

UNIVERSIDAD SAN FRANCISCO DE QUITO

MASTERS IN PUBLIC HEALTH

**WORKING TOWARDS EMPOWERMENT & GENDER EQUALITY IN THE
RURAL ANDES OF ECUADOR.**

Knowledge, Attitudes & Practices
of Quichua women from Quitugo, Morochos & San Martin
communities in relation to social, economical and health development in the high rural
Andes of Imbabura, Ecuador.

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DANA PLATIN

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SUMMARY

Throughout the world, girls are often treated as inferior and are socialized to put themselves last, thus undermining their self-esteem. Discrimination and neglect in childhood can initiate a lifelong downward spiral of deprivation and exclusion from the social mainstream.

The percentage of girls enrolled in secondary school remains significantly low in many countries. Girls are often not encouraged or given the opportunity to pursue scientific and technological training and education, which limits knowledge they require for their daily lives and future employment opportunities. Girls are less encouraged than boys to participate and learn about the social, economic and political functioning of society, with the result that they are not offered the same opportunities as boys to take part in the decision-making process.

Existing discrimination against the girl child in her access to nutrition and physical and mental health services endangers her current and future health. An estimated 450 million adult women in developing countries are stunted as a result of childhood protein-energy malnutrition (5).

The full and equal participation of women in political, economic, social and cultural life has still not been obtained on a worldwide level.

There is a need to ensure that a woman's lifecycle would not become a vicious cycle, where the evolution from childhood to adulthood would be blighted by fatalism

and a sense of inferiority. Only through the active involvement of girls, who are at the root of the lifecycle, would it be possible to initiate a movement for change and betterment. In fact, if the platform for action was to be an agenda for change and advancement of women, it could only be meaningful if it placed the human rights of girls at its core. (IBID)

This following study presents the research results of 147 Indigenous Ecuadorian girls and women whose reality is quite similar to many women in the under developed and developing world. The Quichua, Ecuadorian women were questioned on topics that were related to individual political, economic, social and cultural participation. The study was initiated to identify *what third world women think* to be able to uncover their personal perceptions and gain a greater understanding of their realities.

The objectives of this study were to;

- * Design an instrument which would contribute to the public health community to delve deeper to better comprehend women's knowledge, attitudes and practices toward pertinent subjects in their social, economical and health development.

- * To research social and demographic factors that play a role in favorable and unfavorable knowledge, attitude and practice responses.

- * To present research results from target population's knowledge, attitudes and practices towards: (1) education, (2) employment, (3) gender issues, (4) self-esteem,

(5) domestic work, (6) women and children's rights, (7) domestic violence, (8) leadership and female participation, (9) sexual education, (10) discrimination.

This study was a descriptive, cross-sectional study in 3 Quichua communities within the Cotacachi area in the Imbabura province of Ecuador. The sample included 147 women between the ages of 11 and 50 from the three communities of Quitugo, San Martin and Morocho. The instrument involved was a quantitative questionnaire consisting of 49 questions related to social and demographic topics. Surveys were applied randomly in three different communities within the Cotacachi canton to roughly 50 women in each community to have a solid representation of the majority of female community members. Results were analyzed and presented through the SPSS 6.0, 6.1 program based upon socio-demographic backgrounds, knowledge, attitudes and practice responses indicating frequencies, trends and percentages, favorable end score responses, correlation analysis, ANOVA analysis and a multiple regression analysis.

Women were found to lack favorable knowledge and practices in areas of education, women's rights, children's rights, domestic abuse and reproductive health. Women were found to have had favorable attitudes towards self-esteem, non-gender discrimination, female participation and leadership.

It was concluded that although women experienced poor social and demographic conditions that that did not impact their attitudes unfavorably. It was discovered that even living below the poverty line those women were proud of being female and Indigenous, indicating fair self-esteem. It was also concluded that

informal education and small business cooperatives could be beneficial to these populations and could aid in the increase of self-esteem amongst the women, offering them economic alternatives. It was also concluded that outreach programs be implemented in the three communities on topics of reproductive health, social issues and literacy classes.

This present thesis document has been revised and approved by:

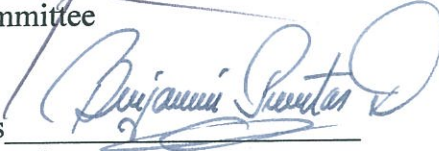
Dr. Marco Fornasini
Thesis Director



Dr. Fernando Ortega
Member of thesis committee



Dr. Benjamin Puertas
Member of thesis committee



Final Grade: _____

A

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1. INTRODUCTION

" The state of a women's health is indeed completely tied up with the culture in which she lives and her position within it as well as in the way she lives her life as an individual." (1)

A culture that is unsupportive of women sets the stage of her health. Our bodies are influenced and actually structured by our beliefs. We inherit many of our beliefs from our history, culture, family and circumstances of upbringing (IBID). Scientific studies conducted by Leonard Sagan, a medical epidemiologist, underscores this and shows that social class, education, life skills and cohesiveness of family and community are key factors, however, education has been shown to be the most important. A review of all major epidemiological data on health makes clear that the major determinants of health are not immunization, diet, water supply or antibiotics. In fact, dramatic decline in death rates from infectious disease earlier in this century began long before the routine use of penicillin and antibiotics. Hope, self-esteem and education are the most important factors in creating health daily, no matter what our background or the state of health in the past (2).

1.1 Problem assessment

Throughout the world women and girls face discrimination, neglect, poverty and violence. The oppression and exploitation of indigenous women began back during the Spanish conquest and continues today. Indigenous women experience most severely the tyranny of economic, social and political oppression (3).

Throughout the developing world, women are prevented from full participation in their social development and continue to be trapped into "traditional" roles and never growing and progressing to their maximum potential. Many women in rural regions lack self-confidence and feel less important than men. Factors that influence the self-esteem of rural women include culture, education, and interaction with others outside of the community and the ability to earn an income.

Many rural communities lack access to adequate water supplies and proper sanitation facilities. Women as the primary water carriers and users are in constant contact with polluted water, increasing their vulnerability. In the cold climate of high altitude regions, the body metabolizes food faster, so people need higher-calorie diets. Since females often have less access to household resources, women and girls are at a greater risk of hunger and poor nutrition (IBID).

Health remains a neglected issue in rural development. While hospitals are accessible in some areas, rural women usually have less access to medical care, family planning or female doctors (IBID). In Ecuador, rural women experience similar

barriers in which geography, language and finance limit them from receiving preventative and curative health care.

While the number of girls attending school in rural areas is increasing, the enrollment is considerably lower than of boys. But the enrollment of girls in school does not guarantee their attendance. Frequently, the girl's mothers, who require their help for childcare and domestic chores, are forced to take them out of school (4).

The persistence of social attributes and prejudices against girls and women continues to raise considerable concern worldwide. Females are often neglected in their access to nutrition, health care and education. There are many organizations such as the United Nations Children's Fund (UNICEF) that aim to promote the equal rights of women and girls to support their full participation in the political, social and economic development of their communities (5). There are organizations out there working on these problems but the indicators still demonstrate disproportionate rates for women of the world between the more powerful countries and the developing countries of the world.

In the rural Andes of Ecuador, there are also trends matching those of rural women in other developing countries of the world. In Ecuador many girls and women are deprived of education, good health, employment and equality. Going by vital statistics and general indicators we are given a clearer idea of the female lifestyle in the rural mountainous communities of Ecuador. The infant mortality rate in the year 2000 for all of Ecuador was 19 deaths for every 1,000 live births (10). Unfortunately, the most recent statistic of infant mortality for the *Imbabura* province was in 1990 was

at 65.6 deaths per 1,000 births in the rural areas. The urban infant mortality rate in Imbabura was lower at 31.1 deaths per 1,000 births but still high when comparing to a developed country that could register around 6 deaths per 1,000 live births (6).

In 1999 CEPAR-ENDEMAIN reported that their spouses physically abused 35.4 % of the women living in the rural highlands at one time in their life (7).

According to the United Nations Statistics Division, female unemployment was at 16%, which is high when compared to Switzerland at 3% female unemployment rate (8).

The illiteracy rate in Ecuador for age groups older than 10 years indicated that men rated at 7.3% and women at 9.5%. In the rural areas of the country, men registered at 11.5% and women at 16%. More specifically, in the Imbabura province, 13% of the men are illiterate and 24.3% of the women are illiterate (9).

These are some general indicators giving a brief social and demographic background of these women where later in the theoretical framework, a profound description of women worldwide and locally here in Ecuador will be presented.

1.2 Purpose

To identify the knowledge, attitudes and practices of 147 Cotacachi, Quichua women regarding their participation in social, economical and health development of their communities and themselves.

1.3 Objectives

To design an instrument which would contribute to the public health community to delve deeper to better comprehend women's perceptions toward pertinent subjects in their social, economical and health development. (Health referring not only to the absence of disease yet physical, mental, spiritual and emotional well being).

public health

To research social and demographic factors that play a vital role in favorable knowledge, attitude and practice responses.

public health

To present research results from target population's knowledge, attitudes and practices towards:

Education

Employment

Gender issues

Self-esteem

Domestic work

Women and children's rights

Domestic violence

Leadership and female participation

Sexual education

Discrimination

1.4 Justification

There are few studies done in Ecuador on powerlessness and empowerment of women, especially within rural highlands of Ecuador. This study will combine aspects of public health that are not nearly discussed enough in Ecuador or in its academic institutions. Health, again, referring to the physical, mental, spiritual and emotional well being of an individual and not just the absence of disease is key for public health practitioners to grasp. Here in Ecuador we still have a clinical, curative perspective in which prevention is a brand new idea. The questionnaire was created to eventually view the mind-body connection and how women's perceptions may play a role in their physical health. If discovered that low self-esteem, low income, lack of education and abuse exists... could that contribute to disease? This study will not focus on the physical aspect but rather the social aspect. The results may help the public health community to see what other social factors may be precursors to good or poor health for future investigations. This study will capture the lives of 147 Quichua women of their past, present and future. This document "could" be a basis for future studies researching powerlessness as a risk factor to disease or empowerment as a health enhancing strategy (20). *Powerlessness being defined as; the expectancy or belief that an individual cannot determine the occurrence of outcomes. Empowerment could be defined as; people assuming control over their lives in the context of their social and political environment; they gain a sense of control and purposefulness to exert political power as they participate in the democratic life of their community for social change (IBID).

1.5 Hypothesis 1

Does favorable knowledge, attitudes and practice responses depend on education, income and young age?

H1- variable 1 does make a difference in variable 2.

H0- variable 1 does not make a difference in variable 2.

Hypothesis 2

Do favorable attitude responses depend on educational level, income and younger age?

H1- variable 1 does make a difference in variable 2.

H0- variable 1 does not make a difference in variable 2

2. THEORETICAL FRAMEWORK

2.1 Indicator comparison of women in developed and developing countries.

In order to measure development progress we need a working set of core indicators. Such general indicators are seen in the following tables. While reviewing data from some of the world's most developed countries and comparing them against South Americas Andean nations; we are able to grasp a better idea of the slower rate of development in certain countries. The indicators are inter-related and should be seen as a whole. They constitute a core set reflecting key aspects of economic and social well being not just representing nations but more specifically the women who live within these boundaries.

Comparing indicators from more developed nations against lesser-developed nations, we see what determines positive social, economic and health development. This framework provides a general basis of comparison between nations, and rural - versus urban-based women in Ecuador. Comparisons between Ecuadorian women and women from developed countries are provided to demonstrate the extreme disparities between these groups. The purpose of this comparative analysis is to examine possible areas of development for these impoverished women.

The maternal mortality rate (the total number of maternal deaths in a given year from pregnancy or up to 40 days after delivery for every 100,000 births) in a nation like Canada in 1995 were 6 deaths per 100,000 births. Comparing that with Bolivia, a developing country, the maternal mortality rate in 1995 was 550 per 100,000 births, which indicates a great difference between the two nations (8).

number In the year 2000, Belgium registered a total of 4 deaths per children (under the age of one) per 1,000 born alive. In that same year Peru registered 33 deaths per 1,000 live births (IBID). Infant mortality rate is an approximation of the number of deaths per 1,000 children born alive who die within one year of birth.

The child mortality rate for children under 5 years of age are also calculated for every 1,000 live births and Switzerland in 2000, registered 4 deaths per 1,000 live births under the age of five. Bolivia in the same year registered 80 deaths per 1,000. We are able to see a trend here in which there are extreme gaps between the developed and underdeveloped nations concerning vital statistics (IBID).

per: In Switzerland, also in the year 2000 they registered their female unemployment rate at 3.1%. In 1998 Ecuador registered their female unemployment rate at 16%. Unemployment rate would be defined as the proportion of the labor force that is unemployed. The unemployed are persons who are currently without work, who are seeking or have sought work recently and who are currently available for work. The base for these statistics is the labor force (the economically active portion of the population), not the total population (IBID).

emph: School life expectancy for females in Australia in 2000 was an expected 16.8 years, in the same year Colombia was 10 years but combining male and female populations. School life expectancy represents the expected number of years of schooling that will be completed; including years spent repeating one or more grades (8a).

