implementation of the literacy programs will be through the Provincial Governments, NGOs and local organizations.
- Skill-based community development programs will be part of the literacy programs.
- Post-literacy phase will be made an integral part of all literacy programs.
- Rural areas, urban slums and women will receive greater attention in the literacy programs.
- Electronic and print media will be fully utilized to generate interest in the literacy efforts and to deliver the programs.

In addition, the National Education Policy (1998) goals for elementary, secondary, and tertiary education were listed as follows (Education Policy 1998-2010).

⁴⁶ The eight United Nations Millennium Development Goals (MDGs) range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015. The goal is to “promote gender equality and empower women” aimed to “eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels by 2015” (Millennium Development Goals Report 2007). The MDG failed to achieve universal primary education by 2005.

- About 90% of the children in the age group (5-9) will be enrolled in schools by year 2002-03. Gross enrollment ratio at primary level will be increased to 105% by year 2010.
- Integration of primary and middle level education into elementary education (I-VIII) will increase participation rates from 46% to 65% by 2002-3 and 85% by 2010 at the middle level.
- The Compulsory Primary Education Act will be promulgated and enforced in a phased manner.
- One model secondary school will be set up at each district level.
- Vocational or career education will be introduced at the secondary level.
- Secondary schools will be made accessible to all students interested in continuing their education. The overall participation rate will be increased from 31% to 48% by 2002-03.
- Access to higher education shall be expanded to at least 5% for the age group 17-23 by the year 2010.

In addressing the religious schools, the policy aimed to bridge the gap between the formal school system and the madrasas by officially recognizing credentials awarded by madrasas as the equivalent of those awarded by the formal system of education.

One of the major components of the national policies was acknowledgment of the acute need to provide non-formal means of education to alleviate poverty as explained in the “Poverty Reduction Strategy Papers”. There was recognition in the National Education Policy of the imminent need to address girls’ education at all levels. However, this goal fell short by almost

40% by the target date (Millennium Indicators, Unstats). In order to address the unmet need, a large number of NGOs⁴⁷ (the Agha Khan Rural Support Program, The National Rural Support Program, AURAT Foundation, and Pakistan Education Society) sprung up to promote formal and non-formal education and adult literacy programs.

Third Military Regime (1999-2008)

The Bhutto-Sharif civilian governments lasted for a decade and were ousted by Musharraf in 1999. Events unfolding in Iraq and Afghanistan, quickly made Musharraf an indispensable ally in the “war on terror”, reminiscent of the Zia-era during which Pakistan was a U.S. ally in the Cold War. The U.S. lifted sanctions and promised Pakistan \$3 billion in aid over the next few years.⁴⁸ Renewed interest in women’s religious education took shape under Musharraf’s government in the form of women-run madrasas. These madrasas filled a much-needed void, providing young girls and women with the illusion of education that the public or private educational institutions were not able to afford (ICG, 2002).

Despite emphasis on literacy, the gender gap in formal educational attainment has continued to persist (see Table 4.2). Overall, in 2001-02, the primary enrollment ratio of girls to boys was .92 in urban areas and .65 in rural areas. The province of Punjab had the highest enrollment rates among the four regions and the smallest gender gap. Punjab also had the highest school attendance rate for girls with 82 girls for every 100 boys.

⁴⁷ A detailed listing of several hundred NGOs and donor agencies engaged in education in Pakistan can be found at this website: <http://www.net-ngo.com/>

⁴⁸ Some accounts state that the U.S. has provided Pakistan \$10 billion in aid since 2003.

Table 4.2
Gross Primary Enrollment Rates in Pakistan by Urbanicity and Province

	1990-91		1995-96		1998-99		2001-02		Enrollment Ratio(F/M)
	Male	Female	Male	Female	Male	Female	Male	Female	
Urbanicity									
Urban	97	87	95	90	95	92	94	87	.92
Rural	82	48	81	54	75	50	80	52	.65
Province									
Punjab	-	-	85	70	82	68	84	69	.82
Sindh	-	-	86	62	75	54	76	51	.67
NWFP	-	-	80	49	84	54	97	56	.57
Baluchistan	-	-	86	63	79	46	77	44	.57
All	86	59	85	64					-

Source: World Bank 2007

Note: GER is calculated by dividing the number of children attending grades 1-5 by the number of children aged 5-9 in the population and multiplying by 100.

War, assassination or execution of elected leaders, and martial law were the primary milestones in each phase of government. For most of Pakistan's history, violence, internal instability, and external pressures demanded the attention of the politicians, with the result that recurrent military rule and militarization of social institutions became a norm.⁴⁹ The role of militarization and patriarchy in the formation of gender roles as they pertain to education has not been studied in the context of Pakistan. More importantly, we have little knowledge, if any, of how they affect educational attainment and access to education.

⁴⁹ The first military coup in Pakistan occurred in 1958. In the ensuing 50 years, there have been 17 years of civilian government.

Chapter 5

Research Questions, Data, Variables, and Analytic Strategy

Research Questions

The purpose of my study was to investigate the reasons for girls and women's low levels of educational attainment in Pakistan. I used data from the nationally representative Adolescent and Youth Survey conducted in 2001-02.⁵⁰ The sample for my analysis consisted of 8,074 adolescents between 15 and 24 years of age. This study assessed the gender differences in schooling as these correspond to the internal political situation and patriarchal social structures in Pakistan. To operationalize militarization I used two military and civilian governments between 1983 and 1994 and to operationalize patriarchy I used household expectations regarding employment, empowerment, and physical mobility of adolescent girls and boys. The overarching question for my study was why women and girls in Pakistan are not getting an education. I identified three interrelated questions for the study:

1. What is the status of educational attainment of adolescent girls? How does it compare to the educational attainment of adolescent boys?
2. How is primary school completion influenced by patriarchy above and beyond other family factors, such as geographical location, socio-economic status (asset index), and parents' literacy status?

⁵⁰ The data, constituting the largest nationally representative survey conducted in Pakistan, was jointly conducted by the Population Council and the Federal Bureau of Statistics in Pakistan.

3. How does school attendance for girls and boys under civilian government differ from that under military government?

Data

Data used in this study are drawn from the Adolescent and Youth Survey (AYP) conducted in 2001–2002.⁵¹ The AYP, the largest nationally representative survey conducted in Pakistan, was modeled after the Demographic and Health Surveys (DHS). The study was jointly conducted by the Population Council⁵² and the Federal Bureau of Statistics in Pakistan. The data were collected between October 2001 and March 2002 to explore the context and experience of transition to adulthood, including education, employment, marriage and fertility, family composition, and socio-economic status. In addition to a household roster with education-related information, the survey also collected additional life-cycle, attitudinal, and socio-economic data pertinent to this study. The AYP has an advantage over other data, such as the Pakistan Demographic and Health Survey (DHS), for three main reasons:

- The AYP data were collected 10 years after the DHS study was conducted in Pakistan and thus provide a more recent snapshot.⁵³

⁵¹ The report based on the Adolescent and Youth Survey of Pakistan 2001-02 is available at <http://www.popcouncil.org/pdfs/ayp0102.pdf>

⁵² The Population Council is an international, non-profit organization founded by John D. Rockefeller in 1952. The Council conducts research for policies, programs, and products pertaining to reproductive health, HIV and AIDS, poverty, gender, and youth in over 60 countries including India, Pakistan, and Bangladesh.

⁵³ The most recent DHS in Pakistan was completed in 2008. The data for this study was collected in 2006-07. The study was conducted to address the monitoring and evaluation needs of maternal and child health and family planning programs. The focus of this study was ever-married women 15-45 years old. The data from this study is expected to be made available in 2009.

- The AYP data contain perceptual, attitudinal, and gender-related data that can be used to understand the impact of parents' attitudes toward educational attainment of both girls and boys. These attitudes reflect more broadly held patriarchal ideologies not present in other datasets.
- The adolescent data lends itself to cohort based treatment that corresponds to two consecutive military and civilian phases of government.

The AYP study used the sampling frame of the 1998 Pakistan Population Census. The universe of the AYP consisted of all urban and rural areas in the four provinces (Sindh, Punjab, Baluchistan, and the NWFP). Military restricted areas of Azad Jumu and Kashmir and protected areas were excluded from this sampling frame. The population of the excluded areas constituted about 2% of the total population of Pakistan. Data collection was conducted by 15 teams of trained men and women who were proficient in the local languages and the survey instrument was translated into the major local languages.

A two-level stratified sampling design, similar to the Pakistan DHS, was used for this study. Cities and towns in the urban areas were divided into 22,800 enumeration blocks (EBs). Each EB consisted of 200–250 households, and was classified into low-, middle-, and high-income groups. In the rural areas, the list of 50,588 villages outlined in the 1998 Census was used as the sampling frame. These EBs and villages were considered the primary sampling units (PSUs). Six thousand eight hundred and twelve (6,812) households or secondary sampling units (SSUs) were selected using a probability sampling technique from each of the EBs, of which 3,997 were rural and 2,815 urban, with highest representation from the province of Punjab (see Table 5.1).

Table 5.1
Distribution of Households by Province and Urbanicity

Province	Urbanicity		Total
	Rural	Urban	
Punjab	2,003	1,349	3,352
Sindh	874	829	1,703
NWFP	720	398	1,118
Baluchistan	400	239	639
Total	3,997	2,815	6,812

Source: Adolescent and Youth Survey of Pakistan 2001-02

The questionnaire design was fashioned after the Pakistan Demographic and Health Survey (DHS)⁵⁴ conducted in 1991. A unique feature of the AYP survey instruments was that the household questions on schooling were worded to correspond with the Pakistan DHS survey for ease of comparison (Lloyd, n.d.). Three instruments were used in the data collection for the AYP: the household survey, the adolescent and youth survey, and the community survey. This study uses the first two instruments, i.e., the household survey and the adolescent and youth survey.

Household Survey: The AYP household questionnaire⁵⁵ was used to obtain information about each member of the household and to gain access to adolescents living in the household for the adolescent survey. The household survey was completed in 6,585 households. Eight out of ten household respondents (81%) were either the head of household or a spouse (see Table 5.2). Most of the other respondents were close relatives of the head of

⁵⁴ The National Institute of Population Studies (NIPS) of the Government of Pakistan, United States Agency for International Development (USAID) and IRD/Macro International Inc. (IRD), Columbia, Maryland, collaborated to conduct the Pakistan Demographic and Health Survey. Technical assistance was provided by IRD for all phases of the survey through the Demographic and Health Surveys program. The survey was jointly funded by USAID and the Government of Pakistan.

⁵⁵ The survey is available at <http://www.popcouncil.org/pdfs/ayp0102.pdf> and also from the author upon request.

household (parents, siblings, son or daughter). When considering attitudinal data regarding adolescents' employment, mobility and empowerment I have treated these household respondents as representing the views of the parents.

Table 5.2
Relationship of Household Respondent to Head of Household

Relationship	Percent (%)
Head of household	33.7
Spouse	47.5
Son/Daughter	6.7
Son/Daughter in law	3.3
Father/Mother	2.9
Brother/Sister	1.6
Brother/Sister in law	.8
Grandchild	.1
Nephew/Niece	.1
Father/Mother in law	.1
Others	.2
DK/NA	3.1

Note: n=6,812

Adults in the household were interviewed first and permission was sought for subsequent interviews with the adolescents and youth in the household. Among other demographic information, a significant portion of the household instrument gathered information regarding the attitude of the household respondent toward education, marriage, employment, empowerment, and physical mobility of adolescents. The household profile included a listing of all household members in the roster, and information about their education, work, and marital status. Information was also gathered on those household members not currently living at home. Additionally, socioeconomic information was collected using 29 asset-related indicators.

The household roster contained 60,580 individuals in 6,812 households. Of these 60,580 individuals, 51% were female and 49% were males. The household size ranged from one to 65 persons with a mean of 8.9, a mode of 8.0, and a standard deviation of 4.9. The larger household sizes could be attributed to the fact that extended families (*kunba*) are a norm in most parts of Pakistan, and in some instances there were as many as 6–9 families living together, this explains the one household comprising 65 people. Overall 71% of the households consisted of fewer than 10 persons, and another 26% consisted of between 11 and 20 persons. Ninety-nine percent of the households had fewer than 25 persons. The household members ranged in age from 0–97 years (or more) with a mean age of 23.4 years and median of 20 years. Age information was missing for 338 (.6%) household members.

*Adolescent and Youth Survey Instrument.*⁵⁶ For the adolescent survey, 254 primary sampling units and 4,839 secondary sampling units were contacted (see Table 5.3).⁵⁷ The AYP adolescent and youth questionnaire,⁵⁸ collected information about education, livelihood, puberty, marriage and childbearing, social context, household assets, migration, gender roles, physical mobility, aspirations regarding education, and decision-making. Life-events calendar and time-use profile over the preceding 18-hour period for adolescents and youth between the ages of 15 and 24 were also developed.

⁵⁶ The AYP study was conducted for the purpose of transition to adulthood, thus the age range used for the adolescents and youth is 15-24 years. This wide an age range is not often referred to as adolescents in other research but for the purposes of this study I have retained the AYP terminology. Hence, throughout this study, the word *adolescent* refers to individuals between 15 and 24 years of age.

⁵⁷ This information is excerpted from the *Adolescent and Youth in Pakistan Report* (<http://www.popcouncil.org/pdfs/ayp0102.pdf>) accessed on September 30, 2007.

⁵⁸ The survey is available at <http://www.popcouncil.org/pdfs/ayp0102.pdf> and also from the author upon request.

Table 5.3
Breakdown of Primary and Secondary Sampling Units in the Adolescent Survey

Province	Sample PSU			Sample SSU		
	Urban	Rural	Total	Urban	Rural	Total
Punjab	45	68	113	862	1,366	2,228
Sindh	32	37	69	580	694	1,274
NWFP	15	29	44	272	531	803
Baluchistan	10	18	28	190	344	534
Total	102	152	254	1,904	2,935	4,839

Source: Adolescent and Youth Survey of Pakistan 2001-02

The adolescent survey contains 8,074 respondents. Forty-one percent of the adolescents surveyed were male and 59% were female. Mean age for these adolescents surveyed was 18.8 years; mode was 15 years with a standard deviation of 2.8 years. (Female adolescents: mean 18.88, median 19.00, mode 15.00, SD 2.83; Male adolescents: mean 18.79, median 18.00, mode 18.00, SD 2.72).

Study Sample: To analyze data for the three research questions I used adolescents between 15 and 24 years old as the unit of analysis. This sample had 8,074 adolescents with 4,741 (59%) girls and 3,333 (41%) boys. I used this sample for descriptive analysis of the data. I also conducted multivariate analysis on this sample to analyze adolescents' primary school completion. In addition, I conducted multivariate analyses on three subsets of the sample. I used a sub-sample of 15-18 year old adolescents (4,042) to analyze status of school attendance at the time of data collection. I then used birth cohorts to conduct multivariate analysis by dividing the sample into two groups. The cohorts (6,432) corresponded roughly to two consecutive military (M2) and civilian regimes (C2). I determined the age of starting school to range between five and seven years. Data from the adolescent and household survey were used for the logistic analysis.

Adolescents between 21-24 years of age (2,390) at the time of the survey were expected to have started school between 1983 and 1988, the last four years of the second military regime (M2). Conversely, adolescents between 15-18 years of age (4,042) at the time of the survey were expected to have started school between 1989 and 1994, the second civilian government (C2) (see Table 5.4). These cohorts were used to explain the difference in primary school completion during the two consecutive military and civilian governments. Subsequently, I carried out the same analysis on a subsample of adolescent girls (3,764) in the two cohorts to understand the effects of government and patriarchy on adolescents' educational attainment.

Table 5.4

Distribution of Cohorts During Military and Civilian Regimes

Regime	Year of Birth	Age at Time of Survey (years)	Size of Sample (<i>n</i>)
M2 (1983-88)	1978-81	21-24	2,390
C2 (1989-94)	1984-87	15-18	4,042

Source: Adolescent and Youth Survey of Pakistan 2001-02

Note: M2=2nd military regime (Zia), C2=2nd civilian government (Bhutto/Sharif)

A multi-year design is used to determine the age of starting school. Despite the fact that age six is universally accepted as the age of starting school and the appropriate age for starting school in Pakistan is five years, school is often delayed due to family, political or social reasons. AYP data show that while 46% of girls and 43% of boys started school at age five another 36% of girls and 42% of boys started between the ages of six and seven. Consequently, a large majority of children (84%) started class 1 between the ages of five and seven years (see Table 5.5). I used these three years as markers for determining whether an adolescent attended school during the military or civilian cohorts.

Table 5.5
Percent of Adolescents at Age of Starting Class 1

Age (years)	Girls (%) (n=2,512)	Boys (%) (n=2,769)	Total (n=5,281)
5	46.1	43.0	44.5
6	21.5	26.3	24.0
7	14.5	15.6	15.1
8	8.8	7.7	8.2
9	5.1	3.6	4.3
10 or older	4.0	3.8	3.9

Source: Adolescent and Youth Survey of Pakistan 2001-02.

The birth cohorts are also carefully mapped to ensure that overlap between the military and civilian governments is minimized (see Figure 5.1). This design removed 1,642 adolescents, ages 19 and 20 years, from the sample but allowed the military and civilian cohorts to remain independent of each other for the purposes of the analysis. Figure 5.1 illustrates that adolescents who were 24 years old at the time of the survey were born in 1978 and would have been of school going age (5-7 years) between 1983 and 1985 (M2). Similarly, adolescents who were 15 years old at the time of the survey were born in 1987 and would have been of school going age between 1992 and 1994 (C2).

