The Role of Education and Wealth in Health Inequalities in Egypt

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Abstract: Overall, youth is normally characterized by low level of disease and death. However, it can also be a time of risk and poor health particularly when associated with income distribution and disadvantaged social circumstances. This paper addresses both educational attainment and wealth index as determinants of young people's health in Egypt. However, the paper examined them separately to try establishing which effect is more important. This paper is used the "Survey of young people in Egypt (SYPE), 2010 data, and focused on young people at two age groups (15 - 21) and (22 - 29). One of the most commonly used methods in measuring social inequalities in health is odds ratio which is used in this paper. Two health indicators were used, self-rated health and self-reporting questionnaire. The results show that male education has a large impact on both health indicators than female education. The highest two wealth quintiles had lowest prevalence of poor health among females more than males. On the other hand, the highest two wealth quintiles had the least prevalence of mental disorders among males more than females.

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1.Introduction

Although, males and females share many similar health challengers, the differences are such that the health of females deserves particular attention. Within countries, the health of girls and women is critically affected by social and economic factors, such as access to education, household wealth and place of residence (WHO, 2009).

Gender norms and values, and resulting behaviors, are negatively affecting health. Fortunately, those gender norms and values are not fixed, they may change over time. So, the poor health consequences resulting from gender difference and gender inequalities are not static (WHO, 2009).

According to the world Bank statistics, Egypt is one of the lowest middle income countries with total population of 82.54 million (2011). Twenty two percent 22 % of the total population are at national poverty line (2008) where the percentage was only 6.19 % on 2005. GNI per capital in Egypt was is 2600 US \$ while the life expectancy at birth is 73 years for both sexes with 73 years for males and 75 years for females in 2011.

Since adolescence is a time of social, emotional and physical change, it is common to find young female are at risk of mental health problem. The risk factors driving these disorders include exposure to violence, poverty and gender norms that may restrict the girls` ability to attend school. Lack of care for these disorders during adolescence may cause serious consequences through adulthood and older age (WHO, 2009).

Also women are more likely than men to suffer from depression and anxiety. An estimated 73 million adult women world wide suffer a major depressive episode each year. In high income countries, about 40 % of women who report moderate or severe mental disorders received treatment during the previous 12 months, compared with only about 14 % in lower income countries. Moreover, in both high and low income countries women in the poorest householders report more mental disorders than women in wealthiest ones and only a very small population of them receive any treatment (WHO, 2009). Again, gender differences in social roles may play a part in causing these mental disorders.

This paper is concerned with examining the self-rated poor health reported by Egyptian youth between ages 15 and 29 years. This includes two life cycles of their lives i.e adolescence and adulthood.

Debates in health inequality

World Since the Second War, the improvements in health have been considerable especially in terms of survival and reduction of mortality levels (Wadsworth, 1997). Overall, youth is normally characterized by low level of disease and death. However, it can also be a time of risk and poor health particularly when associated with income distribution and disadvantaged social circumstances. Health of young people affects their other life transitions of education, employment and marriage.

Research on life history approaches to the study of health inequalities proved that social factors in childhood influence the process of biological development, and are the beginning of socially determined pathways to health in adult life. Thus, the earlier the attempts at reduction of inequalities are begun, the greater the chances of reduction in the inequalities for any given generation (Wadsworth, 1997).

Manor et al., 1997 showed that the magnitude of social inequalities in health largely depends on the choice of social measure. It compared the social class at birth to the educational qualifications in assessing the respondents their health as good or poor health. It concluded that selecting any method to measure social inequalities in health is important. However, the measure of social position appeared to be more important (Manor et al., 1997). Another study carried out in Spain showed that gender ethnic perspectives need to incorporate into clinical practice awareness more than issues of social class (Dardent and Ruiz, 2000).