Life expectancy at birth is an overall estimate of the expected average number of years to be lived by a newborn. Life expectancy at age 60 is the additional number of years expected to be lived by a woman or man who has survived to age 60. The life expectancy rate at birth for females estimated from 2000-2005 in Peru was 72 years of age, Sweden 83 years of age (IBID).

Another interesting indicator presented in the following tables were Internet users per 100 people. With these numbers we can gain a better idea of the isolation certain countries may experience or the surplus of information that they may be able to access. In 2001 the United States registered that 49 out of every 100 persons had Internet access. In that same year Ecuador registered that every 2 out of every 100 persons had internet access (8).

In 2000 the income and economic activity per capita in Canada was \$22,778 (U.S dollars), in Colombia in that same year it was \$1,930. GDP is the total unduplicated output of economic goods and services produced within a country as measured in monetary terms according to the United Nations System of National Accounts (8).

Below are statistics on illiteracy throughout the world, which also places an emphasis on Andean countries and the illiteracy problems that they continue to face and the gender gap, involved.

Table 2.1.1 Illiteracy rates in developing and under developed nations.

Country/region	Illiterate	
	(% of women 15 years and older)	(% of men)
World	31%	17%
Developing countries	34%	29%
Under developed countries	66%	37%
Latin America and the Caribbean	13%	11%
Colombia	8%	9%
Ecuador (UNESCO 1995-99)	14%	9%
Ecuador (SIISE 1999)	12.8%	8.8%
Peru	11%	4%
Bolivia	22%	8%

(15) Unicef- Estado Mundial de La Infancia 2001, *Indicadores de comparacion internacional*, Siise-analfabetismo Inec, Encuestas de condiciones de vida 2001, retrieved from web edition at <http://www.siise.gov.ec>

In Table 2.1.1 we are able to grasp how literacy rates are higher amongst women than men throughout the world. Nearly 67% of the women 15 years and older in underdeveloped countries are illiterate compared to 37% of the men. More specifically in Ecuador, UNESCO registered that 14% of the female population 15 years and older were illiterate compared to 9% for the male population. Being illiterate would refer to those people who can not read or write and those who only obtained a third grade education would be classified into this category.

The following information presents indicators of social development, economic well-being and health for women in developed and developing nations. These indicators show the steep gap placed between nations and plants a hypothesis as to why women continue to live in these conditions. The purpose of this document is to identify women's knowledge, attitudes and practices on similar subjects and to gain a better understanding on how social and demographic background plays a role on their current situation

Table 2.1.2 Women's health, economic and social indicators from developed countries

Countries	Australia	Belgium	Canada	Denmark	France	Germany	New Zealand	Sweden	Switzerland	U.S.A
Maternal mortality rate per 100,000 births (1995)	6	8	6	15	20		1	8	8	12
Children under 5 mortality rate per 1,000 births (2000)	6	6	6	5	5	5	6	4	4	8
Female unemployment rate (2000)	6.6%	8.7%	6.7%	6.6% (1998)	11.9%	8.3%	5.8%	4.3%	3.1%	4.1%
Income and economic activity per capita GDP (U.S.dollars) (2000)	\$20,298		\$22,778	\$30,141 (1998)	\$21,848					
Female educational school life expectancy (1999,2000)	16.8	16.0	15.3	16.0	15.7					15.7
Female life expectancy at birth (2000-2005)	82	82	82	79	83	81	81	83	82	80
Female life expectancy at 60 years (2000-2005)	25	25	24	22	26	24	24	25	25	24
Infant mortality rate 0-1 per 1,000 births (2000-2005)	5	4	5	5	5	4	6	3	4	7
Internet users per 100 population (2001)	37.23	27.99	43.53	44.72	26.38	36.43	28.07	51.63	40.40	49.95

(8) United Nations Statistics Division. Indicators Website (<http://www.un.org/Dept/unsd/social/htm>)(accessed on December 26,2001)

Table 2.1.3 Women's health, economic and social indicators from developing Andean countries.

Countries Indicators	Argentina	Bolivia	Chile	Colombia	Ecuador	Peru
Maternal mortality rate per 100,000 births (1995) (n)	85	550	33	120	210	240
Children under 5 mortality rate per 1,000 births (2000)	21	80	12	30	32	50
Female literacy rates (15-24 years)	98.9%	94.4%	99.2%	97.9%	97.3%	95.8%
Female unemployment rate (2000)	16.4%	20.3% (1997)	9.0%		16.0% (1998)	7.5%
Income and economic activity per capita GDP (U.S.dollars) (2000)	\$7,676	\$995	\$4,669	\$1,930	\$1,088 (1998)	
Female educational school life expectancy (1999,2000)	15.1 yrs.	9.9 yrs. (female & male 1990)	13.4 yrs. (1990)	10.0 (male & female 1995)		
Female life expectancy at birth (2000-2005)	78	65	79	75	74	72
Female life expectancy at 60 years (2000-2005)	22	18	22	21	21	20
Infant mortality rate (2000-2005)	18	51	11	37	37	33
Internet users per 100 population (2001)	8	1.44 (2000)	20.02	2.70	2.54	11.80

(8) United Nations Statistics Division. Indicators Website (<http://www.un.org/Dept/unsd/social/htm>)(accessed on December 26,2001)

2.2 Women and gender in Ecuador.

In Ecuador, we continue to see a struggle towards development and the following indicators will provide the evidence. Comparing the developed nations with the Andean underdeveloped nations we will see that vital statistics, general indicators and social and economic indicators are still on the rise especially here in Ecuador, more specifically....rural Ecuador. Social and demographic factors play a role in the outcome of each individual and we will be able to conclude that the educational rate, income and health conditions are extremely low in Ecuador. Gender also plays a great role in development and rural feminine Ecuador continues to face problems with education, gender, employment and health. For example; even though the fertility rate has substantially lowered itself, the reduction has not been uniform. For example, women with lower educational rates continue to have higher fertility rates. (An average of 6.2 children compared to 2.1 for women with higher educational rates) (11). These rates affect mostly rural women. The access to contraceptives is difficult especially amongst poorer populations. According to ENDEMAIN 1994, 70% of women with lower educational rates stated that they wished they could have fewer children than they did. In Ecuador 25% of its women do not receive prenatal care, check ups and treatment during their pregnancies. Prenatal attention in Ecuador is inadequate and the amount of pregnancies and maternal mortality rates are extremely high. Between 1992-1997 the maternal mortality rate was 159 deaths per 100,000 births. The reproductive health programs tend to exclude the men resulting in fewer trends of contraceptive use amongst men and probably increasing sexually transmitted diseases and or HIV virus or AIDS. Only 3% of men use contraceptives and only .3% are sterilized (14). Domestic violence is also a crucial topic here in Ecuador and

continues to be taken out on women and children. Between 42% and 60% of women are victims of physical violence in their homes.

In terms of education, we find that girls and boys are treated differently in the educational system. Resulting from this we witness gender socialization within the school systems and outside of. Through this young girls tend to make different choices than the boys, decisions which affect them in future employment, social and well-being opportunities. For the adolescents, poverty has forced them to lose their childhood and start working at a very young age, which in turn has limited their educational opportunities and the acquisition of human capital. Around 44% of young boys drop out of school to work.

The macroeconomic crisis also plays its role in gender and the detainment of social development in Ecuador. During periods women tend to take on the chores of the household all by themselves and an extra job outside of the home to help with an extra income. For men, unemployment threatens their roles as household providers and creates self-esteem problems and higher rates of depression...these could also turn into negative effects and produce violence in the household against the women. In health terms, during crisis, women tend to be more vulnerable than men due to their maternal role. Children in the preschool age (boys and girls) become affected by nutritional deficiencies. There is also a higher probability that the children that come from poorer families will drop out from school to work and help out the family.

In relation to employment, illiterate women have less work opportunities, women also have a more difficult time in committing and commuting to a job because

of their responsibilities in the household. Considering the prior information we are presented with the challenges that Ecuador continues to face. The prior topics have consequences in which efficiency; social well being and equality are put at risk.

On the local level in Ecuador not only do gender inequalities exist yet several inequalities between urban and rural residents. We continue to see inequalities in specific indicators such as vital and educational statistics. To be more specific, again the infant mortality rate in Ecuador in 2001 was 19 deaths per every 1,000 live births (10). The female child mortality rate in the year 2000 was 25 deaths (girls under 5 years) per 1,000 live births (IBID). The maternal mortality rate in 2000 was 80 deaths per 100,000 live births (M.M.R. is calculated as the total number of deaths in a given year from pregnancy up until 40 days after delivery for every 100,000 live births). In 1999 the maternal mortality rate was lower at 67 deaths per 100,000 live births, which also indicates that the economic crisis that the country had been facing is affecting women's health. In the year 2000/2001, Ecuador dollarized their economy and it was evident that one vital statistic such as maternal mortality rate has been on the rise and could continue to increase.

Concerning education, the most updated statistics for net educational rates was in 1999 provided by INEC. According to INEC children aged 6-11 (elementary school) living in rural areas had an 88% registry rate within the school systems. The rate was higher for those children living in urban regions of the country at 93%. As we move on to secondary school or highschool we start to see differences between urban and rural residents. Also, the most updated statistic for the educational rate for 12-17 year olds was from 1997 provided by INEC. Rural boys had registered at 26%

while rural girls had a 25% registry rate in highschool. Compared to urban Ecuadorians, boys registered in highschool were at 64% and girls at 61%. It is evident that there is a gap here between rural and urban youth in Ecuador in educational access. In 1999 INEC also registered the gross educational rate for higher education, meaning university level for 18- 24 year olds with extreme differences between the city and country populations. Only 7% of rural men in Ecuador are registered in universities, while only a mere 5% of rural women was registered in Ecuadorian universities. Comparing that with urban youth, we see that urban men have 34 % inscription rate in the universities, while women have a 27% inscription rate (11).

Table 2.2.1 Educational Rates for Youth Aged 6-24 Comparing Urban and Rural Areas in the Highlands region of Ecuador

Educational rate	Sex	Area	%
Elementary School (6-11 years) 1999	Male	Rural	88%
	Female	Rural	87%
	Male	Urban	93%
	Female	Urban	93%
Highschool (12-17 years) 1997	Male	Rural	26%
	Female	Rural	25%
	Male	Urban	64%
	Female	Urban	61%
University (18-24 years) 1999	Male	Rural	7%
	Female	Rural	5%
	Male	Urban	34%
	Female	Urban	27%

(11) Instituto Nacional Estadística y Censos (INEC) *Censo de poblacion*, Elaboracion INEC-SIISE, <http://www.inec.gov.ec>

Rural Ecuador has a higher registry rate in primary schooling than secondary or university education, in which a higher drop out rate exists from elementary school up through university education.

In 1999 INEC also indicated that Ecuadorian highlands youth had a school life expectancy of 11 scholastic years. School life expectancy being the expected number of years of schooling that will be completed, including years spent repeating one or more grades. Taking this into account we can better comprehend why there are lower registration rates amongst this population. The school life expectancy for the "poor" (poverty according to consumption) was 9 years, which is no more than a middle school education. The "non-poor" was expected to have 13.7 years for their school life expectancy, which is equivalent to a highschool diploma and one year completion at the university level. In 1999 INEC also indicated that 71% of girls aged 6-17 living in the highlands region were not registered for classes due to financial problems (12). A high 68% of the boys were also not registered for financial problems. INEC also registered in 1999 that 22% of highland females aged 10-17 work and do not study. Twenty-one percent of highland boys also work and do not study. Sixty percent of Ecuadorian children live in poverty, 92% of those impoverished children are indigenous and 56% are non-indigenous all aged 0-17 years (12).

It is clear that rural Ecuador is not advancing with urban Ecuador and that there are gender discrepancies and several strategies need to be put into place in order to aid the rural communities in their personal and communal development. We were provided with areas of risk and the specific statistics to give us the facts. The

following study was performed due to the fact that so few investigations have been done on gender in rural communities, especially in Ecuador. The following research and survey were designed in order to further investigate rural female issues and correlate their perceptions with women's social, economic and mental health conditions.

sample included 147 women

communities of Quingón, San

3.2 Selection process

The selection process

chosen off a list with

communities were part of

Quichua communities

Cotacachi County that

randomly chosen off a

process, questionnaire

map of the country

representative from

the potential for live

selected 50 women

other women that fit

3.3 Inclusion and exclusion

Inclusion criteria

age, that they belonged

3. METHODOLOGY

3.1 Type of study

This document is a descriptive, cross-sectional study in 3 Quichua communities within the Cotacachi area in the Imbabura province of Ecuador. The sample included 147 women between the ages of 11 and 50 from the three communities of Quitugo, San Martin and Morochos.