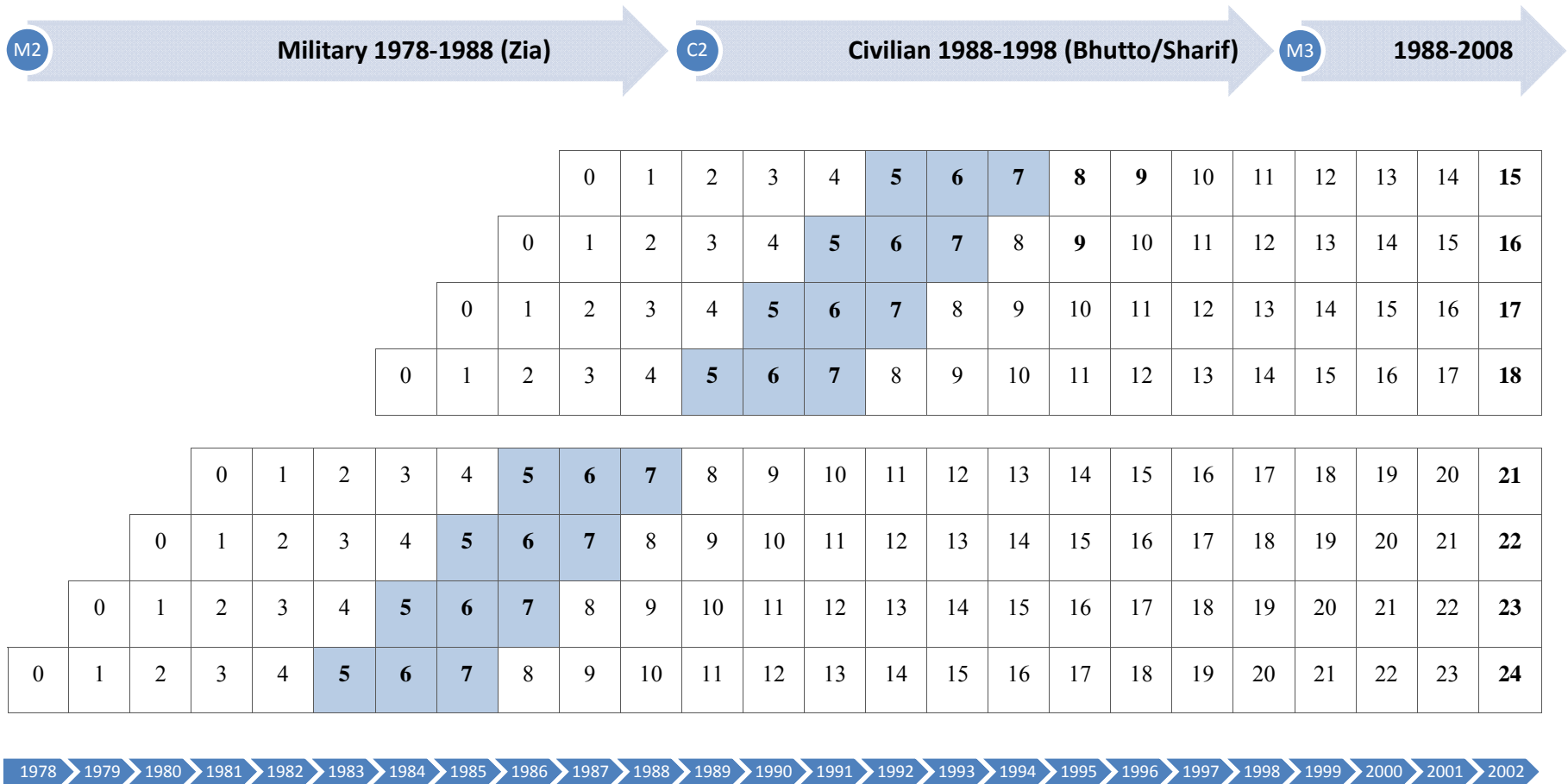


Figure 5.1: Distribution of Adolescents' in Cohorts by Chronological Age

Because I have used self-reported age to develop the two birth cohorts it is important to point out the complexities of data collection unique to Pakistan. In the cultural context of Pakistan, collecting data on women is often fraught with inhibitions, taboos, and misreporting. Accurately measuring any characteristics related to the female population is a challenging task in and of itself (AYP 2001-02).⁵⁹ The seemingly simple task of age-reporting is made complex by the fact that families do not necessarily record age nor is it considered appropriate to disclose information about female members of the household to strangers or people outside the immediate family. In order to address this anomaly, the AYP asked the respondents for age at time of survey and exact date of birth of household members so that the corresponding values for age could be verified. The AYP also used the life-events calendar to verify adolescents' age as reported by household respondents.

Variables and Measures

There are three dependent variables and nine independent variables in this study. Each dependent variable corresponds to one research question (see p. 72). The following section describes the variables briefly.

Dependent Variables: The dependent variable “currently attending school” is used for question 1; dependent variable “primary school completion” is used to analyze question 2; and dependent variable “ever attended school” is used for question 3 (Table 5.6). All dependent variables are dummy-coded as “currently attending school=1”, “completed primary school=1”, “ever attended school=1”, and zero otherwise.

⁵⁹ For a discussion on issues pertaining to census taking in Pakistan, see Weiss (1999).

Table 5.6
Dependent and Independent Variables for the study

Research Question	Dependent Variables	Independent Variables
1	Currently attending school (15-18 year old)	Gender Age Sibship Ever married Ever employed Parent's literacy Household assets Geographical location
2	Completed primary school (15-24 year old)	Gender Parent's literacy Household Assets Geographical location Patriarchal attitudes
3	Ever attended school (15-18 year and 21-24 year old)	Gender Parent's literacy Household assets Geographical location Patriarchal attitudes Cohort

The dependent variable, currently attending school, was important for developing an understanding of the overall status of girls' education in Pakistan in the early 2000s. The dependent variable, ever attended school, was of significance because large numbers of girls and boys had never attended school. Hence it was important to understand the predictor variables that positively impact the likelihood of ever attending school. This dependent variable was also used to analyze the differences in ever attending schools for the two cohorts, military government (M2) and civilian government (C2).

Additionally, primary school completion is important in this study because of the global emphasis on universal primary education and also because dropout rates are very high beyond the primary school level. However, it is difficult to determine an exact age for primary school completion in Pakistan. Class five is the last year of primary education but

students' age in class five varies due to a variety of factors. Children start school at different ages and also stop-out or repeat classes, delaying their completion of the primary level. Because it is hard to fix both the exact age at which primary school is started and consequently the age at which primary school is completed, I have assumed that girls and boys could complete primary school at any age between 10 and 14 years. Using an age-range to establish the start and completion of primary school introduced a complexity in the analysis but is consistent with the methodology used in other studies conducted in Pakistan (Lloyd, Behrman et al., eds, 2005).

Independent Variables: Independent variables for this study are organized to correspond to the research questions and the dependent variables. The following section briefly describes the independent variables. For a listing of all independent variables used in this study see Table 5.7.

Gender: Girls are coded 0 and boys are coded 1.

Geographical location: There are two variables associated with the family's geographical location: urbanicity and province. The sample is divided into rural and urban areas and the four provinces are Punjab, Sindh, Baluchistan, and NWFP. The reference group for urbanicity is rural and for province is Sindh.

Age: Adolescents interviewed for the survey ranged in age from 15-24 years. For the dependent variable, currently attending school, the age range used was 15-18 years. For the civilian cohort the age range was 15-18 years and for the military cohort the age range was 20-24 years.

Table 5.7
Definition of Variables

Variable	Coding Scheme
Dependent variables	
Currently attending school	0= not currently attending school, 1= currently attending school
Completed primary school	0 = did not complete school, 1 = completed school
Ever attended school	0 = never attended school, 1 = ever attended school
Independent variables	
Gender	1 = boy, 0 = girl
Age	15-24 year old
Sibship size	Total number of living brothers and sisters
Employed	0=ever employed, 1= never employed
Married	0=ever married, 1= never married
Geographical location	
Locality	0 = rural, 1 = urban
Province	1 = Punjab, 2 = Sindh, 3 = NWFP, 4 = Baluchistan
SES/Asset index	
Quality of dwelling	Factor 1: sum of 13 asset-related items
Household amenities	Factor 2: sum of 7 asset-related items
Livestock and property	Factor 3: sum of 8 asset-related items
Cohort	Military=1 (adolescents age 21-24 years at time of survey) Civilian=0 (adolescents age 15-18 years at time of survey)
Parent's literacy	
Mother only	0= cannot read and write, 1=can read and/or write
Father only	0= cannot read and write, 1=can read and/or write
Patriarchy	
Attitude regarding employment	Approve of young girls/boys working outside the home 0=no, 1=yes
Attitude regarding mobility	Is a 15-year old girl/boy allowed to go alone (0=no, 1=yes for all items): Neighbor, nearby shop, school, sports/playground, friend, relative, nearby community, nearby health facility
Attitude regarding Empowerment	Should girls/boys make decisions about (0=no, 1=yes for all items) Education, work, marriage Do girls/boys have the right to make decisions about their life
Mobility Scale	Sum of 8 mobility items: Neighbor, nearby shop, school, sports/playground, friend, relative, nearby community, nearby health facility
Empowerment Scale	Sum of 4 empowerment items: Education, work, marriage, decision about life
Reason for never attending school	0=no, 1=yes for all items below No school available School too far No vacancies available in school Poor quality of education Could not pay school fees Physically/mentally disabled Too sickly No aptitude/no interest Care of younger siblings Too many domestic responsibilities Needed on family farm and business Family sees no benefit of schooling Parents disapprove of schooling

Sibship: Adolescents were asked to report on the number of living brothers and sisters. This ranged in number from 0-17 with a mean of 5.91 siblings.

SES/Asset Index: The Adolescent and Youth Study developed an asset index as a proxy for determining the current SES of the household based on responses to the household survey. The asset index distributed households into high, medium high, medium, medium low, and low SES groups using the first factor in a principle components analysis of 29 binary coded items and disregarding the remaining factors. Using an asset index to develop the SES is consistent with the methodology used by Vyas and Kumaranayake (2006) in a comparative study of Brazil and Ethiopia and by Filmer and Pritchett (2002) in a study of 35 developing countries. I used the AYP asset-related items to determine the asset index of adolescents' households at age 15 years. The questions used to determine the asset index were related to the status of the dwelling, utilities, land-ownership, and material and livestock ownership. One item, number of camels owned by household, was removed due to less than 150 responses. I applied factor analysis to the remaining 28 asset-related questions (Cronbach's Alpha .771) and extracted three factors. To extend the AYP (2001) and the Filmer and Pritchett (2002) studies, I used all three factors in the analysis termed as *quality of dwelling, household amenities, and livestock and property ownership*.

The items in each of these factors were summed to develop the individual scores. I recognize that the scores cannot be treated as ratio scales because each of the SES/asset items represents independent attributes. This is best illustrated by the factor *livestock and property ownership* where ownership of poultry may not have the same meaning as ownership of cows.

However, a higher score signifies access to greater resources for the household. A complete list of asset-related items and details of the factor analysis are given in Appendix A.

Cohorts: In the absence of longitudinal data two artificial cohorts were identified for this analysis. The cohorts (M2 and C2) corresponded to one military and one civilian government. The values assigned to this variable were “military = 1”, and “civilian = 0”.

Parents’ literacy: Literacy is defined as the parents’ ability to read and write. Parents’ literacy status is treated as two dichotomous variables with “mother only literate =1”, “father only literate =1”, and zero otherwise.

One important issue that I had to take into consideration related to parents’ literacy status of the adolescents who were not living in the natal home. The adolescent survey collected information on parent’s education only if the adolescent was living with the parents. It did not collect data on the education level of parents who were deceased or who were no longer residing with the adolescent. This was especially significant for girls because of early marriage. However, the household data collected educational attainment of all family members including those who were deceased or had moved away from home. The education data from the household survey were merged with the adolescent survey data to replace the missing information.

Patriarchy: Patriarchy is measured by household respondents’ attitude regarding employment, mobility, and empowerment of adolescents. The household respondents were asked their opinion regarding employment for pay by adolescents. This question was used to determine attitude regarding employment. If household respondent said it was appropriate for

15-year old adolescent to work outside the home for pay it was coded as 1, otherwise it was coded 0. To operationalize the mobility and empowerment variables I used a set of attitudinal questions in the household survey. There were ten items related to mobility and four items related to empowerment in the survey. Two of the mobility items, “should adolescent be allowed to visit field inside the village” and “should adolescent be allowed to visit field outside the village”, were removed due to over 50% missing values leaving eight items for the mobility analysis. All four empowerment items were included in the analysis. All twelve items were treated as binary variables. The eight mobility items were added to the analysis to create the mobility scale and the four empowerment items were used to create the empowerment scale. The reliability analysis generated Cronbach’s Alphas as follows: boy’s mobility .736; girl’s mobility .753; boy’s empowerment .704; and girl’s empowerment .772. See Appendix B for details regarding mobility and empowerment items and scales.

Reason for never attending school: Adolescents were asked the reason why they never attended school. The 13 items in this category were recorded as multiple-choice dichotomous variables. Since 45% of girls in the sample had never attended school this variable is of great interest in understanding the barriers to school attendance.

Analytic Strategy

I used descriptive statistics to understand between-and within-group differences in educational attainment for adolescent girls and boys. To achieve this, I stratified the data by gender, and by birth cohorts for the analyses. I used crosstabs, chi-square tests, and independent and paired samples *t*-test to assess the relationship between the independent and the dependent variables: currently attending school, ever attended school, and primary school

completion. I also conducted independent samples *t*-tests, by cohort, on the reasons for not attending school for the subgroup of girls and boys who had never attended school. Finally, I analyzed household respondent's attitudes regarding employment, mobility and empowerment of adolescents using principle components analysis. I used this analysis to understand the factors that affect school attendance and primary school completion of girls in Pakistan and how it compares to the educational attainment of boys.

In addition to the descriptive analysis described above, I conducted three sets of multivariate analyses using binary logistic regression to predict the odds of currently attending school, primary school completion, and ever attending school. These dummy coded dependent variables lent themselves to logistic regression analysis because normality of distribution was not an issue. Logistic regression was also appropriate because, similar to ordinary least squares regression (OLS) it is designed to estimate the relative contribution of each independent variable in the model while holding other variables constant (Menard, 2002). The block entry method was considered appropriate for the analysis to be consistent with the conceptual model and for consistency across the three logistic analyses. The large sample size also lent itself to the use of logistic regression analysis allowing for listwise deletion of cases, when applicable.

First, I used logistic regression analysis on a sample of 15-18 year old adolescents (4,042) to predict the odds of attending school at the time of the survey. The independent variables I used for this analysis were gender (X_1), age 15-18 years (X_2 , X_3 , X_4 , X_5), sibship size (X_6), never employed (X_7), never married (X_8), father is literate (X_9), mother is literate (X_{10}), quality of household (X_{11}), household amenities (X_{12}), livestock ownership (X_{13}),

urbanicity (X_{14}), Punjab (X_{15}), NWFP (X_{16}), Baluchistan (X_{17}), and Sindh (X_{18}). This analysis contributed to an understanding of the association of background characteristics with gender differences in currently attending school (question 1). The resulting regression equation can be represented as:

$$\log(y_1/1-y_1)=b_0+b_1X_1+b_2X_2+\dots\dots\dots +b_{18}X_{18} \quad \text{Equation 1}$$

Where y_1 is the probability of currently attending school for adolescents age 15-18 years, b_0 is the intercept, and b_1, \dots, b_{18} are the estimated coefficients of each of the independent variables in the model.

Second, to analyze the question regarding patriarchy I extracted data from household survey respondents to merge with the adolescent survey. I used these data to determine expectations of adults regarding employment, mobility and empowerment of adolescents. I carried out logistic regression analysis to predict the odds of completing primary school holding the independent variables constant. The independent variables I used for this analysis were gender (X_1), father is literate (X_9), mother is literate (X_{10}), quality of household (X_{11}), household amenities (X_{12}), livestock ownership (X_{13}), urbanicity (X_{14}), Punjab (X_{15}), NWFP (X_{16}), Baluchistan (X_{17}), Sindh (X_{18}), mobility, (X_{19}), employment (X_{20}), and empowerment (X_{21}). This analysis contributed to an understanding of the association of background characteristics and patriarchy with gender differences in primary school completion (question 2). The resulting logistic regression equation for this analysis can be represented as follows:

$$\log(y_2/1-y_2)=b_0+b_1X_1+b_9X_9+b_{10}X_{10}+\dots\dots\dots +b_{21}X_{21} \quad \text{Equation 2}$$

Where y_2 is the probability of primary school completion for adolescents age 15-24 years, b_0 is the intercept, and b_1, b_9, \dots, b_{21} are the estimated coefficients of each of the independent variables in the model.

Third, to understand gender differences in ever attending school relative to the type of government, I used data on adolescent girls and boys in the adolescent survey (6,432). I carried out logistic regression analysis to predict the odds of ever attending school, holding the independent variables constant. The independent variables I used for this analysis were gender (X_1), father is literate (X_9), mother is literate (X_{10}), quality of household (X_{11}), household amenities (X_{12}), livestock ownership (X_{13}), urbanicity (X_{14}), Punjab (X_{15}), NWFP (X_{16}), Baluchistan (X_{17}), Sindh (X_{18}), employment (X_{19}), empowerment (X_{20}), mobility (X_{21}), and cohort (X_{22}). In addition, I also used an interaction term of military government and male (X_{23}). This analysis contributed to an understanding of the association of background characteristics, patriarchy, and militarization with gender differences in ever attending school for adolescents age 15-18 years and 21-24 years (question 3). The resulting logistic regression equation can be represented as follows:

$$\log(y_3/1-y_3)=b_0+b_1X_1+b_9X_9+b_{10}X_{10}+\dots+\dots+\dots+b_{23}X_{23} \quad \text{Equation 3}$$

Where y_3 is the probability of ever attending school, b_0 is the intercept, and b_1, b_9, b_{23} are the estimated coefficients of each of the independent variables in the model.

I followed up this analysis with logistic regression on a subsample of girls only (3,764) to see the difference in ever attending school between the two cohorts of girls while holding the other variables constant. The independent variables I used for this analysis were

father is literate (X_9), mother is literate (X_{10}), quality of household (X_{11}), household amenities (X_{12}), livestock ownership (X_{13}), urbanicity (X_{14}), Punjab (X_{15}), NWFP (X_{16}), Baluchistan (X_{17}), Sindh (X_{18}), employment (X_{19}), empowerment (X_{20}), mobility (X_{21}), and cohort (X_{22}). In addition, I also used three interaction terms of military government and mobility (X_{24}), military government and employment (X_{25}), and military government and empowerment (X_{26}) in this analysis. This analysis contributed to an understanding of the association of background characteristics, patriarchy and militarization with gender differences in ever attending school for female adolescents. The resulting logistic regression equation can be represented as follows:

$$\log (y_4/1-y_4)=b_0+b_9X_9+b_{10}X_{10}+\dots+b_{22}X_{22}+b_{24}X_{24}+b_{25}X_{25}+b_{26}X_{26} \quad \text{Equation 4}$$

Where y_4 is the probability of ever attending school for adolescents age 15-18 years and 21-24 years, b_0 is the intercept, and $b_9, \dots, b_{22}, b_{24}, \dots, b_{26}$ are the estimated coefficients of each of the independent variables in the model.

Missing data: Most variables of interest in both the household and adolescent datasets have few, if any, missing values. No global methodology could be adopted for addressing these missing data and these are addressed on an as needed basis throughout the analysis. When creating the asset index and patriarchy indices the response item “*don't know*” had to be taken into consideration. I added up the non-missing values to create these indices. For logistic regression, I used listwise deletion. Similarly, in creating binary variables, I coded a positive response as “1” and all other responses as “0”.

Chapter 6

Descriptive Analysis

The AYP household data revealed vast fluctuations in educational attainment among both girls and boys over four decades prior to the survey. Figure 6.1 shows gender gaps in primary school completion during the five major regime changes in Pakistan where M1, M2, and M3 represent the three military regimes and C1 and C2 represent the two civilian periods. The gender gap peaked at 43% in 1970 through the first military regime and the cessation of East Pakistan (now Bangladesh). The sharp reduction in the gender gap subsequent to 1970 happened during the first elected civilian government (C1). Gender gaps in primary school completion again peaked during the second military regime (M2), but were not quite as high as during the previous military government. The second civilian government also saw a decrease in the gender gap despite four government changes over a ten year period. The data show that while the gender gap has historically declined, large disparities in primary school completion remain between girls and boys and the only period with a clear decline in the gender gap is the first civilian regime (C1).

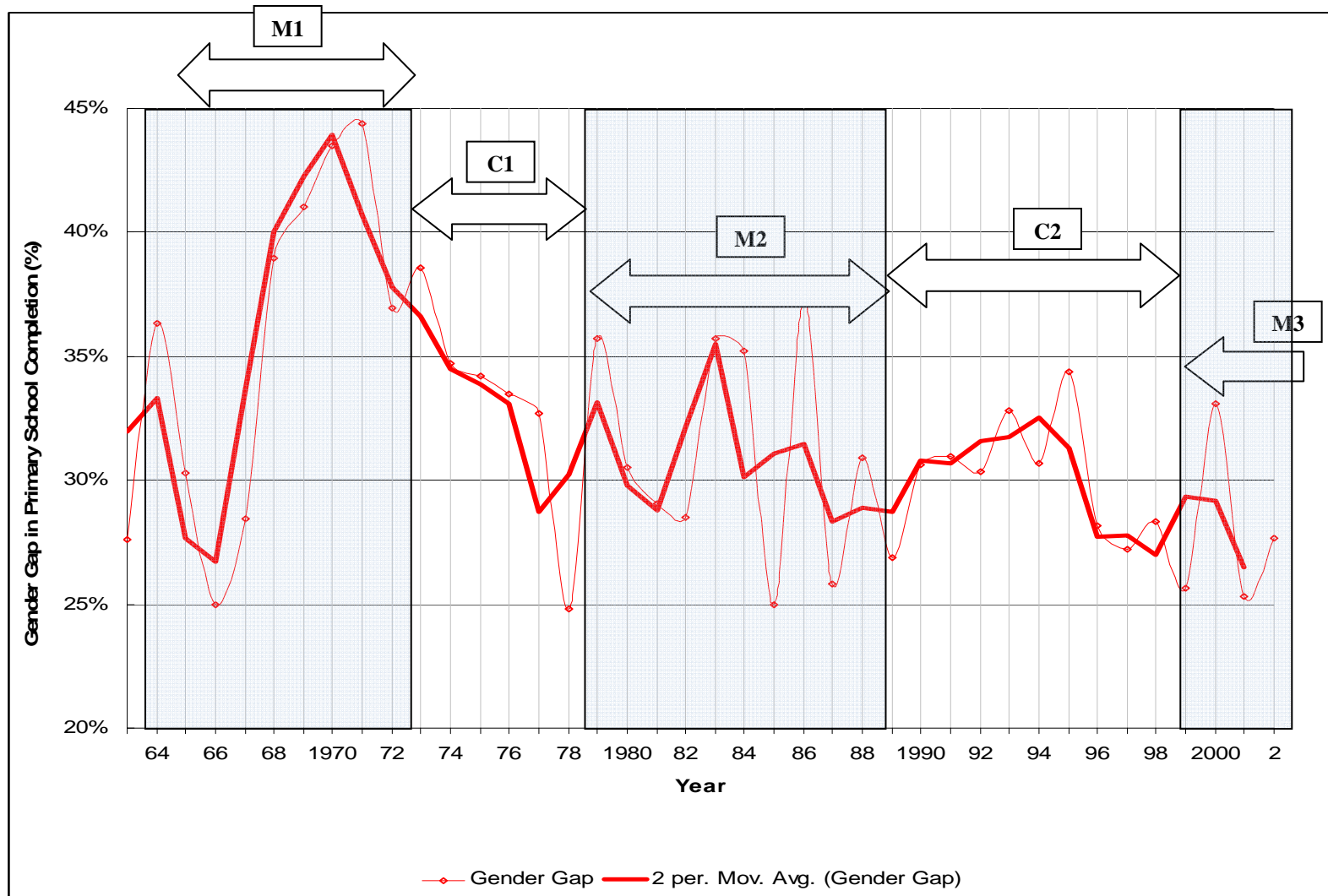


Figure 6.1: Gender Gap in Adolescents' Primary School Completion (based on self-reported historical data).
Source: Adolescent and Youth Survey of Pakistan

Tables 6.1 and 6.2 provide descriptive statistics for the sample by gender and cohort respectively. In Table 6.1, the average age of the adolescents is almost 19 years and the average number of siblings is six. In general, boys have a higher score on all measures of educational attainment (currently attending school, completed primary school, and ever attended school) than girls. A much higher percentage of fathers are literate compared with the mothers. Close to half the adolescents in the sample live in urban areas and in the province of Punjab. The average SES/asset index for adolescent girls and boys is fairly low. There are substantial gender differences within the three patriarchy variables (employment, empowerment, and mobility), positively skewed in favor of boys.

In Table 6.2, the descriptive statistics show that the average age during the civilian government is 16 years while the average age during the military government is 22 years. The data also shows higher educational attainment on all three education variables for boys compared with girls. The patriarchy variables show both within and between group differences for girls and boys.

Table 6.1
Descriptive Statistics of Sample by Gender

Variable	Total			Girls					Boys				
	N	Mean	SD	N	Min	Max	Mean	SD	N	Min	Max	Mean	SD
Currently attending	8,074	17%	.37	4741	0	1	11%	.31	3333	0	1	25%	.43
Completed primary	8,074	55%	.50	4741	0	1	42%	.49	3333	0	1	72%	.45
Ever attended school	8,074	67%	.47	4741	0	1	55%	.50	3333	0	1	85%	.36
Age	8,074	18.84 yrs.	2.78	4741	15	24	18.88 yrs.	2.83	3333	15	24	18.79 yrs.	2.72
Sibship	8,038	5.91	2.41	4719	0	16	5.96	2.36	3319	0	17	5.84	2.48
Never employed	8,029	44%	.50	4716	0	1	69%	.46	3313	0	1	37%	.48
Never married	8,074	72%	.45	4741	0	1	62%	.49	3333	0	1	87%	.34
Urban	8,074	41%	.49	4741	0	1	40%	.50	3333	0	1	43%	.50
Punjab	8,074	43%	.50	4741	0	1	44%	.50	3333	0	1	43%	.50
Sindh	8,074	28%	.45	4741	0	1	27%	.44	3333	0	1	29%	.46
NWFP	8,074	17%	.37	4741	0	1	17%	.38	3333	0	1	16%	.37
Baluchistan	8,074	12%	.32	4741	0	1	12%	.33	3333	0	1	12%	.32
Quality of HH	7,441	5.18	1.40	4372	0	13	5.05	3.41	3069	0	13	5.37	3.38
Amenities	7,873	.59	1.20	4622	0	7	.58	1.21	3251	0	7	.62	1.21
Livestock	7,780	1.62	1.00	4565	0	7	1.61	.99	3215	0	7	1.62	1.02
Father literate	8,074	46%	.50	4741	0	1	44%	.50	3333	0	1	49%	.50
Mother literate	8,074	14%	.35	4741	0	1	13%	.34	3333	0	1	15%	.36
Employment	8,044	77%	.42	4725	0	1	77%	.42	3324	0	1	99%	.08
Mobility	7,789	1.14	1.52	4572	0	8	1.16	1.53	3120	0	8	6.74	1.59
Empowerment	7,913	1.70	1.45	4654	0	4	1.69	1.46	3274	0	4	2.88	1.20

Table 6.2
Descriptive Statistics of Sample by Cohort

Variable	Total			Military					Civilian				
	N	Mean	SD	N	Min	Max	Mean	SD	N	Min	Max	Mean	SD
Currently attending	6,432	19 %	.39	2390	0	1	.04	.21	4042	0	1	.27	.44
Completed primary	6,432	54%	.50	2390	0	1	.53	.50	4042	0	1	.55	.50
Ever attended school	6,432	67%	.50	2390	0	1	.63	.48	4042	0	1	.70	.46
Age	6,432	18.66 yrs.	3.08	2390	21	24	22.39 yrs.	1.07	4042	15	18	16.46 yrs.	1.18
Sibship	6,402	5.89	2.42	2378	0	16	6.00	2.45	4024	0	17	5.82	2.39
Never employed	6,399	43%	.50	2378	0	1	45%	.50	4020	0	1	63%	.48
Never married	6,432	73%	.44	2390	0	1	49%	.50	4042	0	1	88%	.32
Urban	6,432	41%	.49	2390	0	1	41%	.49	4042	0	1	41%	.49
Punjab	6,432	43%	.50	2390	0	1	45%	.50	4042	0	1	42%	.49
Sindh	6,432	28%	.45	2390	0	1	28%	.45	4042	0	1	28%	.45
NWFP	6,432	17%	.37	2390	0	1	16%	.37	4042	0	1	17%	.38
Baluchistan	6,432	22%	.32	2390	0	1	10%	.31	4042	0	1	13%	.33
Quality of HH	5,937	5.17	1.39	2192	0	13	5.02	3.53	3745	0	13	5.26	3.30
Amenities	6,274	.59	1.20	2343	0	7	.50	1.10	3931	0	7	.63	1.24
Livestock	6,199	1.62	1.00	2286	0	7	1.61	.99	3913	0	7	1.63	1.01
Father literate	6,432	46%	.50	2390	0	1	43%	.50	4042	0	1	48%	.50
Mother literate	6,432	14%	.34	2390	0	1	13%	.34	4042	0	1	14%	.35
Girls Employment	6,408	77%	.42	2381	0	1	76%	.43	4027	0	1	78%	.42
Girls Mobility	6,201	1.14	1.52	2312	0	8	1.20	1.57	3889	0	8	1.11	1.49
Girls Empowerment	6,306	1.69	1.45	2346	0	4	1.67	1.44	3960	0	4	1.70	1.45
Boys Employment	6,415	99%	.10	2382	0	1	99%	.11	4033	0	1	99%	.10
Boys Mobility	6,014	6.78	1.56	2236	0	8	6.81	1.50	3778	0	8	6.76	1.60
Boys Empowerment	6,339	2.89	1.22	2358	0	4	2.87	1.90	3981	0	4	2.90	1.23

Note: Military cohort consists of 2,390 adolescents aged 21-24 years who would have started school between 1983 and 1988
 Civilian cohort consists of 4,042 adolescents aged 15-18 years who would have started school between 1989 and 1995

Table 6.3 presents subgroup means of educational attainment for adolescent girls and boys age 15 to 24 years old. There were 4,741 girls and 3,333 boys in the sample. The data show that just under a third of adolescents had never attended school. However, there was a large gender disparity with over 45% of the female (2,146) and 15% of male (496) adolescents having never attended school. Among the 8,074 adolescents surveyed 42% girls and 72% boys reported they had completed primary school.

Table 6.3

Educational Attainment of Adolescents by Age, and Gender

	Girls %	Boys %	Overall %
Never attended school	45.3	14.9	32.7
Currently in school	11.0	25.1	16.8
Completed primary school	42.3	72.2	54.6
<i>n</i>	4,741	3,333	8,074

Source: Adolescent and Youth Survey of Pakistan 2001-02

Note: There was no information available on the schooling status of six girls and six boys

To understand differences in educational attainment within each of the provinces, I carried out cross-tabs on ever attending school, currently attending school, and primary school completion. Table 6.4 shows the results of this analysis. Punjab was better off compared to the other provinces in educational attainment, with 75% of adolescents having ever attended school, 61% having completed primary school, and 18% currently attending school. At the opposite end of the spectrum, in Baluchistan only 53% had ever attended school, 39% had completed primary school, and 16% were currently attending school. Sindh had the lowest percent of adolescents currently attending school at 13%. In all provinces girls' educational attainment lagged behind boys on all three dependent variables. The data also show that drops in school attendance, primary school completion, and those currently attending school are driven by an increase in the gender differences which are highest in NWFP and Baluchistan.

Table 6.4

Percent of Adolescents Who Ever Attended School, Completed Primary School or are Currently Attending School by Province

	Punjab	Sindh	NWFP	Baluchistan	Total
	School Attendance (ever attended)				
Male	86.8	82.6	89.4	78.0	84.9
Female	66.9	48.4	46.0	36.3	54.6
Overall	75.0	63.2	63.2	53.1	67.1
	Primary School Completion				
Male	72.4	71.6	80.5	61.8	72.2
Female	52.5	37.9	36.7	22.8	42.3
Overall	60.7	52.5	54.0	38.5	54.6
	Currently Attending School				
Male	23.7	19.8	37.4	26.6	25.1
Female	14.1	7.4	10.6	8.2	11.0
Overall	18.1	12.8	21.2	15.7	16.8

Chi square $p < .001$

The primary school completion rates were considerably lower than school attendance rates, indicating a high dropout rate. Punjab had the highest rate of primary school completion with close to 3 out of 4 boys and 1 out of every 2 girls completing primary school. However, this number dropped considerably in the other provinces with the primary school completion rate in Baluchistan for boys at 62% and for girls at 23%.

Table 6.5 presents within group differences for girls and boys who *ever attended* school and those who did not attend. A significantly large percentage of girls (78%) and boys (73%) who had never attended school were in the rural areas. In Pakistan, where close to 70% of the population is rural, this represents a sizable gap in school attendance between urban and rural areas.⁶⁰ Among girls who had ever attended school 78% girls and 73% boys were in Punjab and Sindh. NWFP and Baluchistan comprised a very small share of adolescents who had ever attended school.

Table 6.5
Adolescents' School Attendance by Urbanicity and Province

	Girls		Boys	
	Ever Attended (%)	Never Attended (%)	Ever Attended (%)	Never Attended (%)
Rural (vs. urban)	46 (.50)	78* (.42)	54 (.50)	73* (.45)
Punjab	54 (.50)	32* (.47)	44 (.50)	38* (.49)
Sindh	24 (.43)	31* (.46)	29 (.45)	34* (.47)
NWFP	14 (.35)	20* (.40)	.17 (.37)	11* (.32)
Baluchistan	8 (.27)	17* (.37)	.1 (.31)	17* (.38)
<i>n</i>	2,146	2,589	2,831	496

* $p < .05$, $n = 8,074$

Note: Numbers in parenthesis indicate standard deviation

⁶⁰ Population distribution of Pakistan, based on the 1998 census: 55% Punjab, 14% NWFP, 23% Sindh, 5% Baluchistan, 67% rural (Population Census Organization)

Table 6.6 explores the differences between the two cohorts of girls and boys. There were 2,324 and 1,440 girls and 1,718 and 950 boys in the civilian and military cohorts respectively. In the civilian cohort (15 to 18 years), 42% of the girls and 14% of the boys had never attended school. In the military cohort (21 to 24 years), the situation was worse for both girls and boys in that about 50% of the girls in this age group had never attended school while 17% of boys had never attended school.

Table 6.6
Educational Attainment of Adolescents by Cohort and Gender

	Civilian Cohort (%) (15-18 Years Old)		Military Cohort (%) (21-24 Years Old)	
	Girls	Boys	Girls	Boys
Completed primary school	43.3	71.5	40.2	71.7
Never attended school	42.1	14.3	49.9	16.6
<i>n</i>	2,324	1,718	1,440	950

Source: Adolescent and Youth Survey of Pakistan 2001-02

Primary school completion rates varied widely for girls. While there was no difference in the percent of boys completing primary school between the military and civilian cohorts, the percent of girls decreased from 43% in the civilian government to 40% in the military government. This is consistent with the earlier finding that while boys have not attained universal primary education, girls are much worse off. A similar situation is evidenced in the percent of adolescents who ever attended school. This dataset shows that far fewer girls received an education during the military cohort.

Chi-square test shows significant differences in school attendance and primary school completion of adolescent girls and boys based on the parents' literacy status (see Table 6.5). If the father only was literate 76% of the girls and 95% of the boys attended school. Almost all the adolescents attended school if the mother only was literate (96% girls and 99% boys). Primary school completion is similarly affected by the parents' education. Table 6.7 shows that over 91% girls completed primary school if the mother was literate and 65% completed primary school if only the father was literate. A similar trend is evident for adolescents currently attending school. This indicates that mother's literacy status has a much greater influence on the educational attainment of adolescents.