3.2 Selection process

The selection process was random in which 3 out of 11 communities were chosen off a list within the Cotacachi County. Contacts within the eleven communities were pertinent in order to begin any type of investigative research in Quichua communities. Quitugo, Morochos and San Martin, 3 communities within the Cotacachi County that had similar or almost identical demographic backgrounds, were randomly chosen off a list and researched. Through a systemized random selection process, questionnaires were applied to 50 women in the Quitugo community, using a map of the community skipping every other home interviewing one female representative from each household in order to have the fairest representation without the potential for bias. The other two communities of San Martin and Morochos selected 50 women each during mandatory community meetings, interviewing every other woman that fit the criteria until the goal of 50 was reached in each community.

3.3 Inclusion and exclusion criteria

Inclusion criteria required that women were between eleven and fifty years of age, that they belonged to the Cotacachi or Otavalo county for a minimum of three

involved any woman older than fifty years of age or younger than 11 years of age, any woman that was drinking alcohol or appeared drunk, women that were accompanied by their husbands or partners (referring to the actual interview).

3.4 Type of instrument (Survey Index 1)

To implement the study, an instrument was designed to identify the knowledge, attitudes and practices of Quichua women regarding their participation in social development of their communities and themselves. The instrument was a quantitative questionnaire consisting of 49 questions related to social and demographic topics.

3.5 Pilot survey (Index 1^a.)

Originally, a questionnaire was applied in March of 2002 that was qualitative and quantitative which included 5 in depth interviews with peasant women from Otavalo. Through feedback and review from the original March survey, the new quantitative questionnaire was designed as the instrument to be used for the final research. The new "pilot survey" was then applied to 15 women working the Otavalo market from several different communities with similar demographic backgrounds. After reviewing results from the pilot surveys, corrections were made to make "language" more appropriate for the actual instrument used in the following study.

3.6 Survey application & Data collection

In April of 2002 research preparation began in which 2 female community leaders and 1 male community leader were capacitated on how to apply the surveys with the least risk of bias. Sample surveys were applied to other community women

and the interviewers practiced reading each question exactly how the question was worded with out induction and told not to offer aid to responses. After capacitating, investigation began in which 1 female community leader and myself surveyed every other home (out of 70 homes) in the Quitugo community until we reached our goal of fifty women (more than half of the community). Questionnaires were applied to 50 Quitugo women through a systemized random selection process using a map of the community skipping every other home interviewing one female representative from each household in order to have the fairest representation without the potential for bias. In Morochos community support initially came from a male community leader that was rejected by the women and unable to complete the surveys. The few women that answered the first surveys stated they would be more comfortable sharing with another women. Therefore, another female community leader in Morochos was capacitated in proper survey application and then randomly applied the surveys during another mandatory community meeting to 50 women between the ages of 11 and 50. Questionnaires were applied to every other woman who was mandated to attend the meeting until the goal of 50 was obtained. Morochos was also a small community with an average of 70-80 homes. In the San Martin area a female highschool graduate applied the surveys during a mandatory community labor meeting, in which she applied to all women between the ages of 11 and 50 randomly. I chose not to be present during the interview process to avoid the risk of bias and made sure that the surveys were applied randomly to every other woman that was present at the events. Data was collected through the 147 interviews utilizing quantitative questionnaire and later carefully reviewed.

3.7 Statistical analysis

Results were analyzed and presented through the SPSS 6.0. 6.1 program. In the SPSS 6.0, 6.1 program, variables were initially set up to determine frequencies and percentages for socio-demographic indicators. A breakdown of frequency and percentage results from knowledge, attitude and practices was then presented. Certain variables were then recoded in order to analyze results more profoundly. Through SPSS 6.0, 6.1 knowledge, attitude and practice results were recoded as being "favorable" or "unfavorable" and then calculated into end scores. Those scores represented the women as a group and rated their *knowledge, attitudes and practice* responses positively and negatively. Other variables were researched and crossed looking for connections between knowledge with attitude with practices and vice-versa in a crosstabs section. An ANOVA analysis was also applied and multiple regression with method enter looking for interdependence between variables. Findings were deeply analyzed and argued in the discussion section sharing significant findings.

4 RESULTS

The following information fulfills the objective of presenting research results from target population's knowledge, attitudes and practices towards various topics involving their physical, mental, spiritual and emotional well being.

Research results were presented in the following order;

(4.1) Social and demographic information,

(4.2) *Knowledge towards:* women's rights, leadership and reproductive health;

Attitudes towards: education, gender, self-esteem, leadership, and discrimination;

Practices towards: education, employment, income, and sexual education;

(4.3) Favorable end score results for knowledge, attitudes and practices

(4.4) Correlations

(4.5) ANOVA analysis

(4.6) Multiple regression analysis

4.1 Social and Demographic Results Frequencies and Percentages.

The following Tables 4.1.1- 4.1.5 represent group frequencies and percentage results for a general demographics overview. Significant findings indicated that:

In relation to socio-demographic factors, the study demonstrated that all three communities had an average of 5.75 members to each household, a standard deviation of 2.23 with a minimum of 2 people and a maximum of 13 family members. The average age of the women was 32 years old with the youngest being 12 years old and the oldest being 50. Concerning education, the average for the highest obtained level of education was 5.88 years which was extremely low and the minimum was 1 year of education and the highest were 12 years, meaning that not one woman had ever gone on to college for higher education.

Table 4.1.1 Socio-demographic profile on community members from Quitugo, San Martin and Morochos, Ecuador.

Variables	Mean	Std.Dev.	Minimum	Maximum
#Family members	5.75	2.23	2	13
Age	32.30	12.95	12	50
Highest educational level	5.88	2.71	1	12
N total				

In relation to women's civil status within the three communities, the study demonstrated that more than half of the interviewed population was married upon the time of the interview.

Table 4.1.2 Distribution and percentage of civil status of women from Quitugo, Morochos and San Martin.

Civil Status	N	%
Single	38	29.9%
Married	88	59.9%
Divorced	4	2.7%
Separated	3	2.0%
Free union	8	5.4%
Widowed	6	4.1%
N total	147	

In relation to education, this study also indicated that 46.3% of the women had not received any sort of formal education and that 53.7% did attend at least elementary school. Half of the women interviewed had no educational background; meaning 46.3% would be illiterate.

Table 4.1.3. Distribution and percentage of women that attended elementary school from all three communities.

Education	N	%
Attended elementary school	79	53.7%
No education at all	68	46.3%
N total	147	

In relation to employment, the study also discovered that 68.7% of the women were unemployed, it also must be taken into account that 20.4% of this population were students which would not count then as part of the working population, the real rate of unemployment would be at 48.3%, almost half of the population interviewed.

Table 4.1.4. Distribution and percentage of women employed.

Employment	N	%
Employed	46	31.35%
Not employed	101	68.7%
Students	19	20.4%
N total	147	

In relation to income, the investigation indicated that 63% of the women made an income of less than \$20 per week, and that only 4.4% or 2 of the 147 women made more than \$50 per week. This table demonstrated that 63% of the women make an income of only \$80 per month.

Table 4.1.5 Distribution and percentage of weekly income per woman.

Income per week	N	%
\$0-\$10	16	35%
\$11-\$20	13	28.9%
\$21-\$30	4	8.9%
\$31-\$40	6	13.3%
\$41-\$50	4	8.9%
More than \$50	2	4.4%
N total	45	

4.2 Knowledge, Attitudes and Practices Frequencies and Percentages.

4.2.1 Knowledge

The following Table 4.2.1 represents the group frequencies and percentage results for the "knowledge" questions. The most significant findings for the knowledge results were briefly presented below and later analyzed in the discussion section.

Concerning knowledge of women's rights nearly 77% of the women had never heard of women's rights. Considering 46.5% of the women had no formal education it makes sense that there was not positive response to the women's rights question. In relation to children's rights again, a high negative response rate in which 60.5% (more than half) did not know what children's rights were and a low 39.5% were aware of children's rights. Concerning domestic violence more than half of the women (56.5%) did know what domestic violence was which is a bit more than half but a high 43.5% was still not aware. Seventy percent of the women did respond to knowing what rape was and 29.3% did not have a clue as to what rape was. In relation to abuse, or visually witnessing parental abuse, more than half, 58.5% answered yes and 34% no. Fifty-nine percent is extremely high and its interesting how 43.5% of the women did not know what domestic violence was and that 76.5% did not know what women's rights were and that 59% of these women had witnessed abuse at least one time or several times within their homes. Knowledge of leadership or a leader registered at 69.4% unaware of the definition or image of a leader. Knowledge of first menstruation indicated that 65.3% did remember. The objective of this question was not to learn about the exact age but to see if the women actually remembered important moments of their own past. Fifty-one percent did not have a clue as to what it was. Knowledge of remembering the first person that had explained

about menstruation demonstrated that almost 40% stated that the topic was never explained and they were clueless when it happened. Twenty-seven percent of the women were told about menstruation from their mothers. Knowledge of family planning scored weak in which 63.9% had never heard about family planning.

Table 4.2.1 Distribution of Frequency and Percentage Results for *Knowledge Questions*.

Variable	Answer	N	%
Women's rights?	Yes	34	23.7%
	No	113	76.5%
	N total	147	
Children's rights?	Yes	58	39.5%
	No	89	60.5%
	N total	147	
Domestic Violence?	Yes	83	56.5%
	No	64	43.5%
	N total	147	
Rape?	Yes	104	70.7%
	No	43	29.3%
	N total	147	
Parental abuse?	Yes	86	58.5%
	No	51	34.7%
	N total	147	
Leader?	Yes	45	30.6%
	No	102	69.4%
	N total	147	
Remember first menstruation?	12-15 years of age	96	65.3%
	Did not remember	30	20.4%
	N total	126	
Knowledge of menstruation, with first onset?	Yes	57	40.4%
	No	72	51.1%
	N total	129	
First person to explain about menstruation?	Mother	39	26.9%
	It was never explained	55	37.9%
	N total	94	
Knowledge of family planning?	Yes	53	36.1%
	No	94	63.9%
	N total	147	

4.2.2 Attitudes

The following results represent group frequencies and percentage results for the "attitudes" section of this study. Also demonstrating all significant findings for the attitude section.

In relation to primary education and a possible gender preference, women's attitudes responded positively in which 95% believed that boys should go to school and 94% believed that girls should also be educated in elementary school. After completing elementary school, 50.3% of the women's attitudes stated that girls should go on to highschool in order to have better opportunities in their future or to just better themselves as individuals. Forty-eight percent believed that girls at thirteen years of age should work. Eight percent believed that girls should work and study. In relation to the boys and their future plans after elementary school attitudes, 47.6% of the women stated that boys should go on to highschool and 42.9% (almost half) felt they should drop out of school and work. Gender wise there seemed to be a similarity in the answers responding to the continuance of higher education. In relation to gender and possible nutritional preference attitudes, between boys and girls, a positive 87.1% stated that both sexes should be fed equally. Those that felt there should be a preference (12.9%) stated that the younger children should be fed more but did not discriminate between genders. In relation to self-esteem attitudes, 77.6% of the women were proud of being female and of being Indigenous. Also concerning self-esteem 44.5% of the women stated that they believed that the right time to marry should be older than 25 years of age, stating that 25 years is a mature age. Thirty-five percent felt that between 20 and 25 was also an adequate age. Also concerning self-esteem and contentment 93% of the employed women (31%) were content with their

present work situation. Also concerning self-esteem and inner strength attitudes, 57% of the women indicated that they were not fearful of intervening and filing a police report if rape occurred in their community. Considering that Ecuador has very little support for women who are sexually abused this is a high positive response rate. Twelve percent of the women stated that they would never get involved and file a report due to being afraid of the consequences. In relation to female participation and leadership attitudes, 80.3% believed that women should have a "voice" in the decision making process. Nearly 20% did not agree that women should be involved in any form of decision making. Eighty-two percent felt that women can make decisions in the home, 67.3% believed that women should and can make decisions on the community level (community government) and 68.7% believed that women can participate in government affairs. These were all favorable responses but there was still a negative response rate in which thirty-three percent did not agree that women should be involved in governmental affairs, 32.7% did not think women should be involved in community decision making, and 17.7% thought that women should not be allowed to make any decisions in the household. Those women believed that the male figure should only make those decisions. In relation to reproductive health education attitudes, 53.7% believed that sexual education classes were necessary, it was promising that more than half of the women were *pro* sexual education, while 27.9% of the women were against any sort of sexual education lecture. In relation to discrimination and ever feeling discriminated against, attitudes indicated that 40% of the women felt that they had been discriminated against at one point in their life. Of those women, 52.3% stated that they felt they were being discriminated against for being indigenous and 27.3% felt they were discriminated against for being female.

Table 4.2.2 Distribution of frequency and percentage results for *attitudes*.