Table 6.7

Adolescents' School Attendance and Primary School Completion by Parent's Literacy Status

	Ever Attended School		Completed Primary School		Currently Attending School	
	Girls (%)	Boys (%)	Girls (%)	Boys (%)	Girls (%)	Boys (%)
Father Literate	76.4	95.4	64.9	87.6	19.8	36.8
Mother Literate	96.3	99.4	91.4	96.8	32.0	52.7

Chi square p<.001

Family members were asked to respond to questions regarding expectations they had for adolescents regarding employment, mobility, and empowerment. Table 6.8 shows the mean response on each of the items. While almost all respondents indicated that they would allow 15-year old boys to work for pay outside the home, only 77% of the respondents said they would allow girls to work for pay outside the home. On all ten mobility items respondents were willing to allow boys more freedom than girls. For instance, while almost all (98%) of the respondents indicated they would allow a 15-year old boy to go to school alone, only 38% of the respondents said they would allow a girl of the same age to go to

school alone. Girl's mobility was also severely restricted in terms of access to playground, health facility, nearby shop, or community.

Table 6.8

Household Respondent's Attitudes Regarding Employment, Mobility and Empowerment

	Mean %	Standard Deviation
Employment		
Should boys work for pay	99	.10
Should girls work for pay	77	.42
Mobility		
Can 15 year old boy go alone to:		
School	98	.14
Neighbor	50	.50
Nearby shop	95	.21
Playground	94	.24
Friend	90	.30
Relative	89	.31
Fields inside village	93	.26
Fields outside village	80	.40
Nearby community	72	.45
Health outlet	85	.35
Can 15 year old girl go alone to:		
School	38	.49
Neighbor	24	.43
Nearby shop	8	.27
Playground	5	.23
Friend	20	.40
Relative	19	.39
Fields inside village	13	.34
Fields outside village	3	.18
Nearby community	2	.15
Health outlet	5	.21
Empowerment: Boys		
Can boys make decision about their education	87	.34
Can boys make decision about their marriage	45	.50
Can boys make decision about employment	86	.35
Do boys have the right to make decisions about their life	72	.45
Empowerment: Girls		
Can girls make decision about their education	58	.49
Can girls make decision about their marriage	18	.38
Can girls make decision about employment	49	.50
Do girls have the right to make decisions about their life	45	.50

n=8,074

I also conducted a paired samples *t*-test for within-group differences on the same variables as the previous analysis. Table 6.9 shows within-group differences for male and female household respondents. There are significant differences on all items as they relate to girls and boys. Both male and female household respondents indicated they would allow adolescent boys significantly greater mobility and empowerment than they would girls. Most severe restrictions on girls are illustrated in the responses to the mobility items related to their ability to go to a *nearby shop, playground, field outside village, nearby community, and health outlet*.

When the data are disaggregated by gender, results show that female respondents are equally or more likely than male respondents to impose restrictions on girls' mobility. While almost all respondents would allow 15 year old boys to go to school, unaccompanied, only 44 % of men and 34% of women would allow girls to do so. In each of these cases women were far less likely than men to give girls the same permission. In the case of employment, almost all household respondents expected 15-year old boys to work for pay, outside the home, but only 70% of the male respondents and 79% of the female respondents expected 15 year old girls to work for pay.

Similarly, boys were more empowered than girls to make decisions regarding their education, marriage, and employment and more likely to have the right to make decisions about their life than girls. However, more female household respondents than male household respondents thought that adolescent girls should have the right to make decisions about their lives.

Table 6.9

Within-Group Differences in Household Respondent' Attitudes Regarding Employment, Mobility and Empowerment of Adolescents

	Male Respondents		Female Respondents	
	Boys	Girls	Boys	Girls
Employment				
Should adolescents work for pay	98	70***	99	79***
Mobility				
Can adolescent go alone to:				
School	99	44***	98	34***
Neighbor	54	24***	49	26***
Nearby shop	96	9***	95	7***
Playground	93	6***	94	6***
Friend	88	23***	92	18***
Relative	88	23***	90	16***
Fields inside village	94	13***	93	14***
Fields outside village	77	4***	81	3***
Nearby community	68	2***	76	3***
Health outlet	83	6***	86	4***
Empowerment				
Can adolescent make decision about their:				
Education	87	58***	87	59***
Marriage	41	18***	48	19***
Employment	86	46***	86	50***
Does adolescent have the right to make decisions about his/her life	69	42***	74	47***

* $p < .05$, ** $p < .01$, *** $p < .001$, $n = 6,576$

Cases were deleted by analysis.

On examination of this data, an additional question emerged which pertained to the reasons for such high numbers of adolescents never attending school (Table 6.10). The results of independent samples *t*-test show that girls were significantly more limited than boys in terms of availability of schools. Twenty-nine percent of the girls reported not having an accessible school as a reason for not attending school compared to 15% of boys. In a context where single sex schools and same sex teachers are the norm, this reason represents a very significant dilemma for education policy. Two other reasons given by a significantly higher number of girls than boys relate to the social desirability of schooling. More girls than boys stated that *family sees no benefit of schooling* (17% vs. 9%) and *parents disapprove of schooling* (26% vs. 5%).

Relative to girls, more boys cite “*no aptitude or interest*” as the major reason for not attending school (32% vs. 13%). The fact that more boys than girls believe that they do not have the aptitude for or an interest in school suggests that aspiration and interest in education may be higher among girls who did not attend school. Other reasons given by boys relate to *inability to pay, poor quality of education* and *domestic responsibilities* as the main reason for not attending school. Girls used these reasons significantly less than boys. More boys than girls indicated that they were not able to go to school because of the family’s inability to pay (40% vs. 27%). This may explain the high incidence of boys who have to assume domestic responsibility at a young age to provide financial support for the family. This data also shows that gender preference in distribution of wealth may not be the primary reason why girls are not in school, especially in families with limited resources.

Table 6.10
Reasons for Never Attending School by Gender

	Reason for not attending school	Girls (%) (n = 2,146)	Boys (%) (n = 496)
School Factors	No school available	29*** (.45)	15 (.35)
	School too far	7 (.26)	6 (.23)
	No vacancies available in school	0 (.04)	0 (.00)
	Poor quality of education	0*** (.09)	3 (.17)
	Unable to pay	27*** (.45)	40 (.49)
Physical and Mental Health	Physically or mentally handicapped	0* (.06)	3 (.16)
	Too sick	1 (.08)	1 (.10)
	No aptitude or interest	13*** (.34)	32 (.47)
Domestic Responsibility	Care of younger sibling	1* (.10)	0 (.00)
	Too many domestic responsibilities	6* (.23)	16 (.37)
	Needed on family farm or business	0*** (.05)	4 (.19)
Social Desirability	Family sees no benefit of schooling	17*** (.38)	9 (.29)
	Parents disapprove of schooling	26*** (.44)	5 (.21)

* $p < .05$, ** $p < .01$, *** $p < .001$, $n = 2,654$

Note: Numbers in parenthesis indicate standard deviation

I carried out an independent samples *t*-test on reasons for not attending school, using the cohorts as the grouping variable for girls and boys (Table 6.11). The data reveal significant differences between the cohorts for girls on two of the thirteen reasons tested. There were a larger number of girls reporting that they did not attend school during the military government because there was no school available (15% vs. 12%). Compared with girls, only 2% of boys reported that they did not attend school due to unavailability and there was no difference between the military and civilian cohorts for boys. Most importantly, the cohort differences highlight the fact that the social desirability of attending school for girls

during the military government is significantly lower as compared to the civilian government indicating that both supply and demand of schooling are impacted by military government. More girls reported that their parents disapprove of schooling (14% vs. 10%) during the military government compared to the civilian government. However, among boys there is no significant difference between the military and civilian cohorts on social desirability of schooling as a reason for never attending school.

Table 6.11
Reasons for Never Attending School by Gender and Cohort

		Girls (%)		Boys (%)	
		Civilian	Military	Civilian	Military
School Factors	No school available	12 (.33)	15* (.36)	2 (.16)	2 (.14)
	School too far	3 (.17)	3 (.18)	1 (.09)	1 (.10)
	No vacancies available in school	0 (.03)	0 (.03)	0 (.00)	0 (.00)
	Poor quality of education	0 (.06)	0 (.05)	0 (.06)	0 (.07)
	Unable to pay	12 (.32)	13 (.33)	6 (.23)	6 (.24)
	Physical and Mental Health	Physically or mentally handicapped	0 (.04)	0 (.03)	0 (.07)	0 (.06)
Too sick		0 (.06)	0 (.05)	0 (.04)	0 (.05)
No aptitude or interest		6 (.23)	7 (.25)	4 (.21)	5 (.22)
Domestic Responsibility	Care of younger sibling	0 (.06)	0 (.06)	0 (.00)	0 (.00)
	Too many domestic responsibilities	2 (.16)	3 (.16)	2 (.14)	3 (.17)
	Needed on family farm or business	2 (.03)	0 (.04)	0 (.06)	1 (.10)
Social Desirability	Family sees no benefit of schooling	7 (.25)	8* (.27)	1 (.12)	1 (.11)
	Parents disapprove of schooling	10 (.30)	14*** (.35)	1 (.09)	1 (.07)

* $p < .05$, ** $p < .01$, *** $p < .001$

Note: Numbers in parenthesis indicate standard deviations

A review of the descriptive data analysis shows that girls lag behind boys in educational attainment. Only a small percentage of adolescent girls were attending school at the time the survey was conducted; 42% had completed primary school; and 45% had never attended school. The data also showed that adolescents' educational attainment was positively affected by the parents' literacy status with mother's education having a significantly greater association with adolescent's educational attainment than father's literacy status.

Another important result of the descriptive analysis pertained to educational attainment during the military and civilian cohorts. Descriptive data show that both girls and boys were negatively impacted by the military government. Most significant gender differences are evident in school availability and social desirability of schooling. While a negligible number of boys cite these as the reason for not attending school 12% of girls in the civilian government and 14% of girls in the military government said that they did not attend school because there was no school available. Similarly, 10% of girls in the civilian government and 14% of the girls in the military government said their parents did not approve of schooling.

Household respondents' patriarchal attitude also differed by gender with respect to employment, mobility and empowerment of adolescents. The differences between male and female respondents, however, were not as large as the differences in their responses pertaining to girls and boys. For instance, while 93% of male respondents and 94% of female respondents would allow a boy to go to the playground only 6% of male and female respondents would allow a girl to go to the playground. Similar differences are also evident

in other areas of mobility and empowerment. In short, both male and female household respondents allow boys more flexibility and empowerment than they do girls.

The reasons for not attending school are contrary to some commonly held beliefs about the education of girls. First, the data show that fewer girls than boys say they are not able to go to school because of the family's inability to pay. Additionally, there is no difference in the response between the military and civilian government cohorts. This suggests that poverty or preferential distribution of wealth may not be the primary or the sole reason for not going to school as far as girls are concerned. Secondly, a very small percentage of girls, relative to boys, indicated that they are not able to attend school because of domestic responsibilities. Instead, more boys said they were prevented from going to school due to domestic responsibilities.

In summary, the descriptive analysis shows that girls are significantly far behind boys on all three measures of educational attainment: *currently attending school*, *primary school completion*, and *ever attended school* irrespective of urbanicity and province. Girls are also significantly different from boys on the three measures of patriarchy: *mobility*, *employment*, and *empowerment*. These findings accentuate the need to further explore the determinants of schooling for adolescent girls and boys.

Chapter 7

Multivariate Analysis

In addition to the descriptive statistics I have used a series of four logistic regressions to estimate the effects of the independent variables on three dependent variables: *currently attending school*, *primary school completion*, and *ever attending school*. Logistic regression has allowed me to estimate the relative contribution of the focal independent variables, while taking into account other variables in the model. It is worth emphasizing again that this study has used cross-sectional data divided into cohorts to simulate differences over time. While longitudinal effect is simulated by cohorts in order to understand differences in educational attainment, this analysis is intended to reveal associations and not establish causality.

Household Determinants of Currently Attending School

To answer my first research question regarding the status of educational attainment of adolescents, I used a subsample of 15-18 year olds. The dependent variable was currently attending school and the independent variables were gender, age, sibship size, marital and employment status, parent's literacy status, SES/Asset index, and geographical location. Among the 4,042 adolescents between 15 and 18 years of age at the time of the survey 2,324 were girls and 1,718 were boys. Of these adolescents, 423 (18%) girls and 666 (39%) boys were attending school at the time of the survey.

Table 7.1 shows the estimated odds ratios, $\exp(B)$, associated with each of the independent variables. The odds ratio represents the multiplier for currently attending school

for each unit increase in an independent variable (Menard, 2002). The regression coefficients (β) are provided in Appendix C, Table C-1a and standard errors (SE) of the estimates are provided in Appendix C, Table C-1b. Table 7.1 has eight models in which block variables are entered in the following order: gender, age, sibship size, marriage and employment, parent's literacy, SES/asset index, urbanicity, and province.

Model 1 shows that in this subsample of 15-18 year old adolescents the odds of currently being in school are almost three times (2.8) as large for boys as they are for girls. This finding is consistent with research conducted by scholars and funding agencies on the educational attainment of girls in Pakistan as discussed earlier in this study. In subsequent models, the odds of attending school are considerably increased for boys when other independent variables are added indicating a widening gender gap. This shows that the effect of being female is exacerbated by household and family determinants like parent's education, household assets, and geographical location.

Table 7.1
Odds Ratios of Currently Attending School Among Adolescents age 15-18 years

	Male Model 1	Age Model 2	Sibship size Model 3	Marriage & employment Model 4	Parent's literacy Model 5	Assets Model 6	Urbanicity Model 7	Province Model 8
Constant	.222***	.338***	.585***	.004***	.003***	.001***	.000***	.000***
Boy	2.771***	3.105***	3.107***	5.120***	5.221***	5.516***	5.578***	5.600***
Age (ref: 15 years)								
16 years		.801*	.823	.977	.835	.748	.783	.774*
17 years		.519***	.530***	.648***	.551***	.496***	.493***	.488***
18 years		.259***	.266***	.426***	.348***	.310***	.308***	.302***
Sibship size			.905***	.916***	.948*	.944*	.946*	.962
Marriage & Employment								
Never married				18.627***	13.201***	12.325***	12.106***	11.420***
Never employed				11.564***	9.296***	8.339***	8.491***	8.070***
Parent's literacy								
Father literate					2.749***	2.031***	2.023***	2.043***
Mother literate					2.999***	1.708***	1.696***	1.653***
Assets								
Quality of dwelling						1.196***	1.178***	1.169***
Household amenities						1.142**	1.140**	1.183***
Livestock and property						1.061	1.104	1.091
Urban							1.272*	1.311*
Province (ref: Sindh)								
Punjab								1.810***
NWFP								1.542**
Baluchistan								1.441*
-2 log-likelihood	4011.077	3844.410	3809.760	3122.649	2862.348	2700.012	2696.059	2673.692
Nagelkerke R ²	.070	.133	.145	.372	.448	.492	.493	.499
Chi square	337.74	340.803	379.034	634.456	1048.588	1347.155	1350.679	1383.415
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly classified (%)	69.6	69.6	69.7	73.9	75.9	78.8	79.2	80.0

n=4,042

* $p < .05$, ** $p < .005$, *** $p < .001$

For regression coefficients (β) and standard errors (SE) of the estimates see Appendix C, Table C-1a and Table C-1b.

While globally, a large majority of 15-18 year old adolescents are expected to be in school that is not the case in Pakistan where dropout rates are extremely high. Age breakdown in the second model (Model 2) indicates that the odds of being in school decrease rapidly with age. The model shows that the odds of being in school for a 16 year old decrease by 20%; for a 17 year old by 48%; and for an 18 year old adolescent by 74% (age 15 is the reference category). These odds are further reduced when controlled for other independent variables in subsequent models and there is no significant difference between 15 and 16 year old adolescents when controlled for other variables in Models 3 thru 7.

Number of siblings, entered in the next model (Model 3), shows that with each increase in the number of siblings the odds of being in school decrease slightly for adolescents. More specifically, after sibship size is entered in the model, the odds of currently being in school decrease by approximately 9% for each unit increase in the number of siblings. Research in this area has confirmed that educating a child is a significant burden in large families with limited resources.

The next model (Model 4) shows that adolescents who have never been married or have never worked for pay are far more likely to be in school than those who were ever married or ever employed. The data show that the odds of currently being in school are 19 times higher if the adolescent is not married. Early marriage is a serious issue in Pakistan, especially impacting girls. AYP data show that 13% of adolescent boys and 38% of adolescent girls were married in the sample of 15-24 year olds. The effect of early marriage is slightly reduced in subsequent models but continues to be a significant variable in predicting the odds of currently attending school.

Adolescents who were never employed were 11 times more likely to be in school. This can be explained by the fact that employment and schooling are most often mutually exclusive in Pakistan. Children's education is often compromised by employment or apprenticeship at an early age because the opportunity cost of going to school far outweighs the gains from schooling in the short term. Specifically for girls, the opportunity cost of schooling continues to be an issue in the long term since women's participation in the labor force is very limited thus eliminating any possibility of social or private returns on investment in education. The effect of employment decreases when controlled for other variables (parent's education, asset index and geographical location), but still remains substantially high in the final model.

Parent's literacy also improves the odds of currently attending school for 15-18 year old adolescents (Model 5), with mother's ability to read and write having a slightly greater effect compared to the father (3.0 vs. 2.7). Once controlled for household assets and geographical location, the effect of mother's literacy is lower than that of the father. This finding indicates that mother's autonomy in household decision-making may be significantly reduced in the lower socio-economic groups.

The three measures of household assets (quality of dwelling, household amenities, and ownership of livestock and property) are added to the next model (Model 6). There is no significant effect of livestock and property ownership on the odds of currently being in school but the odds increase with improvement in the quality of dwelling and other household amenities. The item, quality of household, represents having such basic needs as toilet facilities, a separate kitchen, water, and electricity in the home. Household amenities

include items like telephone, VCR, car, and computer. These findings suggest that adolescents are more likely to continue their education if their basic needs are satisfactorily met and the family have more disposable income, as evidenced by a higher score on the amenities scale. More specifically, the odds of currently being in school increase by 17% for a one unit increase in the quality of dwelling and by 18% for a one unit increase in household amenities.

Geographical location also has an impact on whether or not adolescents are currently in school. The odds of being in school are increased by 27% if an adolescent is in an urban area (Model 7) compared to a rural location.

The four provinces are entered in the final model ,with Sindh as the reference category (Model 8). In each of the other three provinces (Punjab, NWFP, and Baluchistan) adolescents are more likely to be currently in school than adolescents in Sindh. The odds of currently being in school are 60%, 54%, and 44% higher in Punjab, NWFP, and Baluchistan, respectively than in Sindh.