Variable	Answer	N	%
Boys attending elementary school?	Yes	139	94.6%
	No	8	5.4%
	N total	147	
Girls attending elementary school?	Yes	138	93.9%
	No	9	6.1%
	N total	147	
Girls' future?	High school	74	50.3%
	Work	60	40.8%
	Work and study	12	8.2%
	N total	146	
Boys' future?	High school	70	47.6%
	Work	63	42.9%
	Work and study	14	9.5%
	N total	147	
Nutritional preference between boys and girls?	Yes	19	12.9%
	No	128	87.1%
	N total	147	
Proud to be a woman?	Yes	114	77.6%
	No	33	22.4%
	N total	147	
Proud to be Indigenous?	Yes	114	77.6%
	No	33	22.4%
	N total	147	
Content with current employment?	Yes	40	93%
	No	3	7%
	N total	43	
Appropriate time to marry? (age)	20-25	51	34.9%
	Older 25	65	44.5%
	N total	116	
Rape intervention?	Yes	84	57.1%
	No	18	12.2%
	N total	102	
Can women participate in decision making?	Yes	118	80.3%
	No	29	19.7%
	N total	147	
Women and household decisions?	Yes	121	82.3%
	No	26	17.7%
	N total	147	
Women and community decisions?	Yes	99	67.3%
	No	48	32.7%
	N total	147	
Women and governmental affairs?	Yes	101	68.7%
	No	46	31.3%
	N total	147	
Should sexual education classes be taught?	Yes	79	53.7%
	No	41	27.9%
	N total	120	
Experienced discrimination?	Yes	59	40%
	No	40	27.2%
	N total	99	
For what reasons?	For being;		
	Indigenous	23	52.3%
	Female	12	27.3%

4.2.3 Practices

The following results represent group frequencies and percentage results for the *practice* section of this study, demonstrating significant findings for this section.

Concerning educational practices, 53.7% of the women stated that they did attend elementary school (1-6th grade) and 46.3% indicated that they received not even a first grade education. Those that did not attend were almost half of the group indicating a high illiteracy rate. Concerning low or no educational attendance practices, 54.3% stated that their parents were against sending them to school, 28.6% stated they did not attend for financial problems, 14.3% had to work during their childhood and did not have the opportunity to study. Again in relation to practices and education, 75 out of 147 women received some sort of formal educational training and out of those 75, 14.7% completed only the 3rd grade, 33.3% completed only the 6th grade, 16% completed the 8th grade and 6.7% meaning 5 females actually graduated from highschool. Almost 70% of the women interviewed did not plan on any future educational training. In relation to employment practices, the study also discovered that 68.7% of the women were unemployed, it also must be taken into account that 20.4% of this population were students which would not count then as part of the working population, the real rate of unemployment would be at 48.3%, almost half of the population interviewed. Concerning unemployment, 84% had not sought out employment in the last 7 days because 38.7% were housewives, 20.4% were students, 20.4% stated that they had no one to take care of their children and 6.5% answered that they were tired of looking for employment. Also 31% of the women stated that they work as artisans and 22% work as maids. It was also discovered back in the socio-demographic section that in relation to income practices, 63% of the women

made an income of less than \$20 per week, and that only 4.4% or 2 of the 147 women made more than \$50 per week. This information demonstrated that 63% of the women make an income of only \$80 per month. Concerning household chore practices, 40% of the women indicated that they worked more than 12 hours per day in household chores earning zero income. The other 26.9% of the women stated that worked between 6-11 hours per day in the same chores. Forty-one percent of the women stated that their children aid them in the 12-hour workload. Thirty-one percent stated that they take on the task alone. Concerning practices and sexual education, 62.6% of the women had never attended a sexual education lecture prior.

Table 4.2.3 Distribution of Frequency and Percentage Results for *Practice* Questions.

Variable	Answer	N	%
Attended elementary school?	Yes	79	53.7%
	No	68	46.3%
	N total		147
Why no attendance?	Lack of money	20	28.6%
	Had to work	10	14.3%
	Parent's were against it	38	54.3%
	N total	70	
Highest level of education completed?	3 rd grade	11	14.7%
	6 th grade	25	33.3%
	8 th grade	12	16%
	12 th grade	5	6.7%
Future plans to study?	Yes	35	31.3%
	No	77	68.8%
	N total	112	
Are you employed?	Yes	46	31.3%
	No	101	68.7%
	N total	147	
Main profession?	Artisan	14	31.3%
	Maid	10	22.2%
Weekly income?	N total	24	
	\$0-\$10	16	35.6%
	\$11-\$20	13	28.9%
	\$21-\$30	4	8.9%
	\$31-\$40	6	13.3%
	\$41-\$50	4	8.9%
	More than \$50	2	4.4%
Sought out employment in the last 7 days?	Yes	16	15.4%
	No	88	84%
	N total	104	
Why not?	Housewife	36	38.7%
	No childcare	19	20.4%
	Student	19	20.4%
	N total	93	
Amount of daily hours involved in household chores.	6-12 hours	98	67%
	N total	98	
Who assisits you the most in household chores?	Children	58	41.1%
	Nobody	44	31.2%
	N total	141	
Assisted a sexual education lecture prior?	Yes	34	23.1%
	No	92	62.6%
	N total	147	

4.3 Results from End Score -Favorable Results for Knowledge, Attitude and Practices Responses.

Index 2 represents the answers pertaining to the questions. These questions were scored as being favorable "1", or unfavorable "0" in each section. The purpose in calculating end scores was to be able to measure the women's knowledge, attitude and practice responses positively or negatively. With this information we can better identify women's strengths and weaknesses on their view in personal development which can serve as a base for future studies.

The following results will help to fulfill the objective of researching social and demographic factors that play a vital role in favorable and unfavorable knowledge, attitude and practice responses.

Table 4.3.1 Kscore- favorable answers for knowledge questions

Descriptive

Variable	Mean	Std dev	Minimum	Maximum	N
Kscore	4.63	2.72	0	10	147

Frequencies

Value label	Value	Frequency	%	Valid %	Cum. %
Kscore	0	8	5.4	5.4	5.4
	1	9	6.1	6.1	11.6
	2	18	12.2	12.2	23.8
	3	26	17.7	17.7	41.5
	4	16	10.9	10.9	52.4
	5	18	12.2	12.2	64.6
	6	9	6.1	6.1	70.7
	7	15	10.2	10.2	81.0
	8	13	8.8	8.8	89.8
	9	10	6.8	6.8	96.6
	10	5	3.4	3.4	100.0
Total		147	100.0	100.0	

Valid cases 147

Missing cases 0

In Table 4.3.1 The kscores or knowledge end score frequencies indicate that the women scored very poorly on having favorable answers to the knowledge questions, meaning out of a possible maximum score of 10 the women as a whole group got an average of 4.63.

Five percent of the women did not answer one knowledge question favorably. 6.1% only answered one question favorably. 12.2% answered 2 questions favorably. 17.7% only answered 3 questions favorably. Only 3.4% (5) women scored a 10 on the knowledge section of the survey. This is extremely low.

Table 4.3.2 Ascore- Favorable Answers for Attitude Questions

Descriptive

Variable	Mean	Std dev	Minimum	Maximum	N
Ascore	11.0	3.70	2	17	147

Value label	Value	Frequency	%	Valid %	Cum. %
	2	2	1.4	1.4	1.4
	3	3	2.0	2.0	3.4
	4	4	2.7	2.7	6.1
	5	3	2.0	2.0	8.2
	6	9	6.1	6.1	14.3
	7	11	7.5	7.5	21.8
	8	6	4.1	4.1	25.9
	9	10	6.8	6.8	32.7
	10	14	9.5	9.5	42.2
	11	13	8.8	8.8	51.0
	12	6	4.1	4.1	55.1
	13	18	12.2	12.2	67.3
	14	16	10.9	10.9	78.2
	15	23	15.6	15.6	93.9
	16	7	4.8	4.8	98.6
	17	2	1.4	1.4	100.0
Total		147	100.0	100.0	

Valid cases-147

Missing cases-0

Table 4.3.2 indicated the end score frequencies for the "attitudes" section which proved to be more favorable than the knowledge section. The women as a whole group got an average of 11 out of a maximum score of 17 on their attitudes being favorable. But only 1.4-(2) of the women scored a complete 17 out of 17 but in general the women show an improving trend in their "attitude" responses.

Table 4.3.3 Pscore- Favorable Answers for Practice Questions.

Descriptive

Variable	Mean	Std dev	Minimum	Maximum	N
Pscore	2.01	1.87	0	7	147

Frequencies

Value label	Value	Frequency	%	Valid %	Cum %
Pscore	0	37	25.2	25.2	25.2
	1	40	27.2	27.2	52.4
	2	17	11.6	11.6	63.9
	3	20	13.6	13.6	77.6
	4	12	8.2	8.2	85.7
	5	13	8.8	8.8	94.6
	6	7	4.8	4.8	99.3
	7	1	.7	.7	100.0
Total		147	100.0	100.0	

Valid cases-147

Missing cases-0

Table 4.3.3 indicated the end score frequencies for the "practices" section. The overall pscore proved to be weak in favorable responses. The average score for the women in this section was a 2 and the lowest score was a 0 and the highest rating at 7. These results were extremely shocking seeing that 25% of the women got a 0 in favorable practices. Twenty-seven percent scored a 1. So 52% (half of the women) scored between a 0 and 1 in their practices which is alarming. Less than 1% scored a 7 which was the highest score registered even though the maximum score that they could have obtained was an 11. Not one woman registered a perfect score of 11 indicating favorable practices.

4.4 Correlations

The next section results of the crosstabs share correlations of knowledge with attitudes with practices and to see if there was any significance or at least any types of trends. The most pertinent information or findings according to significance is presented in the following.

Table 4.4.1 Knowledge of reproductive health by educational background

Question #46 Do you know what family planning is? (Knowledge) "Planfam"
Question # 6 Did you go to elementary school? (Practices) "Primaria"

PLANFAM			
PRIMARIA	Yes	No	Row total
Yes	42 53.2 79.2	37 46.8 39.4	79 53.7
No	11 16.2 20.8	57 83.8 60.6	68 46.3
Column Total	53 36.1	94 63.9	147 100.0
Pearson Chi-2 P Value ,0000			

In Table 4.4.1, knowledge of family planning was being compared to each individual's educational background, meaning if the women attended elementary school or not, only until 6th grade. The P value was, 0000 showing significance which indicates that women who did have a "basic" educational background did have an awareness of family planning. Fifty-three percent of the women that went to elementary school knew what was family planning. Eighty-four percent that did not go to elementary school did not know what family planning was.

Table 4.4.2 Knowledge of leader by attitudes of female government participation

Question # 38 Do you know what a leader is? (Knowledge)"LIDER"
 Question #40(c) Do you think women could participate in government? (Attitudes)
 "GOB"

LIDER		GOB		Row total
	Yes	No		
Yes	42	3		45
	93.3	6.7		30.6
	41.6	6.5		
No	59	43		102
	57.8	42.2		69.4
	58.4	93.5		
Column Total	101	46		147
	68.7	31.3		100.0
Pearson Chi-2		P value ,00002		

In Table 4.4.2 Knowledge of the definition of a "leader" was crossed by attitudes of female participation in government. The P Value was 0,0002 which shows significance indicating that there is a strong connection between knowledge and attitudes in this table.

Table 4.4.3 Knowledge of parental abuse by attitudes of self-esteem

Question #37 Have you ever seen your parents physically abuse one another? (Knowledge)"MALTREAT"
 Question #27 Are you proud to be a woman? (Attitude) "ORGULLOMUJ"

MALTREAT		ORGULLOMUJ		row total
	Yes	No		
Yes	58	28		86
	67.4	32.6		62.8
	55.2	87.5		
No	47	4		51
	92.2	7.8		37.2
	44.8	12.5		
Column Total	105	32		137
	76.6	23.4		100.0
Pearson Chi-2		P value 0.00095		

Table 4.4.3 also proved to be significant, in which knowledge of parental abuse and self-esteem did have a connection. The P value was 00095, which showed that females who had witnessed abuse one time in their homes as girls had lower self-esteem as adults did. Females who had not seen abuse had higher self-esteem as women did.

Table 4.4.4 Women that attended elementary school by attitudes of should girls attend elementary school.

Question #6 Did you go to elementary school? (Practices) "PRIMARIA"
Question #11 Do you think girls should go to elementary school? (Attitude) "MUJED"

	MUJED		row total
PRIMARIA	Yes	No	
Yes	79 100.0 57.2		79 53.7
No	59 86.8 42.8	9 13.2 100.0	68 46.3
Column Total	138 93.9	9 6.1	147 100.0
Pearson Chi-2		P value 0.00085	

Table 4.4.4 crosses women who actually went to elementary school with their beliefs if the next generation of girls should also attend elementary school (1-6th grade). A P value of ,00085 was found which shows significance in which there was a correlation between women who did have the opportunity to study in also wanting the same for the next generation of girls.

Table 4.4.5 Knowledge of family planning by participation in sexual education classes.

Question #46 Do you know what family planning is? (Knowledge)"PLANFAM"
 Question #44 Have you ever been to a class about sexual education? (Practices)
 "CHARLAES"

CHARLAES				
PLANFAM	Yes	No	Does not know what sex ed. is	Row total
Yes	28 52.8 82.4	21 39.6 22.8	4 7.5 19.0	53 36.1
No	6 6.4 17.6	71 75.5 77.2	17 18.1 81.0	94 63.9
Column total	34 23.1	92 62.6	21 14.3	147 100.0
Pearson Chi-2 P Value 0.00000				

Table 4.4.5 was also significant in which the P value registered at, 00000 indicating that 52.8% of the women that had attended a lecture on sexual education did have an awareness about family planning. Seventy-five percent of the women that had not attended a lecture on family planning had no knowledge of the topic of family planning.

4.5 ANOVA Analysis

Tables 4.5.1, 4.5.2, 4.5.3 present the ANOVA analysis comparing the different knowledge, attitudes and practice end scores by income, age and education. In this section we look to test the hypothesis if favorable knowledge, attitudes and practices depend on income, age or education? The following results presented are significant and discussed and analyzed later in the discussion section.

Table 4.5.1 ANOVA Analysis of Knowledge, Attitudes and Practices End Scores comparing Income Per Week.

Variable	F value	P value
Knowledge scores comparing weekly income.	5,4028	, 0082
Attitude scores comparing weekly income	1.5761	.2188
Practices scores comparing weekly income	8,5532	, 0008

Knowledge end scores indicated that higher income did reflect better knowledge. Women who earned more than \$30 per week obtained highest scores. Lower scores were obtained by women who earned \$0-\$10 per week.

Attitude end scores did not demonstrate significance with a P value of .2188 but did indicate trends in which higher incomes does play a role in better attitudes but does not solely depend on it. All employed women earning between \$0-\$30 per week scored between an 11 and 13 for their attitude scores which is weak and indicates that favorable attitudes did not solely depend on higher income.

Practice end scores did demonstrate significance with a P value of, 0008 in which higher practice end scores were related to higher income. Women who earned

more than \$30 per week scored an average score of 3 out of 11. These scores are extremely low indicating that women earning more than \$30 per week only has 3 good practices out of 11. Women earning \$0-\$30 per week scored between a 2 and 2.8 in favorable practices. Nevertheless, the P value is significant proving that better income does increase favorable practice scores.

Table 4.5.2 ANOVA Analysis of Knowledge, Attitudes and Practices End Scores comparing Age.

Variable	F value	P value
Knowledge scores comparing age	36,3941	, 0000
Attitude scores comparing age	23,0396	, 0000
Practice scores comparing age	67,1950	, 0000

Knowledge end scores did demonstrate significance in which the P value is, 0000 indicating that younger age scored higher on the knowledge section. Eleven to twenty-one years of age scored the highest on the knowledge section. Women aged 40- 50 years scored a low average of 2 out of 10 on the knowledge section indicating that they only had averaged 2 favorable knowledge responses each.

Attitude end scores also proved to be significant with a P value of, 0000 indicating that better attitude scores did reflect younger age. Girls aged 11-21 scored an average of 6 favorable attitude responses out of 17, still weak but higher than those of the older women aged 40-50 scoring only 2 favorable attitude responses.

Practice end scores also proved significant with a P value of, 0000 indicating that younger girls aged 11-21 were scoring higher on the practice section.

Table 4.5.3 ANOVA Analysis of Knowledge, Attitudes and Practices End Scores comparing highest Obtained Educational Level.

Variable	F value	P value
Knowledge scores comparing highest educational level.	15,9111	, 0000
Attitude scores comparing highest educational level.	5,7127	, 0050
Practice scores comparing highest educational level.	17,6435	, 0000

Knowledge scores were significantly higher for the women who reached the 10th to 12th grade. The P value was ,0000 making it significant and proving that higher education did improve knowledge responses.

Attitude scores also proved to be significant at ,0050 indicating that higher education did impact better attitudes. Women who completed elementary school scored an average of 12 out of 17 and women that were in secondary or highschool scored a 14, there is only a 2-point gap, which also indicated that favorable attitudes might not depend solely on higher education.

Practice scores also proved to be significant with a P value of, 0000 which proved that better practices came along with higher education and those women with lower educational levels, scored lower on the practice section.

4.6 Multiple Regression Analysis

In Tables 4.6.1, 4.6.2, 4.6.3, multiple regression was applied to seek out a dependence between variables. This section can help determine if the hypothesis should be rejected or accepted. Knowledge, attitudes and practices are used as the dependent variables in the following analysis. Age, income and education were tested as the independent variables. Almost all results in this section were significant and presented below and later discussed in detail in the discussion section.

Table 4.6.1 Multiple Regression of Knowledge, Attitudes and Practices End Scores Correlating Age.

Variable	F value	P value
Knowledge scores versus Age	79,09878	, 0000
Attitude scores versus Age	54,22988	, 0000
Practice scores versus Age	96,10534	, 0000

In the prior multiple regression, table 4.6.1 indicated significance for all three variables. With a P value at, 0000 higher knowledge, attitude and practice scores did *depend* on younger age.

Table 4.6.2 Multiple Regression of Knowledge, Attitudes and Practices End Scores Correlating Highest Level of Education Obtained.

Variable	F value	P value
Knowledge scores versus highest level of education obtained	29,65634	, 0000
Attitude scores versus highest level of education obtained	7,52923	, 0076
Practice scores versus highest level of education obtained	28,51234	, 0000

In table 4.6.2 a higher knowledge score is dependent on the highest educational level obtained by each woman. The P value for knowledge scores was

0000, which proved significance. Attitude scores did prove to be dependent on higher educational levels indicating that favorable attitudes depend on higher educational levels. Favorable practice scores did prove to depend on higher education with a P value at, 0000 making it significant.

Table 4.6.3 Multiple Regression of Knowledge, Attitudes and Practices End Scores Correlating Income.

Variable	F value	P value
Knowledge scores versus Income	11,03794	, 0018
Attitude scores versus Income	3,16109	, 0825
Practice scores versus Income	17,51300	, 0001

Higher knowledge scores did prove to be dependent on higher income with a P value of, 0018 making it significant but still demonstrating trends.

Favorable attitude scores also did not depend on higher income with a P value of ,0825 making it insignificant. Favorable practice scores did prove to be dependent on higher income. Those earning a greater living proved to score higher on the practice section.

5. DISCUSSION AND ANALYSIS

Knowledge, attitudes and practices of the women were alarming on social and demographic areas. Considering that half of the women proved to have not received any sort of formal educational training indicated that half of the females interviewed for this study were illiterate. The other half did have some sort of formal education in which 33% of them did finish elementary school, therefore the other half of women are literate but had not advanced passed the sixth grade. Considering that 94% of the women were unable to reach the 12th grade was discouraging considering the consequences that these girls may face in the future. Without basic literacy skills these girls will not access decent employment opportunities that would allow them to strive, grow and prosper. They could very well live out the same consequences that their mothers had experienced. Worldwide, more than 15 million girls aged 15-19 give birth each year (5). Illiterate girls may be part of that statistic and subjected to motherhood at a very young age. Motherhood at a young age could also entail complications during pregnancy, delivery and a risk of maternal death that is much greater than the average. The children of young mothers also have higher levels of morbidity and mortality. Considering that only 6% of the Cotacachi girls interviewed had made it to highschool allows us to compare them with these generalized world statistics and assume that they could suffer the same consequences as other uneducated girls around the world. It is clearly a vicious cycle in which lack of education can lead to an increase in adolescent pregnancies and early marriage that are likely to have long-term adverse impact on their children's quality of life. Lack of education can also increase the risk of HIV/AIDS, which has become a new threat to adolescent girls especially those who miss out on educational opportunities and may turn to the sex industry for answers. Health problems often fall on young uneducated

girls who are disadvantaged due their age, gender and low economic status. Presently, 71% of females from the Ecuadorian highland region (urban and rural) aged 6-17 are not registered in the educational system for financial problems (12). Twenty-six percent of the Cotacachi females also did not attend elementary school for financial problems. The economic crisis in Ecuador has limited female access to education and future employment opportunities. Sixty-eight percent of the women interviewed, also stated that they had no future plans in schooling indicating that either they are content with their current situation, lack the self-esteem to seek out educational opportunities or financially can not afford to educate themselves. Results indicated that Cotacachi girls and women did not have equal opportunities to education correlating to the Ecuadorian statistics that rural highland girls had fewer opportunities than urban females in accessing education. In 1999 INEC registered that only 25% of the females 12-17 years of age living in the rural highlands were registered in highschool, only 5% of the women aged 18-24 living in the rural highlands were registered at the university level and that 21.7% of girl's 10-17 years of age living in the rural highlands (urban and rural) work and do not study.

Analyzing the area of gender and education, it was impressive to see those women's *attitudes* were promising in which they did not differentiate between males and females receiving an education. Almost 100% of the women being interviewed believed both boys and girls should go to elementary school. As for a highschool education for both boys and girls there also seemed to be equal judgement on male and female participation. Almost 50% of the group believed that girls and boys should go on to highschool indicating that both genders would have better opportunities in their futures concerning employment. Around 40% of the women felt

that both boys and girls should drop out of school at 13 years of age and work full time to help the family out financially. Considering the financial crisis and lack of employment and economic security, it is understandable why females think that their children should participate financially in family needs. The interesting point in this section is that there was not a gender preference in which sex should seek employment or education. It was discovered that even though there was such a low educational inscription and attendance rate, that women and girls did state that the next generation should have the opportunities that they have may not been offered.

Concerning nutrition and food allocation, there has been a custom in some poor communities in which a single or poor mother believes she should feed her son more food than the daughters with the belief that her son needs to be stronger to be able to take care of the mother and daughters in the future. Researching this topic it was discovered that a positive 87% of the women believed that all family members were to be fed equally. Nearly 13% felt that not all are equal stated that there should be preference for the younger children. The objective in this question was to see if there was a gender favorite here and it was demonstrated that male and female children were being fed the same amount of limited food that there was. The gender based questions focused on women's "attitudes" demonstrated favorable responses. The females seem to be open to offering equal opportunities for both their sons and daughters and the younger girls interviewed also were open to equal opportunities for males and females. Even though the women's backgrounds so far indicated, high illiteracy rates and low income, it was promising to see that there was not a gender favorite and that both sexes were looked at as equals. While other experiences demonstrate that throughout the world, four times as many girls die of malnutrition as

boys do because food is given preferentially to boys. According to the United Nations Report on the Status of Women, women do two-thirds of the world's work for one-tenth of the world's wages, yet they own less than one one-hundredth of the world's property. Other research also indicated that compared to girls, boys are five times as likely to receive the most attention from teachers and eight times likely to call out in class (1). Considering the gender discrepancies throughout the world, the data discovered in Cotacachi was promising in which gender by the women was viewed more equally. The next generation may be able to make a "dent" in the cycle and offer girls; equal chances, opportunity and treatment to improve their lives and the lives of their children.

Analyzing unemployment rates amongst the target population, it was discovered that almost 70% of the women were unemployed, but also taking into account that 20% of the females were students and the time of interview. Several of the women employed stated that they worked as artisans and earned \$0-\$10 weekly, estimating a maximum of \$40 per month. Forty dollars per month is below the poverty line and that statistic gave more insight to Cotacachi women's economic reality. Other women worked as maids also earning a similar if not lower income. With this data we are able to grasp the economic struggles that the Cotacachi women may face. Unemployment had several negative impacts and consequences that directly affect these women and their families. Lack of employment increases stress, health problems, alcoholism, theft and abuse. Many times in these Quichua communities, girls below the age of 15 often did the same household work as adult women and such labor is not regarded as "real work" and is usually not reflected in statistical data. The younger girls get asked to drop out of school and tend to needs at

home, such as taking care of younger siblings while the mother goes to the fields or bigger cities to work as a maid or in agriculture. Eighty-four percent of the unemployed women of our target population were housewives, whom earned no income and dedicated over 12 hours per day to their chores. Almost half of these women claimed that their children were the main support in assisting them in the hard, vigorous work of cooking, cleaning, farming and tending to the animals. The other 31% stated that no one assisted them in the 12-hour workload. Numerous studies have shown that mountain women have heavier workloads than men have. Men and women share agricultural and livestock tasks quite evenly, but women have additional domestic responsibilities, such as preparation of food, collection of water and wood for fuel, childcare, and maintenance of family health. Steep slopes, great distances, and especially the absence of men due to increasing out-migration intensify the workload of these rural women (17). This raises concern about children's rights and how many of the women were unaware of the subject. It also raises the old saying of "women have several children because they are poor", or "women are poor for having several children." In this case it seems as though the more children the women have the more income they need to find to support the children and the more chores they will have to complete to feed enough mouths, wash enough clothing, cleaning up after several family members. Due to the extensive domestic experience that Cotacachi girls were raised with, it is quite common that Quichua, Cotacachi women aspired to work in the capital city of Quito for a non-Indigenous family. The objective was merely to have a roof over their heads and a hot meal. When Cotacachi girls turn 13 there has been a trend in which they have been sent to work as maids in the bigger cities, making no income but have room and board covered working anywhere from 12-16 hours per day. We can consider that an example of exploitation. Several

women of the older generation had a harder childhood than those of the younger generation in which their parents also suffered from unemployment and poverty and would sell their daughters to the *haciendas*. These now aging women turning fifty were exposed to long hard days in the fields, mental, physical and sexual abuse. These women described that the only escape was to marry the first man that offered. One woman in the study stated that her husband had bought her from the *hacienda* owner. There is a new trend in Cotacachi/Otavalo culture in which parents do not sell their daughters to the haciendas yet *rent* them out for labor purposes. Many young girls aged 13 and older get rented to work for wealthier indigenous men in Spain, Italy and Belgium. We can see that the trend of selling daughters has changed to renting them and should be further researched and eventually intervened with.