In the final model, Model 8, (Nagelkerke R^2 .499; 80% cases correctly classified), the odds of currently being in school for boys are over five times (5.6) greater than for girls. Two variables (sibship size and livestock) do not have any significant effect on the odds of currently being in school. Mother's literacy, though still significant, has less effect than father's literacy after asset index and geographical location are controlled. Similarly, household amenities have a higher effect on the outcome than the quality of dwelling after controlling for geographical location.

This final model can be used to illustrate the predicted probability (log odds) that a 15 year old adolescent will currently be in school using Equation 1 and by substituting the regression coefficients from Table D-1a for each of the variables that are significant.

For a 15 year old girl in the sample, with a mean score on quality of household (5.37) and a mean score on amenities (.615), who has never worked and never been married, living in urban Punjab with literate parents, the logit of currently being in school is calculated to be .363816. This corresponds to a probability of $e^{.3638}/(1+e^{.3638})=.59$ (59%) for girls. On the other hand for a 15 year old girl, with mean score on the quality of household and a mean score on amenities, who has been married and employed, and is living in rural Sindh the logit of currently being in school is -6.23169. This corresponds to a probability of .0019 or less than 1/5 of 1%.

Alternatively, for a 15 year old boy, with mean score on quality of household and a mean score on amenities, who has never worked and never been married, living in urban Punjab with literate parents, the logit of currently being in school is 2.103196. This corresponds to a probability of $e^{2.1032}/(1+e^{2.1032})=.89$ (89%) for boys. On the other hand, a 15 year old boy, with mean score on the quality of dwelling and mean score on amenities, who has been married and employed, living in rural Sindh with parents who are not literate, the logit of currently attending school is - 4.49364. This corresponds to a probability of .0111 or 1.1%.

These examples illustrate that while there is very little chance for 15-18 year old adolescents to be in school if they lived with parents who are not literate in rural Sindh and were married and employed, the chances of being in school for adolescents in urban Punjab

vary greatly by gender. While the probability for girls to be in school is 59%, a boy with the same characteristics has a probability of 89% to be in school.

In summary, this analysis illustrates that the odds ratio of the gender gap increases from 2.77 to 5.60 when all of the background variables are added to the model. In most cases of logistic regression an “improvement” in the model is signaled by a reduction in the coefficients. The increase in the coefficient in this case warrants an explanation: the last model depicts a situation in which the adolescents’ are most disadvantaged. This analysis shows that the gender gap is highest in the least privileged groups, girls among them.

Effects of Patriarchy on Primary School Completion

To answer my second research question regarding patriarchal influences on educational attainment, I used primary school completion as the dependent variable and gender, parent’s literacy status, Asset index/SES, geographical location, and patriarchy as the independent variables. These variables were used to predict the odds of primary school completion for adolescents, age 15-24 years old. The sample for this multivariate analysis consisted of 8,074 adolescents with 4,741 (59%) girls and 3,333 (41%) boys. Among the girls, 2,004 (42%) had completed primary school and among the boys 2,407 (72%) had completed primary school. Table 7.2 shows the estimated odds ratios, $\exp(B)$ for each of the independent variables in eight consecutive models. The regression coefficients (β) are provided in Appendix C, Table C-2a and standard errors (SE) of the estimates are provided in Appendix C, Table C-2b.

Similar to the previous analysis, boys have a large significant advantage over girls in primary school completion in all eight models. The baseline model (Model 1), estimates the effect of gender confirming that the odds of completing primary school for boys are 3.6 times higher than for girls. The odds of boys completing primary school relative to girls increase when other variables are added to the analysis in subsequent models. This is consistent with the earlier finding (Table 7.1) that 15-18 year old boys are more likely than girls to be currently attending school.

Parent's literacy has a significant and positive effect on adolescent's primary school completion, but the effect of mother's literacy far exceeds the effect of father's literacy (Model 2). This model shows that the odds of completing primary school for adolescents are four times higher for literate father than for illiterate father and 10 times higher for literate mother than illiterate mother. In subsequent models, the odds of completing primary school decrease when other variables are added. However, the effect of mother's literacy remains significantly higher than father's literacy. This is in contrast to the effect of parent's literacy on currently being in school. This finding suggests that mothers may have more autonomy in decision-making when it concerns younger children, and there may be a role reversal in the family once the children are older with fathers having a greater role in decisions regarding the education of adolescents.

In model 3, the Asset Index/SES variables were entered. All three factors related to asset index/SES (quality of household, amenities, and livestock) have a positive and significant effect on the odds of primary school completion. In the earlier analysis, for *currently attending school, livestock and property ownership* was not a significant factor

(Table 7.2). However, this model shows that each unit increase in livestock and property ownership increases the odds of completing primary school by almost 10%. Additionally, a one unit increase in the quality of dwelling increases the odds of completing primary school by 30% and a one unit increase in amenities increases the odds by 12%. The asset/SES variable has mitigated the effect of parents' literacy and increased the odds of primary school completion for boys in this model. This finding reflects the importance of family wealth on educational attainment. More importantly, the increase in gender gap illustrates the family wealth benefit for boys relative to girls in this model.

The two geographical factors of urbanicity and province, have a positive effect on primary school completion (Models 4 and 5). In Model 4 and all subsequent models, adolescents in urban areas have between 54% to 58% higher odds of completing primary school than do adolescents in rural areas. The odds of completing primary school are 48% higher in Punjab than in other provinces. Conversely, the odds of completing primary school for adolescents in Baluchistan are 35% less than adolescents in Sindh, and there is no significant difference in primary school completion between adolescents in Sindh and NWFP (Model 5).

Table 7.2
Odds Ratios of Completed Primary School Among Adolescents 15-24 years

	Male Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Employment Model 6	Empowerment Model 7	Mobility Model 8
Constant	.743***	.307***	.083***	.072***	.066***	.050***	.048***	.046***
Boy	3.609***	4.320***	5.066***	5.088***	5.224***	5.248***	5.269***	5.285***
Parent's Literacy								
Father is literate		4.029***	2.740***	2.730***	2.653***	2.649***	2.627***	2.619***
Mother is literate		10.518***	5.576***	5.407***	4.982***	4.925***	4.817***	4.768***
Assets								
Quality of dwelling			1.300***	1.267***	1.255***	1.256***	1.262***	1.260***
Household amenities			1.121*	1.120*	1.197***	1.195***	1.186***	1.182***
Livestock and property			1.095**	1.168***	1.150***	1.149***	1.153***	1.154***
Urban				1.533***	1.547***	1.549***	1.577***	1.560***
Province (ref: Sindh)								
Punjab					1.478***	1.496***	1.485***	1.447***
NWFP					1.123	1.117	1.120	1.129
Baluchistan					.647***	.647***	.645***	.651***
Parents approve of girls:								
Mobility						1.048*	1.040	1.034
Employment							1.378***	1.069***
Empowerment								1.069**
-2 log-likelihood	8882.322	7432.593	6687.979	6654.328	6577.082	6555.794	6571.918	6543.012
Nagelkerke R ²	.117	.348	.449	.453	.463	.464	.466	.468
Chi square	633.934	2083.663	2828.276	2861.928	2939.173	2944.337	2964.193	2973.244
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly identified (%)	63.7	72.1	76.1	76.3	76.6	76.6	76.8	76.9

Note: $n=8,074$

* $p < .05$, ** $p < .005$, *** $p < .001$

For regression coefficients (β) and standard errors (SE) of the estimates see Appendix C, Table C-2a and Table C-2b.

The main focus of this part of the analysis (Table 7.2) is the association between patriarchy and primary school completion. Models 6-8 show the results. Model 6 shows that perceptions regarding girls' mobility slightly increase the odds of completing primary school.⁶¹ For each unit increase in mobility the odds of completing primary school for adolescents increase by close to 5%. In the next model (Model 7) perceptions regarding employment are entered. This shows that if respondents believe girls should work for pay outside the home, then the odds of completing primary school are increased by 38%. Similarly, in Model 8, when empowerment is added, the odds of completing primary school increase by 8%. However, when empowerment and employment are entered in Models 7 and 8 the effect of mobility is rendered insignificant.

In the final model (Model 8) the odds of completing primary school for boys are over 5 times greater than the odds for girls. The effect of mother's literacy is considerably reduced but still positive and significant, and significantly greater than the effect of father's literacy. Two factors related to patriarchy (employment and empowerment of girls) have a positive and significant effect on primary school completion, but mobility is no longer a significant factor. This final model can be used to illustrate the predicted probability (log odds) that a 15-24 year old adolescent will complete primary school using Equation 2 and by substituting the regression coefficients from Table D-2a for each of the variables that is significant.

For illustrative purposes, two examples are shown here. For an adolescent girl in the sample who has maximum scores on empowerment (4) and employment (1), with a mean score on quality of household (5.37), a mean score on amenities (.615), and a mean score on

⁶¹ To operationalize mobility I have used household respondents' attitudes regarding ability of girls and boys to go to a variety of different places, including school. For details see Appendix B.

livestock and property ownership (1.63), living in urban Punjab with literate parents, the logit of completing primary school is calculated to be 2.365644. This corresponds to a probability of $e^{2.3656}/(1+e^{2.3656})=.91$ or 91%. An adolescent girl with similar characteristics, but minimum scores on empowerment and employment, has a probability of 86% for completing primary school. On the other hand for an adolescent girl, with minimum scores on empowerment and employment, with mean scores on the quality of household, amenities, and livestock and property ownership, living in urban Punjab with parents who are not literate, the logit of primary school completion is -0.69736. This corresponds to a probability of .33 or 33%.

These examples illustrate that if households exert higher patriarchal influence on girls this greatly impinges on their ability to complete primary school. Patriarchy, coupled with parental literacy status, has an even more adverse effect on the outcome.

Effects of Military Government on Ever Attending School

To answer my third question regarding the effects of militarization on school attendance, I used, *ever attended school*, as the dependent variable and gender, parent's literacy status, Asset index/SES, geographical location, patriarchy and cohorts as the independent variables. The sample for this analysis consisted of 4,042 adolescents between 15 to 18 years and 2,390 adolescents between 21 to 24 years.

A series of eight logistic regression models were used to estimate the relative contribution of each independent variable on the odds of having ever attended school. An interaction term, gender and military government was used to test the significance of the

combined effect on the odds of having ever attended school, of being male, and being at the school-going age during the military government. Table 7.3 shows the estimated odds ratios, $\exp(B)$, for each of the independent variables in the eight models. The regression coefficients (β) are provided in Appendix C, Table C-3a, and standard errors (SE) of the estimates are provided in Appendix C, Table C-3b.

Results of this logistic regression show a significant gender gap with boys having a significant advantage in attending school when compared with girls across all models. In Model 1, gender is entered as an independent variable. This model shows that the odds of ever attending school are five times higher if the adolescent is a boy. The effect of gender on ever attending school increases through Model 7 to over 7 times the odd for girls. In Model 8, this effect is mitigated through introduction of the interaction variable of male and military, and drops to slightly below 6 times the odds of ever attending school for boys.

Table 7.3
Odds Ratios of Ever Attended School Among Adolescents in the Military and Civilian Cohorts

	Male Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	Cohort Model 7	Cohort and gender Model 8
Constant	1.249***	.575***	.149***	.131***	.104***	.067***	.075***	.078***
Boy	4.778***	5.547***	6.659***	6.687***	6.974***	7.117***	7.147***	5.794***
Parent's Literacy								
Father is literate		4.264***	2.925***	2.917***	2.934***	2.896***	2.868***	2.870***
Mother is literate		15.282***	7.913***	7.592***	6.519***	6.181***	6.280***	6.384***
Assets								
Quality of dwelling			1.340***	1.305***	1.297***	1.304***	1.302***	1.304***
Household amenities			1.048	1.047	1.113	1.097	1.096	1.907
Livestock and property			1.107**	1.175***	1.149***	1.155***	1.155***	1.158***
Urban				1.549***	1.572***	1.599***	1.609***	1.607***
Province (ref: Sindh)								
Punjab					1.944***	1.908***	1.930***	1.951***
NWFP					.963	.977	.973	.984
Baluchistan					.864	.879	.868	.873
Parents approve of girls:								
Mobility						1.027	1.029	1.032
Employment						1.412***	1.402***	1.409***
Empowerment						1.076**	1.076**	1.079**
Military cohort							.765***	.645***
Military cohort and male								1.737**
-2 log-likelihood	6319.016	5372.520	4809.395	4785.329	4691.052	4658.391	4645.519	4634.079
Nagelkerke R ²	.143	.341	.444	.448	.464	.470	.472	.474
Chi square	549.073	1540.569	2103.693	2127.760	2222.036	2254.697	2267.570	2279.010
p	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly identified (%)	68.0	76.3	78.6	78.9	80.1	80.2	80.1	79.9

Note: n=6,432

*p<.05, **p<.005, ***p<.001

For regression coefficients (β) and standard errors (SE) of the estimates see Appendix C, Table C-3a and Table C-3b.

Similar to the previous two analyses (Table 7.1 and 7.2), parent's literacy status has a positive and significant effect on the dependent variable (Model 2) with mother's literacy having a much greater effect than father's literacy. The effect of parent's literacy decreases considerably when other independent variables are added to the analysis, but mother's literacy continues to have a much greater effect than father's literacy. This is consistent with the results of primary school completion (Table 7.2) suggesting that mothers have greater autonomy when the children are younger.

The three asset-related items are entered in Model 3. Quality of dwelling and livestock ownership have a positive effect, but the effect of household amenities is not significant. This result is different from the previous two analyses, indicating that basic needs and livestock ownership are sufficient and critical conditions for ever attending school. Descriptive data analysis showed that 80% of the adolescents started school between the ages of 5 and 7. This finding suggests that the opportunity cost of sending a young child to school may not be too high for families given that at a young age few household resources have to be expended on schooling. As the child matures and could potentially contribute to the family income, the opportunity cost of schooling increases and may put education out of reach for families with minimal expendable resources.

Similar to the previous analyses, geographical location has a significant effect on ever attending school. The odds of ever attending school are positive and significantly greater for adolescents in urban areas than for those in rural areas (Model 4). Adolescents in Punjab have higher odds of ever attending school compared to the other three provinces (Models 5).

The odds of ever attending school are 90% higher for adolescents in Punjab than for adolescents in Sindh.

Model 6 tests the effect of the three patriarchy variables on ever attending school. Once again, the effect of girls' mobility is not significant, while the variables of girls' employment and empowerment increase the odds of attending school for all adolescents. This finding is consistent with the previous analysis which found no significant effect of girls' mobility on primary school completion. Other studies conducted in Pakistan have found that the absence or shortage of single-sex schools and same-sex teachers might be a greater deterrent for girls to attend school (Lloyd, Mete and Grant, 2007).

A new variable, cohort, was tested in the last two models. The cohorts were designated based on the type of government. Adolescents who would have started school during the military government were between the ages of 21 and 24 years at the time of the survey and those who would have gone to school during a civilian government were between the ages of 15 and 18 years at the time the survey was conducted. If the adolescents between 21 and 24 years of age had ever attended school they were counted as having started school during the military government. Similarly, if the adolescents between 15 and 18 years of age had ever attended school they were counted as having started school during the civilian government.

Model 7 tests the effect of the cohort on the odds of ever attending school. The results of this model show that the odds of ever attending school for adolescents during the military government are 24% less than during the civilian government.

The next model (Model 8) tests the interaction effect of male and military government. The results show that the odds of ever attending school are 74% higher for male adolescents during the military government than for female adolescents during the civilian government.

In the final analysis, Model 8 shows that the odds of ever attending school for boys are almost 6 times greater than girls. Boys also benefit from a military government with higher odds of ever attending school during a military government. This model also shows that household amenities and girls' mobility have no significant effect on ever attending school. Additionally, only adolescents in Punjab have significantly higher odds of ever attending school compared with Sindh. The other two provinces, Baluchistan and NWFP are not significantly different from Sindh.

This final model can be used to illustrate the predicted probability (log odds) of ever attending school for an adolescent using Equation 3 (p. 94) and by substituting the regression coefficients from Table D-3a for each of the variables that are significant. Given this equation, the probability for an adolescent girl in the sample, with a mean score on quality of household (5.37), a mean score on amenities (.615), and a mean score on livestock and property ownership (1.63), living in urban Punjab with literate parents, who has maximum scores on empowerment (4) and employment (1) during the civilian government the logit of ever attending school is calculated to be 3.7994. This corresponds to a probability of $e^{3.7994}/(1+e^{3.7994})=.98$ or 98%. Similarly, for an adolescent girl, with similar characteristics during the military government, the logit of primary school completion is 3.3614 and corresponds to a probability of .97 or 97%.

However, computing the probabilities of ever attending school for girls in rural areas with parents who were not literate showed very different results. For an adolescent girl in the sample, with a mean score on quality of household (5.37), a mean score on amenities (.615), and a mean score on livestock and property ownership (1.6320), living in rural Punjab, who has maximum scores on empowerment (4) and employment (1) during the civilian government, the logit of ever attending school is calculated to be .4174. This corresponds to a probability of $e^{.4174}/(1+e^{.4174})=.60$ or 60%. Similarly, for an adolescent girl, with similar characteristics during the military government, the logit of primary school completion is -.0206 which corresponds to a probability of .49 or 49%.

While there is no substantial difference between girls in the two types of governments, if they live in urban areas and have literate parents, the difference is fairly large for girls in rural areas with non-literate parents. The probability of girls to attend school during the military government is considerably reduced in the latter case. A similar pattern is evident for boys, though the effect of government is reversed such that the probability of ever attending school for boys during the military government is slightly higher than during the civilian government.

Effect of Military Government on Ever Attending School for Girls

To further understand how military government and patriarchy affect girls' education, I carried out a logistic regression analysis on a subsample of girls using the same variables as Table 6.3. This subsample consisted of 3,764 girls in the military and civilian government (2,324 civilian, age 15-18; 1,440 military, age 20-24). Additionally, to draw comparisons between the three patriarchy items and the asset/SES items, I standardized the individual

scores. The binary-coded items, cohort, parent's literacy, and geographical location were left unstandardized (Menard, 2000). I also created three interaction terms: military and employment; military and empowerment; and military and mobility using the cohort and patriarchy items. Table 7.4 shows the estimated odds ratios, $\exp(B)$, for this analysis. The regression coefficients (β) are provided in Appendix C, Table C-4a and standard errors (SE) of the estimates are provided in Appendix C, Table C-4b.⁶²

The variable, cohort (type of government), was entered in the first model. The results of this model show that girls in the civilian government have higher odds of ever attending school than girls in the military government. This finding is consistent with the earlier analysis which found that the odds of ever attending school were higher during the civilian government (Table 7.3).

In Model 2, parent's literacy was added as a variable. This model shows that the odds of ever attending school for girls are significantly higher if either parent is literate. The effect of mother's literacy is several times greater than father's literacy. According to this model, the odds of ever attending school are 15 times greater if the mother is literate and 4 times greater if the father is literate. In the earlier analyses, mother's literacy was shown to be consistently more highly significant than father's literacy.

⁶² For similar analysis using a subsample of boys see Table 7.5a-7.5c in Appendix C.

Table 7.4
Odds Ratios of Ever Attended School Among Female Adolescents in the Military and Civilian Cohorts

	Cohort Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	MiltXMob Model 7	MilXEmpl Model 8	MilXEmpo Model 9
Constant	1.424***	.676***	.204***	.165***	.129***	.123***	.123***	.123***	.123***
Military	.712***	.700***	.694***	.688***	.636***	.622***	.621***	.622***	.622***
Parent's Literacy									
Father is literate		3.988***	2.834***	2.843***	2.897***	2.873***	2.886***	2.889***	2.894***
Mother is literate		14.787***	7.874***	7.443***	6.142***	5.697***	5.769***	5.754***	5.760***
Assets									
Quality of dwelling			2.329***	1.277***	1.262***	1.275***	1.276***	1.276***	1.276***
Household amenities			1.028	1.031	1.118	1.092	1.090	1.089	1.088
Livestock			1.029	1.135	1.085	1.097*	1.098*	1.099*	1.098*
Urban				1.997***	2.091***	2.137***	2.141***	2.131***	2.134***
Province (ref: Sindh)									
Punjab					2.432**	2.434***	2.434***	2.433***	2.430***
NWFP					.978	.984	.990	.989	.989
Baluchistan					.766	.785	.790	.786	.782
Parents approve of girls:									
Mobility						1.145**	1.226**	1.229***	1.231***
Employment						1.171***	1.169**	1.136*	1.146*
Empowerment						1.153**	1.155**	1.156**	1.111
Interaction									
MilitaryXmobility							.847	.843	.836
MilitaryXemployment								1.078	1.057
MilitaryXempowerment									1.111
-2 log-likelihood	4428.576	3721.615	3311.345	3267.137	3148.722	3107.525	3104.526	3102.566	3102.566
Nagelkerke R ²	.009	.270	.397	.410	.443	.454	.455	.455	.456
Chi square	21.760	728.720	1138.991	1183.199	1301.613	1314.608	1332.834	1332.834	1332.834
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly classified (%)	55.5	69.7	74.2	74.5	75.5	76.7	76.5	76.4	76.4

Note: $n=3,764$

* $p < .05$, ** $p < .005$, *** $p < .001$

Odds ratios are standardized for mobility, employment, and empowerment

For regression coefficients (β) and standard errors (SE) of the estimates see Appendix C, Table C-4a and Table C-4b.

The only asset/SES variable that has a significant effect on the odds of ever attending school is the quality of dwelling. Amenities or livestock ownership do not significantly impact the dependent variable (Model 3). This is a departure from the analysis on the odds of ever attending school, primary school completion, and currently being in school for adolescents. This shows that for girls to ever attend school, basic living conditions are of significant importance. For one unit improvement in the quality of dwelling, the odds of attending school for girls increase by 68%.

As in previous analyses, the odds of ever attending school for girls in urban areas (ref: rural areas) and in Punjab (ref: Sindh) are higher than the rest of the country (Model 4 and 5). If girls are in urban areas or in Punjab, their odds of attending school are almost 2 times greater than girls in rural areas or in Sindh.

The patriarchy variables show that household expectations positively impact the odds of ever attending school for girls. If households approve of employment for girls, the odds of ever attending school are 15% greater than for girls in households where employment is not allowed or approved. Similarly, if households allow girls more flexibility in mobility and empowerment, the odds of ever attending school are greater than for girls whose households are more restrictive regarding their mobility and empowerment (Model 6).

To analyze the interaction effect of patriarchy and the type of government, the three interaction variables were tested in Models 7-9. All three interaction terms are insignificant, indicating that the effect of mobility, empowerment, and employment on ever attending school for girls is the same during a military or civilian government.

Since variables in the last three models are not significant, I used Model 6 as the final model for this analysis (Nagelkerke R^2 .454, 76.7% cases correctly classified). This model shows that the odds of ever attending school during the military government are reduced by 0.7 times. Additionally, this model shows that mother's literacy status is considerably more influential than father's literacy status in ever attending school. Another important finding of this analysis is that amenities are not a significant factor in ever attending school for girls. As in other analyses, girls in urban areas and in Punjab have higher odds of attending school. All three patriarchy variables also significantly affect the dependent variable.

This final model can be used to illustrate the predicted probability (log odds) of ever attending school for an adolescent using Equation 4 and by substituting the regression coefficients from Table D-4a for each of the variables that are significant.

For an adolescent girl in the sample, with a mean score on quality of household (5.37), and a mean score on livestock and property ownership (1.63), living in urban Punjab with literate parents, who has maximum scores on mobility (8), empowerment (4) and employment (1) during the civilian government, the logit of ever attending school is calculated to be 7.506. This corresponds to a probability of $e^{7.506}/(1+e^{7.506}) = .999$ or almost 100%. Similarly, at the opposite end of the spectrum, for an adolescent girl, with parents who are not literate, lowest scores on patriarchy, living in a rural area in any of the provinces other than Punjab, during the military government, the logit of primary school completion is -.9656. This corresponds to a probability of .335 or 34%. The probability for a girl, with similar characteristics, to attend school during a civilian government is 44%.

The multivariate analysis permits a more nuanced understanding of the association of family characteristics, patriarchy, and militarization with educational attainment. These findings are briefly summarized below:

- Boys have a large advantage over girls on all three measures of educational attainment, indicating a significant gender gap
- Punjab has the highest level of educational attainment compared to the other three provinces
- Sibship size is only marginally significant and becomes insignificant once SES/asset index is taken into account
- The association of parent's literacy with measures of educational attainment varies considerably. For adolescents currently attending school, mother's literacy is more important before SES/asset index is taken into account, but father's literacy becomes more important once SES/assets are accounted for in currently attending school. In general, the effect of parent's literacy decreases with improvement in SES/asset index
- Household attitude regarding girls' employment and empowerment are significant factors in primary school completion, but mobility is not a significant factor
- Educational attainment of girls and boys is adversely affected during the military government
- Gender gap in ever attending school decreases during the military government
- Effect of patriarchal attitudes on girls' school attendance is similar during the military and civilian governments

Chapter 8

Summary, Discussion, and Recommendations

Summary

The objective of this research was to understand the reasons for low educational attainment of women in Pakistan. Using data from the nationally representative Adolescent and Youth Survey of Pakistan conducted jointly by the Population Council and the Government of Pakistan in 2001-02, I have developed a conceptual framework to illustrate how patriarchy and militarization impinge upon girls' education together with other school, family, and community factors. The sample for my study consisted of 8,074 adolescents between the ages of 15 and 24 years. Measures of central tendency, *t*-test, chi-square test, principle components analysis, and logistic regression were used in the analysis. This chapter presents a summary of the results followed by a discussion of the implications, suggestions for future research, policy recommendations, and a brief summary of the limitations of the study.

The overarching objective of my research was to understand why education has remained an inaccessible reality for most women in Pakistan. I identified three questions for this study. The first question focused on a subsample of 15-18 year old adolescents. The objective was to understand the status of educational attainment of adolescent girls and how it compares to the educational attainment of adolescent boys, given their demographic and family characteristics.

The second question used the entire sample of adolescents aged 15-24 years. I conducted this analysis to assess the association of patriarchy with primary school completion above and beyond other demographic and family characteristics. Patriarchy was measured by household respondents' attitudes regarding employment, mobility, and empowerment of girls and boys in the household.

Finally, I conducted the third analysis in two stages to understand the association of militarization with ever attending school. I first used two cohorts of adolescents to represent the two types of government (military and civilian). Adolescents age 15-18 years old were expected to have started school during the civilian government while those between 21-24 years of age were expected to have started school during the military government. My objective was to understand how school attendance for girls and boys under civilian government differs from that under military government.

To further explore the effect of patriarchy and militarization, I used a subsample of girls during the two phases of government. Interactions of military with the three patriarchy variables were also tested in this analysis in order to understand the association between patriarchy and girls' education during the different types of government.

My study confirmed existing research regarding the low educational attainment of women and girls in Pakistan. The results of my analysis indicate that despite recent gains in educational attainment, almost half of the adolescent girls had never attended school, while more than half of the girls had not completed primary education. Both the descriptive and multivariate analyses in this study suggest that girls are decidedly at a disadvantage with regard to attending school, subsequently completing primary education, or continuing their

education beyond the primary school level. The study found that both girls and boys are adversely affected by patriarchy and military government, but the gender gap is greater during military government than during civilian government. This suggests that girls are far more susceptible than boys to the effects of changes in the type of government.

Discussion

The following section is an elaboration of the results of the analyses conducted in chapters 6 and 7, linking these results back to the conceptual framework. The discussion is organized in two sections to reflect the structure of the framework. The first section deals with school, family, and community factors and the second section discusses patriarchy and militarization as critical issues in education of women and girls.

School, Family, and Community Factors

When girls were asked their reasons for not attending school, by far the most frequent response was *unavailability of schooling*. This is not surprising given that fact that there is an acute shortage of schools in Pakistan, especially in the rural areas (Lloyd, Mete, and Grant, 2002; Sathar, 2002; Andrabi, Das Khawaja; 2002; World Bank Country Report, 2005). Other problems associated with the supply of schools relate to teacher absence, poor infrastructure, and cost of providing schools. In a cultural climate where single sex-schools and same-sex teachers are almost a requirement for girls' schools, finding and retaining teachers at the local level becomes a serious issue. To offset some of the problems that emerge from supply of schooling, the policy pendulum has swung back and forth between privatization and nationalization of schools during the last sixty years. The fact that a large number of girls

indicated they were not able to attend school due to unavailability has to be evaluated in light of the other constraints mentioned above.

While there is debate about the effectiveness of private schools, it cannot be denied that fee-based schooling transfers the burden of schooling to the family, creating an even higher level of opportunity cost for families with limited resources. My analysis has supported evidence that family resources affect the decision to educate girls. Worth noting are several new findings. In the AYP (2001) study, the SES index was developed using the first factor in a principle components analysis. Previous studies that used selected household assets defined by the first component in a factor analysis missed important measures of other aspects of SES. I found that asset-related items that were not contained in the first factor—such as amenities (VCR, phone, car, motorcycle, cable, refrigerator, and computer) and livestock and property ownership—are also significant factors in discussing educational attainment. I retained all of the asset items and grouped them in three factors: quality of dwelling, amenities, and livestock ownership. The findings show that the quality of dwelling and livestock factors are significant for adolescents having started school, while household amenities are a significant factor for primary school completion. This indicates that household wealth, represented by increased amenities, is an important factor for consideration in school retention. That said, a comparative study of urban and rural areas in each of the provinces is needed for a more thorough understanding of how the quality of dwelling, household amenities, and livestock ownership impact schooling of girls in the different regions of Pakistan.

Further analysis of a subsample of girls showed similar tendencies—the quality of dwelling was strongly associated with ever attending school, livestock ownership was marginally associated, and amenities did not have a significant association. On the one hand, this points to an inverse relationship between abject poverty and starting school; on the other, it suggests a positive relationship between increased family wealth and educational progression. More specifically, the data show that adolescents who lived in a dwelling with some level of permanence, proper sanitation, and cooking facilities were more likely to have ever attended school, but having a telephone, VCR, computer, or refrigerator did not significantly impact their likelihood of attending school. This suggests that minimal resources are necessary and sufficient for school attendance.

The study found that sibship size, after controlling for other family characteristics, does not have a significant effect on 15-18 year old adolescents currently attending school. This is contrary to the conventional understanding of the relationship between family size and educational outcome. According to the resource dilution theory (Blake, 1989) parents' finite resources are distributed proportionally to the number of children, which does not seem to be the case in Pakistan. Buchman and Hannum (2001), in a comprehensive, comparative review of studies from developing countries, also found that the negative relationship is not consistently applicable. Their review found studies that show no direct impact of sibship size on educational attainment, especially in the case of extended families. This suggests that the organization of the household as an extended family may have a role in buffering the effect of limited resources, where older siblings or other family members might help to defray some of the costs of schooling younger children and might also relieve girls of caring for the younger siblings. The analysis found evidence of large extended families in Pakistan and

supports this finding. Only a very small percentage of girls indicated that they were not able to go to school because they had to care for their siblings, and far fewer girls than boys reported that domestic responsibilities prevented them from going to school.

The overall findings of this study also reinforce the significant role of parent's education in the schooling of children. Mother's literacy is significantly more important than father's literacy for younger children. As the children age, father's literacy becomes a more important influence. This signals a parental role reversal as children progress through school indicating that mother's autonomy may be diminished with older children bolstering the role of patriarchy in familial decision-making.

Patriarchy and militarization

This study has substantially extended the research on women's education by investigating two new variables—patriarchy and militarization—that have not been given much significance in the literature and research on education in developing countries and conflict zones like Pakistan. While my study found that both patriarchy and militarization are negatively associated with girls' education, the two are uniquely different mechanisms that work to create barriers to girls' education. Education, especially that of women, is perceived to be a threat to the dominant culture of power, and educated women have the potential to upset the gendered hierarchy by questioning established norms and cultural constructs.

In general, the findings of this research support the rapidly expanding literature on issues of human security in postcolonial conflict zones, with particular emphasis on how patriarchy and militarization affect women's education. The research shows that patriarchy

and militarization work to create a power structure in which women are marginalized and deprived of access to education. Although I have used military government as a proxy for militarization, I recognize that this is limited in scope; clearly, militarization is a highly complex and multi-faceted social phenomenon. However, this study goes a long way in understanding the complex mechanism through which militarization of women's lives plays out in nation-states that are engulfed in internal or external armed conflict.

The findings of my study suggest that effects of militarization and patriarchy on education of girls cannot be ignored. The study found that girls are less likely to attend school during military government than during civilian government. This effect is consistent, irrespective of geographical and household differences as measured by the SES/asset index or parents' literacy status.

The study also found that girls' limited mobility is not a significant impediment to completion of primary school for adolescents. Instead, empowerment and family expectations regarding girls' employment are significant factors that contribute to higher rates of primary school completion. Nevertheless, mobility remains a significant factor in starting school for younger girls.

As stated earlier, social *undesirability* of schooling for girls was a significant factor attributed to girls never having attended school. The unwillingness of parents to send their daughters to school reflects behavioral outcomes of a patriarchal attitude. *Parents do not approve of schooling* or *family sees no benefit of schooling*, are two reasons given by girls for not attending school. While the community might consider these reasons socially desirable, they pose a dilemma for interpretation of the results because adolescents might rely on them

as convenient and socially acceptable excuses for not attending school. These motivations notwithstanding, it is important to understand the reasons why parents are not willing to send their daughters to school or do not see the benefit of schooling. The data are limited and do not allow for an in-depth analysis in this regard. However, the literature review and background analysis are consistent in pointing out the issues created by patriarchy and militarization. Keeping girls from getting an education helps to perpetuate the power structure both within the home and outside. Education thus becomes a mechanism for the exercise of power over the lives of women in general.

Expanding on the finding that girls are not going to school at the same rate as boys, it is essential to point to vast regional differences in school attendance, corroborating earlier research showing that girls in Punjab and in urban areas have a higher likelihood of attending school. The data are limited in explaining factors that have contributed to the higher levels of school attendance in selected areas, but some inferences can be made, based on the social, cultural, and political overview presented in chapters 2 and 3. One of the reasons is the sheer availability of places of learning. Punjab, similar to urban areas, has the oldest higher educational institution in the country and currently has the largest number of schools (HEC, 2005). Increased financial resources were also apportioned to Punjab during the Sharif government (1990-93 and 1997-99). Additionally, funding agencies (World Bank, Asian Development Bank and USAID) have historically focused their efforts in the province on rural development projects including water supply, health, and sanitation. More recently the Punjab Education Sector Reform Program (PESRP) has promoted the expansion of women's education in the region through capacity building, improving infrastructure, voucher programs, and decentralizing school financing. Not the least significant is that a large

majority of the officers as well as the rank and file in the armed forces, especially the military, comprise men from the province of Punjab (Jalal, 1990). On the surface it may appear that this would not affect educational attainment of girls. However, in a militarized state, this has manifested itself in stratification between the provinces, between girls and boys, and between girls in each of the four provinces. Further study is needed to investigate the mechanism for this regional difference, as it may have some key policy implications for women's education in other parts of the country.

My analysis has pointed to the different ideologies adopted by the two civilian and military governments I used for my study. Despite the rhetoric, the foundation of policy formation during the civilian government was provision of "food, clothing, and shelter", while that of the military government was ensuring that women were veiled behind the four walls of their natal or conjugal home. This level of isolation of women from the world around them was a conscious effort to reproduce gender stratification.

The study found that the association of patriarchy with school attendance is consistent during the military and the civilian governments indicating the extent to which patriarchy has become the fabric of cultural and social institutions in the country. However, patriarchal influence does vary by family characteristics and the type of government; fewer girls attend school when there is a military government. My study has shown that patriarchy and militarization constitute the structural framework within which women's lives are defined. The findings have implications for women's status at the global level. In most postcolonial conflict zones, women face similar challenges in gaining access to education among other social, cultural, and political institutions. The power relations that are created in the public

and private realms by patriarchy are entrenched in the cultures and manifest themselves as religious, economic, and political constraints placed on women. Furthermore, the exclusionary practices of military governments create gender stratification that resembles patriarchal percepts. Together, patriarchy and militarization create a network of institutions that is unquestioned by both men and women and accepted as status quo. Education is the first step for women to regain control over their own lives.