Reviewing educational levels of the unemployed female Ecuadorians, using data from 1997, 56% of the unemployed females had a high-school education and 24% of the unemployed had higher or university education (16). Considering that almost half of the women interviewed were illiterate with out even a 1st grade education, explains why these women were not marketable for decent employment in the city. Traditionally, these women were born weavers and artisans that could have employment opportunities in the artisan markets but would require the educational skills or economic means to market their product. The women here showed a trend as housewives whom depended financially on their husbands for economic security. This may also explain the low divorce rate in the three communities, which was low at 2.7%. Sixty percent of the women were married which may indicate family stability or economic dependence. This is an interesting and important subject that could be recommended for a follow up study.

In relation to self-esteem and women 78% of the group was proud to be female and indigenous. Regardless of their demographic backgrounds more than half of the women were indicating high self-esteem and connections with their traditional roots. Almost half also felt that a women should have her independence and not marry until her mid to upper 20's which also was significant and promising for future generations. Women that had married young also realized that it was important to first mature and marry at a later age. Quichua culture tends to marry at a younger age so it was impressive to see those women's attitudes in these communities were changing in which they felt it was better to wait.

Concerning women's rights and abuse, it was discovered that 76% were not aware of their own rights and a high 60% were not aware that children had rights. Fifty-six percent of the women were also unaware of domestic violence. The fact that more than half of these women are not aware of domestic violence is concerning especially since abuse is on the rise and women may not even think that this behavior was actually illegal. The shocking information discovered here was that 70% of the women did know what "rape" was and more than half would intervene if necessary and file a police report against the rapist. Analyzing these results brought upon the possible conclusion that rape might be common in these Quichua communities. Why were the women unaware of "women's rights", "children's rights", and "domestic violence", yet 70% aware of "rape". Where did they learn about this topic if they had not even heard about domestic violence? Had they viewed or witnessed it? Do they know that it is illegal, do they believe that it is acceptable? This topic is also necessary to further research in great detail. Family abuse was also discovered in

which 58% had witnessed family physical abuse at one point in their lives. When the women visually witnessed some sort of abuse they were able to associate the terminology with the action but they proved ignorant on topics such as domestic violence, women's and children's rights.

Almost 90% of the women stated that up until present day there is no community policy to protect women. Two studies were done through the Centro de Planeacion y Estudios Sociales (CEPALES) in marginal Quito, including 237 women, findings indicated that 50% (from 1990 survey) and 60% (from 1991 survey) of the women had answered that they had been physically abused by their partners at least once in their life. Close to 37% of these women had been physically abused frequently, at least 2-3 times per week or per month. The study indicated that women with higher education had a lower abuse rate (16). In the Cotacachi study, it was discovered that women who had witnessed parental abuse at least one time in their lives had lower self-esteem than those who did not witness it.

In Ecuador very few women are included in high judicial positions, which generally presents culture's attitudes toward women in leadership, especially when dealing with democratic nations that are responsible for voting individuals into office. Almost 70% of the women interviewed were not aware of the term "leader". Out of the 30.6% of women that did know what a leader was that 97% of those women stated that anyone (female, male, anyone from different racial backgrounds) could be a leader, not just a male figure. This was actually favorable. Again, it was discovered that the women viewed gender and race equally and placed themselves on the same

level as others. This also indicates decent self-esteem and will benefit the women and community in the future.

In the areas of female participation in the decision making process, women did respond positively to female participation in the household, community and in governmental affairs. A trend was noticed here in which women's attitudes were more favorable than their knowledge or actual practices. It had been presented that lack of income, education and older age was not impacting women's views negatively. This may be that the older generation remembers the struggles they had experienced and would want change for their daughters.

Analyzing the section on reproductive health, the objective was to learn about knowledge, attitudes and practices towards the topic. It was discovered that more than half of the women (65%) did remember at what age they first started to menstruate. The objective of that question was not to learn about the exact age but to see if the women actually remembered important moments of their own past. When menstruation did begin 51% of the women were unaware as to what was happening to them. Thirty-eight percent of the women never had the topic of menstruation explained to them yet 26.9% of women were told about menstruation from their mothers. It was also revealed that 64% had never heard about family planning. It was also discovered that more than half of the women or 62% had never attended a sexual education talk or class. In 1990 INEC registered that fertility rate (expected amount of children) for women aged 15-49 in Ecuador was 4.0 children. Out of that 4, it was expected that urban women would have 3.2 children and that rural would have 5.4 children. When comparing Ecuadorian provinces, Imbabura had an urban rate of 3.6

children and that rural Imbabura had a higher fertility rate of 5.9 children. This is high and could be related to a lack of education. The consequences related to higher fertility rates, and reproductive health ignorance would be higher risk of sexually transmitted diseases, higher maternal mortality risk, increased poverty due to additional children, adolescent pregnancy, early motherhood and higher risk of infant and child morbidity and mortality rates. More than half of the women (54%) revealed that there was an interest in sexual education or reproductive health classes, but 28% of the population indicated that they did not believe or feel comfortable with this topic. Again, there were trends in positive attitudes amongst more than half of this group but still presented risk amongst the others.

The topic of discrimination continues to be significant within Ecuador in which different ethnic backgrounds discriminate against one another. It was demonstrated that 40% of the women did feel that they had been personally discriminated against at one time or another mainly for having indigenous roots, others stated for being female. Discrimination exists on a worldwide level but Ecuador has not achieved a level of comfort between groups. Quietly, the diversity of each group is feared and not celebrated. Health in marginal areas (rural and urban) is tied to hierarchy giving privilege to Mestizos more than Quichuas, men more than woman and rich more than the poor (19). Discussing the women's perceptions on discrimination, it had been identified that the women did feel discriminated against for being both indigenous and female yet interesting enough, 70% of this same group of women were proud of both being indigenous and female, showing again a strong

sense of self, regardless of the negative treatment they had received in the past by the people who had discriminated against them.

Analyzing the section on "end scores" the kscores or knowledge end score frequencies indicated that the women scored very poorly on the knowledge questions. This section indicated that women were extremely weak in knowledge responses and only 3% of the women got the highest score of a 10 on this section. The following sections of ANOVA analysis will help us to figure out what determinants make the women weak in knowledge.

The end scores frequencies for the "attitudes" section, which proved to be more favorable than the knowledge section. The women as a whole group got an average of 11 out of a maximum score of 17 on their attitudes being favorable. But only 1.4% (2) of the women scored a complete 17 out of 17 but in general the women show an improving trend in their "attitude" responses.

The end score frequencies for the "practices" section proved to be weak in favorable responses. The average score for the women in this section was a 2.01 and the lowest score was a 0 and the highest rating at 7. These results were extremely shocking seeing that 25% of the women scored a 0 in favorable practices, 27% scored a 1. So 52% (half of the women) scored between a 0 and 1 in their practices which is alarming. Less than 1% scored a 7 which was the highest score registered even though the maximum score that they could have obtained was an 11. Not one woman registered a perfect score of 11 indicating favorable practices.

In the last three tables of kscore, ascores and pscores, there was a trend of weakness in the women in the topics of knowledge and practices yet there was some improvement in attitudes, indicating that even though the women were lacking in areas knowledge and practices, that they were open and had more positive results in attitudes which demonstrated potential.

In the crosstabs section it was proven that favorable practices determined favorable knowledge responses. For example it was discovered that women who were educated were more aware of the family planning concept than women who were not educated. Women familiar with the term "leader" also believed that women could participate in government. Women who witnessed parental abuse at least one time in their lives had lower self-esteem than those who did not witness it did. Women who did attend elementary school also felt that girls should attend. Those women who did not attend elementary school also felt regret and indicated that they would want the younger girls to have the opportunities that they were not given. Women younger in age indicated knowledge of family planning higher than the older women did. It was indicated here that age does have an impact over progressive topics such as reproductive health. It was also proven that 75% of the women who had never attended a class on sexual education were unaware of family planning.

In the ANOVA analysis different end scores of knowledge, attitudes and practices were measured against social and demographic factors such as income, age and educational background.

In relation to income and its contributing to favorable end scores, it was proven that higher income did reflect better knowledge and practices. Women who earned more than \$30 per week obtained higher scores than those whom earned \$0-\$10 per week. Attitude end scores did not demonstrate significance with a P value of .2188 but did indicate trends in which higher income did play a role in better attitudes but does not solely depend on it. It was discovered here in these communities that high or low income did not lower women's self-esteem. Here we see that even though there was a high unemployment rate and women are not grossing a lot of money that their attitudes were not affected by this in a negative manner. But it was proven that lack of income did affect positive practices and access to knowledge and information.

In relation to age and its affect on a favorable response rate, it was proven that younger age equaled better knowledge, attitudes and practices. Girls aged 11-21 scored the highest on all three section of the questionnaire. Women aged 40-50 scored the lowest also on the three sections placing a gap between the two generations. This new generation of girls may have had more opportunities than their mothers had and maybe that is why these types of results were shown. Spanish language barriers and illiteracy were factors that played a role in the negative outcome in the older women's scores. The older women are all Quichua born women and only spoke Quichua while growing up in the household. Many never learned Spanish while others learned the basics but not enough to study within a castillian school system. There was no bilingual education and continues to be scarce within the rural schools in the Cotacachi County. The new generation of girls are raised bilingual; Quichua and Spanish. Globalization and tourism in the nearby cities may be benefiting these younger girls in which they have more exposure to the outside world

than from the isolated communities they are accustomed to. Foreign cultures visit the nearby artisan markets where most of the women work and are intrigued by the Indigenous women and her culture. There is a great amount of respect that these Quichua women receive from *outsiders*, which may contribute to the high self-esteem rates amongst the 147 women interviewed. This same group of women stated that they have been discriminated against within their own country yet respected by outsiders, these factors could play a role in their cultural and feminine pride. The girls are now also exposed to Internet in the nearby towns where they are able to access the same information that a young girl in a completely developed nation could access. With the Internet boom, there are no longer borders between nations in which gender, race and economic status define opportunities and access.

In relation to educational rates, it was proven that knowledge scores were significantly higher for the women who studied up to 10th to 12th grades. Higher education did improve knowledge responses. Attitude scores also proved to be significant, indicating that higher education did impact better attitudes. Practice scores also proved to be significant in which better practices came along with higher education and those women with lower educational levels, scored lower on the practice section.

In the multiple regression analysis it was proven that favorable knowledge, attitudes and practices did depend on younger age.

Older age = lower scores,

Younger age = higher scores.

The multiple regression analysis also determined that better knowledge, attitudes and practice scores did depend on educational background.

Higher educational level = higher scores,

Lower educational levels = lower scores.

The multiple regression analysis also proved that favorable attitudes did not depend solely on personal income, again indicating that the women had demonstrated better attitude responses regardless of their socio-demographic background. Better knowledge and practice scores did prove to be dependent on higher income in the multiple regression analysis.

Throughout the investigation patterns were shown that women scored higher on the "attitudes," they did not score wonderfully but higher than the knowledge and practices sections regardless of their social and demographic backgrounds.

6. CONCLUSIONS AND RECOMENDATIONS

In our progressive modern world, women continue to be discouraged from pursuing many of their hopes and dreams, especially in the developing world. As presented in the anterior, Cotacachi women do not have the same opportunities or access as women in the developed world. All three communities that had participated involved younger and older women. The younger generations responded more favorably than the older generations indicating that there is a generation gap and that the role of women is changing in which girls are now being sent to school where prior generations were not given that opportunity. Younger girls are both bilingual in Spanish and Quichua and have greater access to future opportunities educationally and employment wise. Not one woman in the investigation has gone on to college but this is something that we hope to see accomplished in the years to come.

Quitugo, San Martin and Morocho women proved to be living below the poverty line earning a maximum of \$40 per month per woman. Here is an example of how the women may feel powerless over their situation, (powerless being defined as the expectancy or belief that an individual cannot determine the occurrence of outcomes.)

Women also scored low on awareness of women's rights, children's rights and domestic violence, but were aware of sexual abuse and rape which raised some concerns that there could be patterns of sexual abuse within the communities that needs to be addressed.