The problem of women's education in Pakistan is severe and complex and demands a multi-faceted approach. The findings of this study confirm that existing political, social, and familial barriers have overarching policy implications. The findings point to the social undesirability of girls attending school in Pakistan. This research has also shown that educated parents have a higher likelihood of sending their children to school. Thus opening more schools, without educating the parents, is not likely to result in sending more girls to school. The study also found that mothers have a much greater influence than fathers when children are younger, but the effect reverses for adolescents who are 15-18 years old or as girls mature into womanhood. This reversal indicates that fathers play a greater role in decision-making when the children are older. Based on these findings, I make the following recommendations.

Policy Recommendations

Some important implications for policy and future research can be ascertained from this discussion. Generally, both policy makers and researchers pay greater attention to poverty alleviation and development issues. The impulse to emphasize these two issues may stem from the fact that international aid and funding for education are tied heavily to the

return on investment decisions. The impact of militarization is de-emphasized due to internal and external political forces. This study has highlighted the need for research on the combined effects of militarization and patriarchy on the education of women and girls in conflict zones like Pakistan.

It is important to realize that the problem of educating girls has to be addressed holistically and cannot be resolved by tweaking the education policies in isolation. If patriarchal influence and the fear and insecurities created by militarization are to be overcome, creating more primary schools may not be the answer. Education policy formation needs to seriously consider investment in programs with a strong emphasis on non-formal education and social programs as a supplement to the formal system of education. There are successful programs that can be explored as models to guide policy formation. One such program is the Bangladesh Rural Advancement Committee (BRAC), initiated in Bangladesh in 1972, with the specific goal of bringing about “positive changes in the quality of life of the poor” (BRAC Annual Report, 2007). In addition to economic development programs, BRAC has provided primary school education and teacher training programs to underprivileged women and girls in Bangladesh over the last two decades. The BRAC education program model has now been adopted in Sri Lanka and Afghanistan and several countries in Africa.

Although BRAC has recently started working on microfinance programs in Pakistan, the education component has not been introduced. As a first step, the Ministry of Education should seriously evaluate BRAC education programs and shift its focus from the traditional form of schooling to schooling that focuses on intergenerational family literacy programs. This will address the problem at two levels. First, both generations will gain exposure to

education, but most importantly, some of the concerns regarding personal safety will be alleviated as young girls will be supervised by their parents (or another adult) while traveling to and from school, as well as during school, while learning alongside each other. Since this research has shown that educated fathers have a significant role to play in adolescents' educational attainment, it is essential to involve fathers in family education programs. Family literacy programs also have the potential to address issues of patriarchy through curriculum designed to alleviate the 'dangers' of education. Additionally, schools should be flexible in implementing programs that allow students and parents to simultaneously continue their employment or family occupation. If schooling requires a family to forego potential income, a reimbursement plan should be instituted so that opportunity cost of schooling is minimized for the family.

This study does not make any assertions about the quality of education. Other research has made clear that much work needs to be done to improve the quality of instruction and infrastructure in schools in developing and war-torn countries like Pakistan.⁶³ However, the findings suggest that the social and economic cost of girls' schooling is too high for families, creating a vicious cycle that inhibits spending on education. When girls do not go to school there are no teachers being trained to then teach the girls who do want to go to school. Ghuman and Lloyd (2007) found teacher absence in public girls' schools to be considerably higher than in public boys' schools. The reasons and implications for this disparity need to be further explored. Traditional solutions of relocating female teachers to underserved areas have not proven to be successful.

⁶³ For a detailed discussion of the quality of instruction and educational outcomes in Pakistan, see Andrabi, T. A, Khwaja, & T. Vishwanath (2008). *Pakistan: Learning and Educational Achievements in Punjab Schools (LEAPS). Insights to inform the education policy debate.*

Additionally, this study has found that parental literacy is a very significant factor in adolescents' school attendance and retention. The solution for improving retention rates of girls from primary through secondary and tertiary education might lie in educating parents about the value of education. As a policy initiative, this recommendation has long-term implications and special incentives may be needed to retain girls in school long enough so they can be trained as teachers for the local schools.

The data clearly indicate that women in Pakistan are complicit in perpetuating the patriarchal structure that prevents girls from getting an education. The findings show that women are more restrictive in their views regarding mobility and empowerment for girls than boys as opposed to men in the household. This is a very important social phenomenon that cannot be addressed in isolation at the education policy level. By and large, the power structures created through patriarchy and militarization have to change first for any significant improvement in educational attainment of girls. Durrant (2000) found that girls in Pakistan spend a significant portion of their time engaged in housework which insulates them from establishing social and intellectual connections. Education, albeit in the form of family literacy programs, will enable women to establish social connections outside the home, thus exposing them to other ways of thinking, approaches to problem solving, and available resources.

The study also raises a question about the responsibility of the state with regard to provision of education. In Pakistan, publicly-funded schools are at the bottom of the educational strata, with inadequate infrastructure and poor quality of instruction (Burki, 2008). However, lessons learned from some other countries show that state control of

education has the potential to bring about significant and lasting changes in the education system. Malaysia is a prime example of a country with an education system where racial and ethnic stratification in educational attainment was reversed as a result of implementing specific education policy in the public schools (Pong, 1993). It is valid to say that, in the case of Pakistan, neither of the two systems is capable of addressing the enormity of the education crisis on its own. Both the public and private sector are needed and both are in need of massive educational reform. It is outside the scope of this study to analyze the advantages or disadvantages of public and private education, but without appropriate reform efforts the gulf between the two systems will continue to widen.

Finally, to grapple with the effect of militarization on girls' education it is important to take a step back from education policy formation and understand that militarization infiltrates all social and cultural institutions. While it would be an exercise in futility to suggest that military rule should be outlawed, there are steps the government could take to counter its negative effects on women's education. First and foremost is the realization that there are serious implications for the health and welfare of the country if almost half the female population is not educated. Second, it is important to acknowledge education as a human rights issue for women. It is essential to treat issues of national security and those of human security as equally significant. Human security issues assume greater proportions in times of national crisis or armed conflict. Policy makers and funding agencies need to ensure that financial and infrastructure support is not diverted away from social institutions when the military assumes decision-making roles. This especially includes stabilizing funding sources for education and healthcare for women and girls. Additionally, the military should focus on securing the borders and abdicate responsibility for education to the civil society.

Limitations

In general, this research complements the rapidly expanding literature on human security in postcolonial conflict zones, with particular emphasis on how patriarchy and militarization affect women's education. It shows that patriarchy and militarization work to create a power structure in which women are marginalized and consequently deprived of access to education. It should be noted that since the data come from a representative sample of households, and are based on the enumeration schemes developed for the national census, the findings should have a high level of external validity, which is an advantage rarely present in studies or data sets of a smaller scale. However, the limited time span of the data only allowed for comparison between one military and one civilian government.

A few words of caution are in order. The data were not collected to address the issues of gender differences in education or issues pertaining to the effects of patriarchy and militarization; hence the variables are more limited than desirable. Militarization and patriarchy are multidimensional issues and this study has only scratched the surface. Especially restrictive is the use of a dummy variable to evaluate the impact of militarization. Military government is just one aspect of militarization that can be measured; others may include differential expenditure on education and defense, military takeover of civic institutions, establishment of armed checkpoints within communities, increased sexual violence, and loss of personal security. In the absence of any other suitable variables, military government was thought to be the best proxy. Additionally, without longitudinal data, conclusions about the causal ordering of the variables are necessarily guarded.

Social class plays a significant role in defining status and access to civil institutions in Pakistan. The AYP data does not allow for an in-depth analysis of class structure and its impact on educational attainment. The asset index developed for the purposes of this study is the best proxy available for defining socioeconomic status at this time.

Where possible, published data are used to support the findings, but it is important to note that sources for publicly available data are extremely limited in Pakistan. In some cases there are no mechanisms in place for reliable and efficient means of tracking metrics. Even when data are collected, they are archived in the associated offices and not made publicly available. Bureaucracy and red tape in the government makes it almost impossible for researchers and scholars to find the relevant sources of data. AYP data for this study were accessed through personal contacts and very protracted communications with high ranking government officials in Pakistan.

In addition to the household and adolescent surveys, the AYP developed a community profile using structured group discussions with community leaders. These key informants provided information on contextual variables about the community, including infrastructure, schools, health care facilities, employment opportunities, and the presence of non-governmental organizations (NGOs). The community profile was not available for this study, but could prove to be a very useful tool for micro-level analysis at the village or community levels. Four other efforts are worth mentioning here: the Pakistan Integrated Household Survey 1998-99 (PIHS), Household Integrated Economic Survey 2001-02 (HIES), the National Education Census 2005 (NEC), and the Pakistan DHS 2008. Each of these efforts culminated in national datasets of considerable value for researchers. Of note are

the National Education Census, which has tremendous potential to provide insights into the current state of educational institutions in the country and the Pakistan DHS and could be used in conjunction with the AYP study, and the DHS studies conducted in 1990 and more recently in 2008.

Two other limitations of the dataset should be mentioned here as well. First, this dataset did not explore the content and experience of schooling. Schooling is in itself a transformative process, and patriarchy and militarization are both reinforced and reproduced through the curricula and the environment in the schools. There is a high level of debate regarding the quality of instruction in public schools and madrasas versus the private schools. That debate notwithstanding, there is a critical need for substantive research on curricular reform in Pakistan. Most often the debate about curricular reform is centered on whether the medium of instruction should be English or Urdu, or alternatively, one of the local languages. Not much attention is paid to the content, which still subscribes to the colonial, patriarchal, and nationalistic agendas. Secondly, the dataset does not allow for a distinction between cohort and period effects. However, since the two cohorts are arranged chronologically in consecutive time periods, there is a minimal chance that they may have experienced markedly different period effects.

Lastly, this study is complicit in homogenizing the vast regional differences in language, cultural practices, and religious sects due to the nature of data collection and difficulty in accurately identifying the differences. The effects of religion on educational attainment are often cited in literature as a major reason for low educational attainment in Pakistan. Ninety-seven percent of the respondents in the household survey reported their

religion as Islam. However, the survey did not collect information on the varying levels of religious sects and practices in households. This precludes the possibility of using religion as a variable of interest in the analysis, but it does not diminish the need to investigate the relationship between religiosity and the educational attainment of women in Pakistan.

Suggested Future Research

I have explored two factors, patriarchy and militarization, that are new considerations in the area of education research in the context of Pakistan. As an exploratory analysis, I relied on existing data collected for a study on transition to adulthood. While the data are sufficient to suggest that patriarchy and militarization contribute to the grave inequities in education, they fall short of explaining the mechanisms through which these social constructs operate. I have relied on other published data to bridge these gaps. This study points to the need to collect longitudinal data at the individual, family, and community level to understand causal relationships and further explore regional differences within Pakistan. Additionally, qualitative data collected through participant research methodologies are needed to complement the self-reported quantitative data.

Other aspects of gender stratification that need to be further explored are the differential effect of patriarchy and militarization resulting from different levels of religiosity and social class. With the immense importance attributed to the role of fundamentalist ideologies in education, the gendered nature of cultural practices often inscribed as religious beliefs needs to be investigated further. It was outside the scope of this study to delve deeper into the regional characteristics, but it is nevertheless an important avenue to explore as levels of religiosity vary markedly by ethnic origin and geographic location. The advantage

of analyzing the data at the regional level is that it will allow the education policy to be tailored to the nuanced differences that can be critical to the success of education programs.

Future studies should also develop the SES/asset index further. My research has shown that, contrary to other studies, a much broader assessment of assets is needed to develop an accurate index. An index developed at the regional level would likely present a more nuanced picture.

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Appendix A: Socio-Economic Index Using Principle Components Analysis

Adolescents were asked about conditions in their household at age 15 that pertained to household possessions and amenities as proxy for the household's socioeconomic status. Responses to 29 items were used as input in the factor analysis. Six components were generated; of these, the first component explained 20.694 percent of the variance. The first Eigen value was 6.001 (see Table B1).

Table B1: Principle Components Analysis--Total Variance Explained

Component	Initial Eigen values		
	Total	% of Variance	Cumulative %
1	6.001	20.694	20.694
2	2.562	8.836	29.530
3	1.576	5.434	34.964
4	1.269	4.375	39.340
5	1.127	3.886	43.226
6	1.106	3.814	47.040

Since there are six Eigen values greater than one, there is an indication that the “co-movement” of the assets is explained by more than one factor. However, based on the findings of Filmer and Pritchett (2002) and Vyas and Kumaranayake (2006), it was assumed that the first component could reasonably be interpreted as a household's socioeconomic status. This component was scored and the households were divided into quintiles of approximately equal size. The quintiles were used as a proxy for determining the asset index of the adolescents' household at age 15.

The following 29 items were entered in the principle components analysis:

Did household own dwelling?

Was there more than one (living) room in the dwelling?

Was there a separate room for cooking?

Did the dwelling have a drainage or flush latrine?

Did the dwelling have a gate?

Was the roof constructed with concrete?

Was the floor cemented?

Were the walls cemented?

Did the household have electricity?

Did the household have piped natural gas or LPG gas cylinder?

Did the household have piped water from government supply?

Did the household have telephone?

Did the household have cycle?

Did the household have motor cycle?

Did the household have car/van?

Did the household have radio?

Did the household have TV?

Did the household have dish/cable?

Did the household have VCR?

Did the house have refrigerator?

- Did the house have computer?
- Did the household own plot or agricultural land?
- Did the household own poultry?
- Did the household own goat/sheep?
- Did the household own cow?
- Did the household own buffalo?
- Did the household own oxen?
- Did the household own camel?
- Did the household own any other livestock?

Appendix B: Mobility and Empowerment Scales Using Reliability Analysis

Household respondents were asked if they felt it was permissible for 15-year old unmarried girls and boys to go to a variety of different places alone. They were also asked their opinion about whether girls and boys can make decisions about their education, work, and marriage. The sum of the following eight items was used for the mobility scale:

Can 15 year old girl/boy go alone to⁶⁴:

- Neighbor
- Nearby shop
- School
- Playground
- Friend
- Relative
- Nearby community
- Health outlet

The sum of the following four items was used to develop the empowerment scale:

- Can boys/girls make decision about their education?
- Can boys/girls make decision about their marriage?
- Can boys/girls make decision about employment?
- Do boys/girls have the right to make decisions about their life?

⁶⁴ The following items were not used in the development of the mobility analysis. Can 15 year old girl/boy go alone to: fields inside village, field outside village

Appendix C: Regression Coefficients and Standard Errors

Table C-1a

Logistic Regression Coefficients of Currently Attending School Among Adolescents age 15-18 years

	Male Model 1	Age Model 2	Sibship size Model 3	Marriage & employment Model 4	Parent's literacy Model 5	Assets Model 6	Urbanicity Model 7	Province Model 8
Constant	-1.506***	-1.083***	-.536***	-5.573***	-5.939***	-6.723***	-6.817***	-7.173***
Boy	1.019***	1.133***	1.134***	1.633***	1.653***	1.708***	1.719***	1.732***
Age (ref: 15 yrs)								
16 years		-.221*	-.194	-.023	-.180	-.243	-.245	-.257*
17 years		-.656***	-.635***	-.433***	-.595***	-.701***	-.707***	-.718***
18 years		-1.350***	-1.326***	-.854***	-1.055***	-1.171***	-1.179***	-1.199***
Sibship size			-.099***	-.088***	-.053*	-.057*	-.055*	-.038
Marriage & Employment								
Never married				2.448***	2.230***	2.121***	2.139***	2.088***
Never employed				2.925***	2.580***	2.512***	2.494***	2.435***
Parent's literacy								
Father literate					1.011***	.708***	.704***	.714***
Mother literate					1.098***	.535***	.528***	.503***
Assets								
Quality of dwelling						.179***	.164***	.156***
HH amenities						.133**	.131**	.168***
Livestock & property						.059	.099	.087
Urban							.240*	.270*
Province (ref: Sindh)								
Punjab								.593***
NWFP								.433**
Baluchistan								.365*
-2 log-likelihood	4011.077	3844.410	3809.760	3122.649	2862.348	2700.012	2696.059	2673.692
Nagelkerke R ²	.070	.133	.145	.372	.448	.492	.493	.499
Chi square	337.74	340.803	379.034	634.456	1048.588	1347.155	1350.679	1383.415
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly classified (%)	69.6	69.6	69.7	73.9	75.9	78.8	79.2	80.0

*n=4,042 (missing cases deleted listwise)***p<.05, **p<.005, ***p<.001*

Table C-1b
Error Terms of Currently Attending School Among Adolescents age 15-18 years

	Male Model 1	Age Model 2	Sibship size Model 3	Marriage & employment Model 4	Parent's literacy Model 5	Assets Model 6	Urbanicity Model 7	Province Model 8
Constant	.057	.109	.144	.451	.461	.492	.495	.506
Boy	.077	.080	.081	.097	.102	.107	.107	.108
Age (ref: 15 years)								
16 years		.103	.104	.116	.124	.128	.128	.129
17 years		.109	.110	.123	.130	.135	.135	.136
18 years		.116	.116	.129	.136	.141	.141	.142
Sibship size			.017	.019	.020	.021	.021	.021
Marriage & Employment								
Never married				.122	.126	.130	.130	.132
Never employed				.418	.421	.424	.424	.425
Parent's literacy								
Father literate					.101	.106	.106	.108
Mother literate					.126	.138	.138	.140
Assets								
Quality of dwelling						.020	.021	.022
Household amenities						.045	.045	.046
Livestock and property						.050	.054	.054
Urban							.121	.121
Province (ref: Sindh)								
Punjab								.127
NWFP								.157
Baluchistan								.173

n=4,042 (missing cases deleted listwise)

p<.05, **p<.005, *p<.001*

Table C-2a
Logistic Regression Coefficient of Completed Primary School Among Adolescents age 15-24 years