Women also scored poorly on sexual education knowledge, which could conclude why the fertility rate could be high in these communities. Women with higher educational rates were more aware of reproductive health subjects than those with lower education.

Women with lower educational rates low income and older in age scored lower on the "knowledge" and "practice" sections.

Several studies have documented that people living in poverty have higher morbidity and mortality rates than higher status socioeconomic groups (20). These women could be prone to a range of mental, physical and behavioral health problems due to the chronic stresses of living in hardship over long periods of time, being poor, long-term unemployment and experiencing powerlessness. All of these concerns are risk factors that may increase susceptibility to higher morbidity and mortality rates in the future.

All three communities did not identify with gender discrimination. The women had favorable attitudes towards both sexes and believed in equal rights and opportunities for both. This is a changing trend from old traditional customs and may be for the increased education amongst the younger generation that affects the older women's views. Self-esteem also proved to be high amongst the women, which was very promising in which they felt strong about who they were as women and as an ethnicity. There were favorable responses that females could participate in the decision making process in their homes, equal with the men, locally in the community and nationally within the government. This positive sense of self and outlook on the

female population indicates a sense of empowerment on the individual level, which may long term, could be an indicator of health promotion.

Women with lower educational backgrounds, low income and older in age showed improvement on the "attitudes" scores, which indicated that attitudes did not depend on better social and demographic conditions, which raises a very interesting point that women can be empowered even though they may have been limited in their past and present education, employment, health and equality access and opportunities.

The ANOVA analysis was able to present connections between poor knowledge to lack of education, income and older age. There was also a connection between poor practices and lack of education, income and older age. Attitude scores did not prove to be significant but did show trends in connection to social and demographic factors, it was interesting to see that the women were capable of answering the attitudes section more favorably even though they were not educated, employed and from an older generation.

The prior information demonstrates a contrast in which the women are powerless over their economic situation but have taken power over their spiritual and emotional situation.

Hypothesis 1

Does favorable knowledge and practice responses depend on education, income and age?

H1-variable 1 does make a difference in variable 2.

H0- variable 1 does not make a difference in variable 2.

Hypothesis 1 would be accepted in this case due to the statistical proof in the ANOVA and multiple regression analysis.

Variable 1 being favorable knowledge and practice responses did depend on the amount of education one receives, income and younger age.

Hypothesis 2

Do favorable attitude responses depend on educational level, income and younger age?

H1- variable 1 does make a difference in variable 2.

H0-variable 1 does not make a difference in variable 2

Hypothesis 2 would be rejected in which it was proven that favorable attitudes did not solely depend on income rather age and education.

Recommendations

Understanding the vital role those women have played and are playing in their environment can further the process of development in rural areas as in the Cotacachi area. This needs to be combined with a search for solutions that will empower women. If empowerment can combat a susceptibility to disease from powerlessness, it then becomes critical for health practitioners and educators to embrace empowerment education programs. The fact that 68% of the interviewed women were unemployed and of those employed, 63% made less than \$80 per month indicated a great need for employment. Stable employment may aid in the increased control over ones life, which has also been associated with better health habits,

compliance, and fewer illnesses (20). By forming cooperatives, syndicates, and other groups women may feel a sense of empowerment and be able to generate an income through a newly developed business. Thirty-one percent of the women reported that they are artisans and obviously working for an employer who pays them somewhere from \$0-\$20 per week. In this case it seems as though the women may not have a strong educational background yet they possess a skill. That skill is a weaver, seamstress, embroiderer, knitting or clothing design. They have proven that they are capable of producing the art and a recommendation would be to start their own small businesses so they can exclude the "middle man" and gain a fairer wage and sell directly to the public and possibly double their current income. The Cotacachi communities are located extremely close to the Otavalo area and the world famous Otavalo artisan market. The women have the advantage in which they live close to the market place and may have the opportunity to start their own small businesses regardless of age, educational training or current income.

An example of a small business cooperative that has proven to be successful is the Quitugo community recycling paper project. Mothers and daughters sought out solutions to their problems and created employment and invested their profits into education and nutrition. The community women were utilizing the resources that the community had to offer and that did not cost any money. Their main resource was all the garbage that consisted floating around the village that the young women collect and recycle. Although these community women were lacking a formal education, they used their newfound knowledge to educate others on the benefits of recycling financially, environmentally and health wise. This group of women also had formed a

support group in which they have a place to tell their stories, heal their wounds and go forth to create health in their lives, through this they become empowered.

The Morochos community had started an Eco-tourism project in which they too were seeking solutions to their problems. Again, even though the majority of these women were lacking in education, income and may be older in age, they too possessed a skill in artisan goods. The community was also located close to the Otavalo market in which they too had an opportunity to access the tourism in the area. The fact that these women had preserved their culture had given them the chance to open the doors of their communities to outsiders and market their product...crafts, food, environment, music and community. This project allowed them to share their culture, become empowered and make an income.

These small businesses were good examples of how women can empower themselves and own, manage, organize and coordinate their own businesses and make a better income than working for people that have been exploiting them. The businesses need to be made sustainable and that would be possible if the women themselves are the ones who take the initiative to start them up, run and control it with community resources that do not cost a great investment.

It was also recommended that the younger girls that are being educated in the school systems start informal classes with their mothers. If it comes from the community members themselves, chances are the programs will sustain themselves and get passed on to the next generation. Providing classes in the community center could be an opportunity for the women to learn about topics of reproductive health,

nutrition, and social issues, which could contribute to their future development and positive growth. More women present at these meetings could become contagious in which others will attend and each one could educate on different topics that they are aware of. The idea is to use the creativity that already exists on the community level, if it comes from the people it has a higher probability of becoming sustainable.

Development takes time and this study was aiming at the next generation of girls and hoping to increase income levels of the women and with the aid of education hopefully the next generation will have more work opportunities in Ecuador. The goal was to strengthen women's participation in the development of community and the approach to problem solving in their communities through these small business proposals and informal education.

While government interventions to help rural women are found in many rural areas, there are significant gaps between the policy goals and local realities. Policies designed outside the community are usually inappropriate for the local context and many ignore the daily activities of the men and women. Although the infrastructure and policies that can empower women may not all be in place, knowledge and access to their own "community analysis" may be enough to spark an interest in defining and solving their own problems. This document has provided a community diagnosis on 147 Quichua women's roles, responsibilities, similarities and differences. It has been determined that these women could benefit from community outreach on the topics of; reproductive health education, rape and sexual abuse education, women's rights, domestic abuse, children's rights and small business management including product development, finance, quality control and legal aspects in beginning a business.

This review will be shared with the community women that participated in the study aiming to offer them an evaluation of their current situation and hoping through this new found information the women will organize, define and solve their own problems. Empowerment does not solely depend on each individuals demographic background. The Cotacachi women indicated that they do live below the poverty line, yet experience a decent level of self-esteem and hope which is a determinant to positive physical, mental, spiritual and emotional health.

7. INDEX

Index 1- Survey

Identificación

FILTRO

Que tenga edad entre 11 a 50 años, que pertenezca al cantón de Cotacachi u Otavalo por lo menos 3 años, que sea mujer, que hable español.

GUIA

1. Cantón
2. Localidad
3. Miembros de Familia
4. Edad
5. Estado civil (1) soltera (2) casada (3) divorciada (4) separada (5) unión libre (6) viuda

EDUCACION

6. ¿Estudió en la primaria? (1) Sí, pase un #8 (2) No, pase a #7
7. ¿Porque? (1) falta de dinero (2) tenía que trabajar (3) tenía que cuidar a los hermanos (4) la escuela estaba muy lejos (5) padres o parientes no quisieron
8. ¿Cuál fue el último año de educación que Ud. estudió? Primaria 1 2 3 4 5 6
Secundaria 1 2 3 4 5 6 Universidad _____ Otro _____
9. ¿Piensa seguir estudiando? (1) Sí (2) No
10. ¿Piensa que los varones deben estudiar? (1) Sí (2) No
11. ¿Piensa que las mujeres deben estudiar? (1) Sí (2) No
12. ¿Después de estudiar la primaria, que piensa deben hacer las niñas? (1) Continuar con los estudios (2) Trabajar (3) Ambos (4) Otro _____ ¿Porqué?
13. ¿Después de estudiar la primaria, que piensa deben hacer los niños? (1) Continuar con los estudios (2) Trabajar (3) Ambos (4) Otro _____ ¿Porqué?

TRABAJO

14. ¿Ud. trabaja? (1) Sí (2) No (No, pase a #21)
15. ¿Cuántos trabajos remunerados tiene? (1) Uno (2) Dos (3) Tres y más
16. ¿En que trabaja? (el trabajo principal) _____
17. ¿Cuántas horas trabaja a la semana normalmente, considerando todos sus trabajos?
(1) Menos de 30 horas (2) 30 a 39 horas (3) 40 horas (4) Más de 40 horas
18. ¿Cuánto gana por semana? (1) 0 - \$10 (2) \$11 - \$20 (3) \$21-\$30 (4) \$31 - \$40
(5) \$41-\$50 (6) Mas que \$50
19. ¿Le gusta su trabajo principal? (1) Sí (2) No (Pase a #22)
20. ¿Buscó trabajo en la última semana? (1) Sí (2) No
21. ¿Por que no trabaja, ni busca trabajo? (1) Incapacidad física (2) No necesita trabajar (3) Ama de la casa (4) Estudiante (5) No tiene con quien dejar los niños (6) No le gusta trabajar (7) Cansada de buscar trabajo (8) Problemas de la salud (9) Interfiere estudios (10) Recibe bono de solidaridad (11) Otro
22. ¿Qué trabajo le gustaría hacer? _____
23. ¿En las mingas los hombres y mujeres hacen el mismo trabajo? ¿(1) Sí (2) No, ¿Por qué no el mismo? _____
24. ¿Cuántas horas diarias dedica a los quehaceres domésticos? (1) 1-5hrs (2) 6-10hrs (3) 7-11hrs (4) más de 12hrs (5) No dedica a los quehaceres domésticos.

25. ¿Quién le ayuda más con los quehaceres domésticos? (1)esposo (2)hijos / as
(3)hermanos / as (4)madre (5)padre (6)empleado (7)otros familiares (8)vecino/a
(9)nadie
26. ¿Piensa que alguien en la casa debe comer más que otros? ¿(1)Sí, quien o quienes?
(a)varones (b)mujeres (c)menores (d)mayores (e)otro _____ (2)No

AUTO ESTIMA

27. ¿Se siente orgullosa de ser mujer? (1)Sí (2)No
28. ¿Se siente orgullosa de ser indígena? (1)Sí (2)No
29. ¿Cuándo piensa es bueno para casarse? (1)Entre 15 y 20 años (2)Entre 20 y
25 años (3)Mayor que 25 años (5)Otro _____
30. ¿Sabe Ud. ¿los derechos que tiene una mujer? (1)Sí (2) No
31. ¿ Ha escuchado de los derechos de los niños? (1)Sí (2)No
32. ¿ Sabe que es abuso a la mujer? (1)Sí (2)No
33. ¿ Ud. sabe que es violación? (1)Si (2)No, pase a #36
34. ¿Si ocurre una violación haría una denuncia? (1)Si, pase a #36 (2)No
35. ¿Porque? (1)Tiene miedo (2)No quiere involucrarse (meterse) (3)Otro _____
36. ¿Existe una política en la comunidad para proteger a la mujer? (1)Sí (2)No
37. ¿Alguna vez vió o escuchó a sus padres o padrastros maltratarse / pegarse
físicamente? (1)Si (2)No (3)No aplicable (4)No sabe, Ninguno responde

LIDERAZGO

38. ¿Sabe que es un líder? (1)Sí (2)No, Pase a #40
39. ¿Quién puede ser un líder? (1)Mujer (2)Hombre (3)Indígena (4)Mestizo (5)Blanco
(6)Todos (7)Otro _____
40. ¿Piensa que la mujer puede participar en la toma de las decisiones? (1)Sí (2)No
- a) ¿En la casa? (1)Sí (2) No
- b) ¿La comunidad? (1)Sí (2)No
- c) ¿En el gobierno? (1)Sí (2)No

SEXUALIDAD

41. ¿Qué edad tenía cuando llego la menstruación (regla), por primera vez? (1)Edad
____ (2)No ha menstruado todavía (Pase a #43) (3)No recuerda (4)No responde
42. ¿Cuándo eso sucedió, Ud. sabía lo que era la menstruación o regla? (1)Si (2)No
(3)No responde
43. ¿Quién fue la primera persona que le explicó sobre la menstruación o la regla?
(1)Padre y Madre (2)Padre (3)Madre (4)Hermano (5)Hermana (6)Madrina
(7)Padrino (8)Amigo (9)Amiga (10)Profesor(a) (11)Nunca le explicaron (12)Tía
(13)Otro _____
44. ¿ Ha asistido a alguna charla sobre educación sexual? (1)Si (2)No (3)No sabe que
es educación sexual.
45. ¿Cree que se deben dar charlas sobre educación sexual? (1)Si (2)No (3)No
responde (4)No sabe que es educación sexual.
46. ¿Sabe que es planificación familiar? (1)Sí (2)No

DISCRIMINACION

47. ¿ Ha sentido que le han discriminado(rechazada)alguna vez?
48. ¿ Por cuales razones? _____
49. ¿ Piensa que la mujer puede participar en deportes? (1)Sí (2)No

INDEX 1ª.
Pilot Survey

FILTRO

Que tenga edad entre 11 y 50 años

Que pertenezca a los cantones de Cotacachi u Otavalo por lo menos, 3 años.

Que sea mujer

Que hable español

GUIA

Cantón

Localidad

Miembros de Familia / Nombre y apellido

Edad

EDUCACION

1 ¿Estudió en la primaria? SI NO

2 ¿Porqué no continuó?

3 ¿Piensa que los varones deben estudiar? SI NO ¿Por qué?

4 ¿Piensa que las mujeres deben estudiar? SI NO ¿Porque?

5 ¿Después de estudiar la primaria, que piensa deben hacer las niñas?, SI NO ¿Por qué?

6. ¿Después de estudiar la primaria, que piensa deben hacer los niños?, SI NO ¿Por qué?

TRABAJO

7 ¿Ud. trabaja? SI NO

8 ¿En qué trabaja?

9 ¿Le gusta su trabajo? ¿Que le disgustó de su trabajo?

10 ¿Qué trabajo le gustaría hacer?

11 ¿Existen diferencias entre hombres y mujeres en relación con el trabajo?

AUTO ESTIMA

12 ¿Se siente orgullosa de ser mujer?

13 ¿Se siente orgullosa de ser indígena?

14 ¿Cuándo piensa que es bueno para casarse? ¿Porque?

15 ¿Sabe Ud. que es el día internacional de la mujer? ¿Que importancia tiene para Ud.?

16 ¿Ha escuchado de los derechos de la mujer?

17 ¿Sabe Ud. que derechos tiene una mujer? ¿Que derechos cree que debe tener una mujer?

18 ¿Ha escuchado de los derechos de los niños?

19 ¿Qué entiende por abuso a la mujer?

20 ¿Ud. sabe que es violación? SI NO

21 ¿Si ocurre una violación haría una denuncia? ¿SI NO ¿Porque?

22 ¿Existe una política en la comunidad por proteger a las mujeres? SI NO

LIDERAZGO

- 23 ¿Quién es el "líder" en la comunidad?
24 ¿Quién puede ser un líder? Mujer, hombre, indígena, mestizo, blanco, etc.
25 ¿Piensa que la mujer puede participar en la toma de las decisiones? SI NO
a) ¿En la casa? ¿SI NO ¿Porque?
b) ¿En la comunidad? ¿SI NO ¿Porque?
c) ¿En el gobierno? ¿SI NO ¿Porque?

SEXUALIDAD

- 26 ¿Sabe que es la educación sexual? SI NO
27 ¿Dónde, Como, Quien... aprendiste de eso?
28 ¿Qué temas se deberían explicar en la educación sexual, que temas no se deben explicar?
29 ¿Piensa que es una tema importante? SI NO ¿Porque?
30 ¿Te da vergüenza preguntar de ese tema?¿Porque?

DISCRIMINACION

- 31 ¿Qué piensa de la población indígena?
32 ¿Qué piensa de la población mestiza?
33 ¿Qué piensa de la población negra?
34 ¿Qué cree lo que esas poblaciones hablan de Ud.?
35 ¿Piensa que la mujer puede participar en deportes?
36 ¿En qué deportes?
37 ¿Piensa que la salud es importante? ¿Porque?
38 ¿Cuándo está enferma, que hace? ¿Porque?
39 ¿Piensa que alguien en la casa debe comer más que otros?

INDEX 2

Códigos favorables y desfavorables por las preguntas de conocimiento.

# de Pregunta	Respuesta	Código Favorable "1" Desfavorable "0" No es aplicable "N/A"
#30 ¿Sabe Ud. los derechos que tiene una mujer?	Sí No	1 0
#31 ¿Ha escuchado de los derechos de los niños?	Sí No	1 0
#32 ¿Sabe que es abuso a la mujer?	Sí No	1 0
#33 ¿Ud. sabe que es violación?	Sí No	1 0
#36 ¿Existe una política en la comunidad para proteger a la mujer?	Sí No	1 0
#37 ¿Alguna vez vio o escuchó a sus padres o padrastos maltratarse / pegarse físicamente?	Sí No	1 0
#38 ¿Sabe que es un líder?	Sí No	1 0
#41 ¿Qué edad tenía cuando llegó la menstruación por primera vez?	12 a 15 años Aun no No recuerda	1 1 0
#42 ¿Cuando eso sucedió, Ud. sabía lo que era la menstruación?	Sí No	1 0
#43 ¿Quién fue la primera persona que le explicó sobre la menstruación?	Madre y Padre Esposo Madre Hermano Hermana Madrina Amiga Profesora Nunca le explico Tía Otro Cuñada	1 1 1 1 1 1 1 1 0 1 1 1
#46 ¿Sabe que es la planificación familiar?	Sí No	1 0

Códigos favorables y desfavorables por las preguntas de actitud.

# de Pregunta	Respuesta	Código Favorable "1" Desfavorable "0" No es aplicable "N/A"
#10 ¿Piensa que los varones deben estudiar?	Sí No	1 0
#11 ¿Piensa que las mujeres deben estudiar?	Sí No	1 0
#12 ¿Después de estudiar la primaria, que piensa deben hacer las niñas?	(1)Continuar con los estudios (2)Trabajar (3)Ambos (4) Trabajar en casa	1 0 1 0
#13 ¿Después de estudiar la primaria, que piensa deben hacer los niños?	(1)Continuar con los estudios (2)Trabajar (3)Ambos	1 0 1
#19 ¿Le gusta su trabajo?	Sí No	1 0
#22 ¿Qué trabajo le gustaría hacer?		N/A
#23 ¿En las mingas los hombres y mujeres hacen el mismo trabajo?	Sí No	1 0
#26 ¿Piensa que alguien en la casa debe comer más que otros?	Sí No	0 1
#26 ^a ¿Quiénes?	Varones Niños menores Ancianos	N/A
#27 ¿Se siente orgullosa de ser mujer?	Sí No	1 0
#28 ¿Se siente orgullosa de ser indígena?	Sí No	1 0
#29 ¿Cuándo piensa es bueno para casarse?	Entre 15 y 20 años Entre 20 y 25 años Mayor que 25 años	0 1 1
#39 ¿Quién puede ser un líder?	Hombre Todos (Mujer, hombre, indígena, mestizo, negro, blanco etc.)	0 1
#40 ¿Piensa que la mujer puede participar en la toma de decisiones?	Sí No	1 0
a) ¿En la casa?	Sí	1
b) ¿En la comunidad?	No	0
c) ¿En el gobierno?		
#45 ¿Deben dar charlas sobre educación sexual?	Sí No	1 0
#47 ¿Ha sentido que le han discriminado alguna vez?	Sí No	0 1
#48 ¿Por cuales razones?		N/A
#49 ¿Piensa que la mujer puede participar en deporte?	Sí No	1 0

Códigos favorables y desfavorables por las preguntas de practica

# de Pregunta	Respuesta	Código Favorable "1" Desfavorable "0" No es aplicable "N/A"
#6 ¿Ud. estudió en la primaria?	Sí No	1 0
#7 ¿Por qué no?		N/A
#8 ¿Cuál fue el ultimo año de educación que Ud. estudió?	Grado 1 hasta 6 Curso 1 hasta 5 Curso 6	0 0 1
#9 ¿Piensa seguir estudiando?	Sí No	1 0
#14 ¿Ud. trabaja?	Sí No	1 0
#15 ¿Cuántos trabajos remunerados tiene Ud.?		N/A
#16 ¿Cuál es su trabajo principal?		N/A
#17 ¿Cuántas horas trabaja a la semana considerando todos sus trabajos?		N/A
#18 ¿Cuánto gana por semana?	\$0-\$10 \$11-\$20 \$21-\$30 \$31-\$40 \$41-\$50	0 0 0 0 1
#20 ¿Ha buscado trabajo en la última semana?	Sí No	1 0
#21 ¿Por qué no trabaja, ni busca?	Discapacitada Bono solidario No tiene destreza Anciana Ama de casa Estudiante No tiene con quien dejar los hijos No le gusta trabajar Esta cansada de buscar trabajo Problemas de salud	0 0 0 1 0 1 0 0 0 0
#24 ¿Cuántas horas diarias dedica a los quehaceres domésticos?	1 – 5 horas 6 – 11 horas Mas que 12 horas No hace quehaceres domésticos Una vez por semana	1 0 0 0 0
#25 ¿Quién le ayuda más con los quehaceres domésticos?	Esposo Hijos Hermanos Madre Empleada Otros miembros familiares Vecinos Nadie	1 0 1 0 1 1 1 0
#34 ¿Haría una denuncia si ocurre violación en la comunidad?	Sí No	1 0
#35 ¿Por qué no haría una denuncia?		N/A
#44 ¿Ha asistido una charla sobre educación sexual?	Sí No	1 0

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Dana Platin MPH, BSW

KEY QUALIFICATIONS

6 years experience in sustainable development works in Ecuador, South America focusing on public health, female leadership and income generation projects within rural communities.

OBJECTIVE

To apply a comprehensive educational background and acquired skills in a challenging and stimulating position pertaining to public health, sustainable development and gender issues in developing countries.

EDUCATION

University of San Francisco of Quito - Quito, Ecuador

Masters in Public Health (MPH) Graduated, February 2003

Thesis-Working Towards Empowerment and Gender Equality in the Rural Andes

Colorado State University - Fort Collins, Colorado

Major: Social Work (BSW) Graduated, May 1996

WORK EXPERIENCE

United States Peace Corps- Ecuador, South America

Rural public health educator, July 1997- February 2000

Lived and worked in poverty stricken communities in the northern Andes of Ecuador. Designed and facilitated classes based upon nutrition, preventative health, reproductive health, hygiene and environmental education on the community level and within the rural school system. Initiated campaigns against infectious diseases such as,

cholera, typhoid, hepatitis, respiratory and chronic diarrhea caused by parasites, amoebas and contaminated water. Created a recycling paper business consisting of Indigenous women and children to bring in desperately needed income for the children and their families while raising awareness on environmental and health issues.

The New Seed Foundation- Ecuador, South America

Founder and Director- March 1998- present day

Provided cooperative assistance to community based project that offers employment to disadvantaged artisans, working in partnership to stimulate economic growth through an income generation recycling paper project. Trained and collaborated in product development, quality control, marketing and sustainability for future generations.

"Huarmirazu" Project (Women of the Ice-capped peaks)

Co-Founder of the Andean Women's Mountaineering Movement

December 1999- present day

Created the first Indigenous women's mountaineering group, strengthening women's participation in the development of community and approach to problem solving through outdoor leadership skills, empowering themselves on the Andean glaciers and later reapplying their new found self-esteem at the local level acting voluntarily as catalysts toward positive social change for other community women.

University of Tampa- Ministry of Public Health- Quito, Ecuador

Contract Consultant- March 2002 - June 2002

Researched, assessed and analyzed the social, economical and health situation of 850 families living at the base of an erupting volcano (Tungurahua) in Ecuador. Designed and constructed maps of the high risk zones, calculated and researched the

relationship between volcanic ash fall and respiratory disease incidence, interviewed and identified target population's knowledge, attitudes and practices towards their current social, economical and health situation. Responsibilities also included analyzing statistical data from taken from different local health clinics located in the high-risk areas to identify trends in respiratory disease during the years in which volcanic activity were at its peak.

University of San Francisco of Quito, Quito, Ecuador

Contract Graduate Professor in the School of Public Health- Fall semester 2001

Provided students with the opportunity to develop written and oral English skills in the field of public health, prepared students with necessary skills to become bilingual specialists in the field of international health. Guided students on topics of health and human rights, reproductive health, health care in developing countries and child/maternal health. Facilitated group discussions, case presentations article and editorial reviews.

Cafemundo.com- South American representative - Editor

November 1998- January 2003

Marketed, advertised and recruited for bilingual website of the "Americas" covering articles and editorials on Latin American current events, economics, politics and social problems.

New York League for Early Learning (NYL) Harry H. Gordon School

Bronx, New York

Summers 1993,1994,1995,1996,2000

Lead teacher working directly with low functioning, special needs children with disabilities providing needed services to children with autism, pervasive development disorder, mental retardation, orthopedic impairments and attention deficit disorder.

LANGUAGES

Spanish-fluent

Quichua-basic

TECHNICAL SKILLS - grant and proposal writing, project implementation, leadership in community development.

COMPUTER SKILLS- Word, Excel, PowerPoint, SPSS 6.0,6.1