	Male Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Employment Model 6	Empowerment Model 7	Mobility Model 8
Constant	-.298***	-1.180***	-2.487***	-2.631***	-2.722***	-2.782***	-3.042***	-3.087***
Boy	1.284***	1.463***	1.622***	1.627***	1.653***	1.658***	1.662***	1.665***
Parent's Literacy								
Father is literate		1.394***	1.008***	1.004***	.976***	.974***	.966**	.963***
Mother is literate		2.353***	1.718***	1.688***	1.606***	1.594***	1.572***	1.562***
Assets								
Quality of dwelling			.263***	.237***	.227***	.228***	.232***	.231***
Household amenities			.114*	.113*	.180***	.178***	.170***	.167***
Livestock and property			.090**	.156***	.140***	.139***	.142***	.143***
Urban				.427***	.436***	.438***	.455***	.445***
Province (ref: Sindh)								
Punjab					.391***	.403***	.395***	.369***
NWFP					.116	.110	.114	.121
Baluchistan					-.436***	-.436***	-.439***	-.429***
Parents approve of girls:								
Mobility						.046	.040	.033
Employment							.321***	.270***
Empowerment								.067**
-2 log-likelihood	8882.322	7432.593	6687.979	6654.328	6577.082	6571.918	6545.569	6543.012
Nagelkerke R ²	.117	.348	.449	.453	.463	.464	.466	.468
Chi square	633.934	2083.663	2828.276	2861.928	2939.173	2944.337	2964.193	2973.244
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly identified (%)	63.7	72.1	76.1	76.3	76.6	76.6	76.8	76.9

Note: n=8,074 (missing cases deleted listwise)

p*<.05, *p*<.005, ****p*<.001

Table C-2b
Error Terms of Completed Primary School Among Adolescents age 15-24 years

	Male Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Employment Model 6	Empowerment Model 7	Mobility Model 8
Constant	.032	.045	.092	.096	.108	.111	.127	.128
Boy	.053	.059	.064	.064	.065	.065	.065	.065
Parent's Literacy								
Father is literate		.059	.152	.064	.065	.065	.065	.065
Mother is literate		.144	.012	.153	.153	.065	.154	.154
Assets								
Quality of dwelling			.040	.013	.013	.153	.013	.013
Household amenities			.030	.041	.042	.013	.042	.042
Livestock and property			.092	.032	.032	.042	.032	.033
Urban				.074	.074	.032	.075	.075
Province (ref: Sindh)								
Punjab					.073	.074	.073	.074
NWFP					.100	.100	.100	.101
Baluchistan					.108	.107	.107	.107
Parents approve of girls:								
Mobility						.020	.021	.021
Employment							.072	.074
Empowerment								.022

Note: n=8,074 (missing cases deleted listwise)

p<.05, **p<.005, *p<.001*

Table C-3a

Logistic Regression Coefficients of Ever Attending School Among Adolescents in the Military and Civilian Cohorts

	Male Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	Cohort Model 7	Cohort and gender Model 8
Constant	.223***	-.553***	-1.904***	-2.034***	-2.263***	-2.699***	-2.588***	-2.566***
Boy	1.564***	1.713***	1.896***	1.900***	1.942***	1.962***	1.967***	1.757***
Parent's Literacy								
Father is literate		1.450***	1.073***	1.071***	1.076***	1.063***	1.054***	1.054***
Mother is literate		2.727***	1.069***	2.027***	1.875***	1.822***	1.837***	1.854***
Assets								
Quality of dwelling			.293***	.267***	.260***	.266***	.264***	.266***
Household amenities			.047	.046	.107	.093	.092	.093
Livestock and property			.103**	.162***	.139***	.144***	.144***	.147***
Urban				.437***	.452***	.470***	.476***	.474***
Province (ref: Sindh)								
Punjab					.665***	.646***	.658***	.669***
NWFP					-.038	-.023	-.027	-.016
Baluchistan					-.146	-.128	-.140	-.136
Parents approve of girls:								
Mobility						.027	.029	.032
Employment						.345***	.338***	.343***
Empowerment						.073**	.074**	.076**
Military cohort							-.268***	-.438***
Military cohort and male								.552**
-2 log-likelihood	6319.016	5372.520	4809.395	4785.329	4691.052	4658.391	4645.519	4634.079
Nagelkerke R ²	.143	.341	.444	.448	.464	.470	.472	.474
Chi square	549.073	1540.569	2103.693	2127.760	2222.036	2254.697	2267.570	2279.010
p	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly identified (%)	68.0	76.3	78.6	78.9	80.1	80.2	80.1	79.9

Note: n=6,432(missing cases deleted listwise)

*p<.05, **p<.005, ***p<.001

Table C-3b

Error Terms of Ever Attended School Among Adolescents in the Military and Civilian Cohorts

	Male Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	Cohort Model 7	Cohort and gender Model 8
Constant	.035	.047	.103	.107	.122	.149	.151	.152
Boy	.070	.075	.080	.081	.082	.082	.083	.102
Parent's Literacy								
Father is literate		.073	.079	.079	.081	.081	.081	.082
Mother is literate		.252	.262	.262	.263	.264	.264	.265
Assets								
Quality of dwelling			.015	.016	.016	.016	.016	.017
Household amenities			.056	.057	.058	.058	.058	.058
Livestock and property			.036	.038	.038	.038	.039	.039
Urban				.089	.091	.091	.091	.092
Province (ref: Sindh)								
Punjab					.088	.089	.090	.090
NWFP					.116	.116	.116	.117
Baluchistan					.120	.120	.120	.120
Parents approve of girls:								
Mobility						.024	.025	.025
Employment						.087	.087	.087
Empowerment						.026	.026	.026
Military cohort							.075	.090
Military cohort and male								.164

Note: n=6,432 (missing cases deleted listwise)

*p<.05, **p<.005, ***p<.001

Table C-4a

Logistic Regression Coefficient of Ever Attended School Among Female Adolescents in the Military and Civilian Cohorts

	Cohort Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	MiltXMob Model 7	MilXEmpl Model 8	MilXEmpo Model 9
Constant	.354***	-.392***	-1.589***	-1.803***	-2.051***	-2.094***	-2.097***	-2.099***	-2.096***
Military	-.339***	-.357***	-.365***	-.374***	-.453***	-.475***	-.476***	-.475***	-.475***
Parent's Literacy									
Father is literate		1.383***	1.042***	1.045***	1.064***	1.055***	1.061***	1.061***	1.063***
Mother is literate		2.694***	2.064***	2.007***	1.815***	1.740***	1.753***	1.750***	1.751***
Assets									
Quality of dwelling			.285***	.244***	.233***	.243***	.243***	.244***	.243***
Household amenities			.028	.025	.111	.088	.086	.086	.085
Livestock			.029	.127*	.082*	.093*	.094*	.094*	.093*
Urban				.692***	.738***	.760***	.761***	.757***	.785***
Province (ref: Sindh)									
Punjab					.898***	.890***	.890***	.889***	.888***
NWFP					-.023	-.016	-.010	-.011	-.011
Baluchistan					-.266	-.242	-.236	-.246	-.246
Parents approve of girls:									
Mobility						.136**	.203**	.206***	.208***
Employment						.158***	.156**	.127*	.136*
Empowerment						.142**	.144**	.145*	.105
Interaction									
MilitaryXmobility							-.167	-.171	-.180
MilitaryXemployment								.075	.055
MilitaryXempowerment									.105
-2 log-likelihood	4428.576	3721.615	3311.345	3267.137	3148.722	3107.525	3104.526	3102.566	3102.566
Nagelkerke R ²	.009	.270	.397	.410	.443	.454	.455	.455	.456
Chi square	21.760	728.720	1138.991	1183.199	1301.613	1314.608	1332.834	1332.834	1332.834
p	.000	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly classified (%)	55.5	69.7	74.2	74.5	75.5	76.7	76.5	76.4	76.4

Note: n=3,764 (missing cases deleted listwise)

*p<.05, **p<.005, ***p<.001

Odds ratios are standardized for mobility, employment, and empowerment

Table C-4b

Error Terms of Ever Attended School Among Female Adolescents in the Military and Civilian Cohorts

	Cohort Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	MiltXMob Model 7	MilXEmpl Model 8	MilXEmpo Model 9
Constant	.045	.058	.121	.127	.148	.151	.151	.151	.151
Military	.073	.081	.088	.088	.091	.092	.092	.092	.092
Parent's Literacy									
Father is literate		.083	.090	.091	.094	.094	.094	.094	.094
Mother is literate		.262	.274	.274	.276	.277	.277	.277	.277
Assets									
Quality of dwelling			.017	.018	.019	.019	.019	.019	.019
Household amenities			.060	.061	.063	.063	.063	.063	.063
Livestock			.043	.045	.047	.047	.047	.047	.047
Urban				.104	.107	.108	.108	.108	.108
Province (ref: Sindh)									
Punjab					.108	.110	.110	.110	.110
NWFP					.141	.142	.143	.143	.143
Baluchistan					.153	.154	.154	.154	.154
Parents approve of girls:									
Mobility						.045	.059	.059	.059
Employment						.045	.045	.057	.057
Empowerment						.046	.046	.046	.058
Interaction									
MilitaryXmobility							.091	.091	.092
MilitaryXemployment								.075	.092
MilitaryXempowerment									.094

Note: n=3,764 (missing cases deleted listwise)

*p<.05, **p<.005, ***p<.001

Table 7.5a

Odds Ratios of Ever Attended School Among Male Adolescents in the Military and Civilian Cohorts

	Cohort Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	MiltXMob Model 7	MilXEmpl Model 8	MilXEmpo Model 9
Constant	6.276***	2.992***	.642*	.699	.589	.678	.678	.675	.669
Military	.899	1.011	1.152	1.168	1.171	1.169	1.159	1.174	1.198
Parent's Literacy									
Father is literate		6.217***	3.755***	3.804***	3.831***	3.841***	3.857***	3.857***	3.878***
Mother is literate		25.719**	11.651**	12.135**	12.374**	12.088**	12.118**	12.118**	12.173**
Assets									
Quality of dwelling			1.352***	1.38***	1.373***	1.379***	1.379***	1.379***	1.383***
Household amenities			1.240	1.231	1.259	1.261	1.258	1.258	1.249
Livestock			1.317***	1.262**	1.262**	1.259**	1.260**	1.260**	1.262**
Urban				.727	.727	.695*	.696*	.696*	.687*
Province (ref: Sindh)									
Punjab					1.406*	1.391*	1.392*	1.392*	1.386*
NWFP					1.330	1.334	1.338	1.338	1.325
Baluchistan					1.131	1.130	1.130	1.130	1.131
Parents approve of boys:									
Mobility						.970	1.036	1.036	1.025
Employment						.198	.199	.179	.177
Empowerment						1.063	1.064	1.064	1.211
Interaction									
MilitaryXmobility							.902	.902	.917
MilitaryXemployment								1.175	1.193
MilitaryXempowerment									.823
-2 log-likelihood	1811.275	1560.553	1411.462	1407.875	1402.887	1306.610	1390.031	1396.031	1394.119
Nagelkerke R ²	.001	.192	.296	.298	.302	.306	.306	.306	.308
Chi square	.720	251.442	400.533	404.120	409.108	415.485	417.876	415.965	417.876
p	.396	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly classified (%)	85.8	85.8	86.2	86.5	86.1	86.2	86.4	86.4	86.3

Note: n=2,668 (missing cases deleted listwise)

*p<.05, **p<.005, ***p<.001

Odds ratios are standardized for mobility, employment, and empowerment

Table 7.5b

Regression Coefficient of Ever Attended School Among Male Adolescents in the Military and Civilian Cohorts

	Cohort Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	MiltXMob Model 7	MilXEmpl Model 8	MilXEmpo Model 9
Constant	1.837***	1.096***	-.444**	-.359	-.529	-.388	-.388	-.393	-.402
Military	-.107	.011	.142	.155	.158	.157	.147	.181	.181
Parent's Literacy									
Father is literate		1.827***	1.323***	1.336***	1.343***	1.346***	1.350***	1.350***	1.355***
Mother is literate		3.247**	2.455**	2.496**	2.516**	2.492**	2.495**	2.495**	2.499**
Assets									
Quality of dwelling			.302***	.324***	.317***	.321***	.322***	.322***	.324***
Household amenities			.215	.208	.230	.232	.229	.229	.223
Livestock			.275**	.233**	.232**	.230**	.231**	.231**	.232**
Urban				-.318*	-.318*	-.363*	-.363*	-.363*	-.376*
Province (ref: Sindh)									
Punjab					.341*	.330*	.330*	.330*	.326*
NWFP					.285	.288	.291	.291	.281
Baluchistan					.123	.122	.122	.122	.123
Parents approve of boys:									
Mobility						-.030	.035	.035	.024
Employment						-1.617	-1.614	-1.722	-1.732
Empowerment							.062	.062	.192
Interaction									
MilitaryXmobility							-.103	-.103	-.086
MilitaryXemployment								.161	.177
MilitaryXempowerment									-.194
-2 log-likelihood	1811.275	1560.553	1411.462	1407.875	1402.887	1306.610	1390.031	1396.031	1394.119
Nagelkerke R ²	.001	.192	.296	.298	.302	.306	.306	.306	.308
Chi square	.720	251.442	400.533	404.120	409.108	415.485	417.876	415.965	417.876
p	..396	.000	.000	.000	.000	.000	.000	.000	.000
Cases correctly classified (%)	85.8	85.8	86.2	86.5	86.1	86.2	86.4	86.4	86.3

Note: n=2,668 (missing cases deleted listwise)

*p<.05, **p<.005, ***p<.001

Odds ratios are standardized for mobility, employment, and empowerment

Table 7.5c

Error Terms of Ever Attended School Among Male Adolescents in the Military and Civilian Cohorts

	Cohort Model 1	Parent's Literacy Model 2	Assets Model 3	Urban Model 4	Province Model 5	Patriarchy Model 6	MiltXMob Model 7	MilXEmpl Model 8	MilXEmpo Model 9
Constant	.077	.086	.178	.184	.205	59.645	59.716	65.788	65.780
Military	.126	.132	.139	.140	.140	.141	.141	165.262	165.262
Parent's Literacy									
Father is literate		.177	.185	.186	.187	.187	.187	.187	.187
Mother is literate		1.009	1.016	1.016	1.018	1.018	1.018	1.018	1.019
Assets									
Quality of dwelling			.032	.034	.035	.035	.035	.035	.035
Household amenities			.177	.176	.179	.179	.179	.179	.179
Livestock			.069	.072	.072	.073	.073	.073	.073
Urban				.168	.169	.171	.171	.171	.172
Province (ref: Sindh)									
Punjab					.159	.163	.163	.163	.163
NWFP					.227	.228	.228	.228	.228
Baluchistan					.208	.209	.209	.209	.209
Parents approve of boys:									
Mobility						.075	.119	.119	.120
Employment						714.656	715.501	1823.462	1816.529
Empowerment							.067	.067	.115
Interaction									
MilitaryXmobility							.149	.149	.150
MilitaryXemployment								1986.450	1980.148
MilitaryXempowerment									.140

Note: n=2,668 (missing cases deleted listwise)

* $p < .05$, ** $p < .005$, *** $p < .001$

Odds ratios are standardized for mobility, employment, and empowerment

VITA

TALAT AZHAR

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Ph.D. Dual-degree program in Education Theory and Policy and Comparative and International Education. The Pennsylvania State University, 2009.

MBA: The Pennsylvania State University, 1997.

Master of Science in Architecture: The Pennsylvania State University, 1985.

Graduate study in Architecture and Urban Design: University of California, Los Angeles (UCLA), Rotary Foundation Scholarship for International Understanding, 1983.

Bachelor of Architecture: The NED University, Karachi, Pakistan, 1981.

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Senior Market Research Manager, Penn State Outreach, The Pennsylvania State University, 2000-present.

Marketing Research Associate, Penn State Outreach, The Pennsylvania State University, 1997-2000.

Project Manager, Design Group AE, State College, Pennsylvania, 1985-87.

Project Manager, Rizki and Co., Karachi, Pakistan, 1981-83.

EDTHP497/CI ED497: *Global Feminist Perspectives in Education*, The Pennsylvania State University, Fall 2007.

ARCH 441: Architectural Design Analysis, Assistant Professor, College of Arts and Architecture, The Pennsylvania State University, 1991-1993.

Visiting Instructor, NED University of Engineering and Technology, Karachi, Pakistan, 1981-1983.

Papers and Presentations

Effects of Patriarchy and Militarization on the Education of Women: A Case of Pakistan. American Educational Research Association, San Diego, CA, 2009.

Education Denied. Invited speaker, Centre County Reads, State College, PA, 2008.

The New Adult Learner. Midwestern Education Research Association, Columbus, OH, 2008.

Women at the Nexus of Poverty and Illiteracy. Comparative and International Education Society, Baltimore, MD, 2007.

Barriers to Access: The Case of South Asia. Midwest Comparative and International Education Society, regional, Michigan State University, Lansing, MI, 2005.

Colors of a Culture. Invited speaker, American Association of University Women, State Convention, Pittsburgh, PA, 2002.

Research Methods. Invited speaker for graduate course in Architecture. The Pennsylvania State University, April 2001.

Getting it Right: Focused Data Collection Through Surveys, (with Babs Bengtson). Pennsylvania Society of Association Executives Annual Convention, Harrisburg, PA, 2000.

Needs Assessment and Evaluation: Are We Practicing What We Preach (with Jeri Childers). Adult Education Research Conference, State College, PA, 2000.

Winning Design Entry, International Small Home Design Competition, 1995 (with Jawaid Haider). *Small House Designs*, Pawnee, Vermont: Storey Publications, 1997.

Evanston Public Library Design Competition (with Jawaid Haider). Design entry in Uddin, M. S. *Composite Drawing: Techniques for Architectural Design Presentation*, McGraw Hill, 1996.

Children's Museums: Critical Issues in Architectural Design (with Jawaid Haider) in Mary Maher (ed.) *Resource Guide for Start-Up Youth Museums*. Washington DC: American Association of Youth Museums, 1996. This article was first published in *Hand to Hand*, v8, n3, Fall 1994.

Professional Memberships

American Educational Research Association (AERA)

American Association of University Women (AAUW)

Comparative and International Education Society (CIES)

Council on Accelerated Learning (CAP)

Market Research Association (MRA)

Midwestern Education Research Association (MWEREA)