WHO has launched a commission on Social Determinants of health not only to review existing knowledge but also raise societal debate and promote uptake of policies that will reduce inequalities in health within and between countries (Marmot, 2005). While Reidpath and Allotery in 2007 suggested that inequity of poor health experienced by poorer regions around the world is significantly worse than a simple analysis of health inequality reveals. By measuring the inequity and not simply the inequality, the magnitude of the disparity can be factored into future economic and health policy decision making (Reidpath and Allotey, 2007)

A recent study conducted in South Africa found that the burden of the major categories of illhealth and disability is greater among lower socioeconomic groups. Moreover, it proved that the lowest socioeconomic groups have the lowest level of health service utilization and derive the least benefits from service use (Ataguba et al., 2011)

As showed and discussed above, most studies that measured social health inequalities focused on both educational attainment and economic resources such as income or wealth. However, some studies considered these two indicators are so highly correlated so that no separation is possible. This view is based on the longstanding tradition that considers these two key dimensions of socioeconomic status as interchangeable rather than being based on empirical evaluations. On the other hand, most studies considered that education is the most important indicator that determines the classification of social position (Fuchs et al., 2010).

This paper addresses both educational attainment and wealth index as determinants of young people's health in Egypt. However, the paper examined them separately to try to establish which effect is more important.

Data

The "Survey of Young People in Egypt (SYPE), 2010 collected data from young people between the ages of 10 to 29 through their lives transitions. The SYPE sample covers all

governorates in Egypt including slum areas. A sample of 15029 of young people were interviewed. This paper focused on young people at two age groups (15 - 21) and (22 - 29) with total number of 10449. Details are shown at table 1A and 1B

2. Methods

Several methods are used to measure social inequalities in health. One of the most commonly used methods is the odds ratio (OR), which is used in this paper. The main advantage of the odds ratio is its simplicity in calculation and interpretation (Manor et al., 1997). Two logistic regression models are used. In the first model, the health was considered as dependent variable and was measured by a dichotomous variable (by depending on a self-rated health question where the respondents assessed their health as excellent, very good, good, fair or poor overall). This study combined those who rated their health as poor with those who rated their health as fair. Also, excellent rated health, very good rated health and good rated health were all combined together. In the second model, the health was measured by using another indicator which is the self-reporting questionnaire which developed by the world health organization to screen for common mental disorders. The SRQ -20 is a group of twenty yes/no question, and the respondent's score is the number of questions to which he or she answers yes. The tool is designed on the basis that the higher the score, the more likely there is a mental disorder. This study then used a SRQ-20 cutoff score of 8 or more as a positive screen for mental disorder and less than 8 score as a negative screen for mental disorder.

Socioeconomic and health indicators

This paper used two social indicators to classify the social position. As stated earlier, these social indicators are education and wealth or income. Educational qualifications are grouped into five categories (less than primary, primary, preparatory, secondary and vocational secondary, and university and above). While wealth was constructed, based on household asset ownership and housing characteristics, into five wealth scores the lowest, second, middle, fourth, and the highest (population Council, 2010). In this paper, the place of residence together with both of education and wealth were used because access to and availability of services like health , education, access to piped drinking water, sanitation conditions, and disposal of waste are very much depending on the place of residence urban, rural or slum.

In addition to wealth index, educational qualifications and place of residence, age is also used as an independent variable at two age groups (15-21) and (22-29), However, four models were applied for the older age group (22-29). Another

independent variable was introduced to those four models which is the occupational status because it was assumed that the respondent is employed since he or she finished their education.

3.Results and Discussion

Table (1A) shows the distributions of education, social class, age, and the place of residence categories, as well as the two health indicators. The gender gap seems to be very obvious in education, especially in the lowest extreme category where the percentage of females is almost four times greater than males who are less than primary educated. (13.95 and 3.6 for female and male respectively) Also, males tend to have higher qualifications than females except for the highest extreme where the percentages for both sexes are almost similar. The gap is even greater for employment where the percentage of employed females is almost six times less the percentage of males (8.71 and 52.58 for females and males respectively), while the percentage of non employed females are almost twice the percentage for males (91.92 and 47.42 for female and male respectively). On the other hand, the social class according to the wealth index categories has a similar distribution for females and males. The prevalence of good health as it was shown in selfrated health indicators are similar for females and males.

As for the self reporting questionnaire which reflects the mental health problems, it shows that females tend to have mental or social problems five times more than males (22.25 vs. 4.5 for females and males respectively). However, in table (1B) the two leading disorders are the same for both sexes. Having headaches is the first disorder reported by females (48.9 %) followed by feeling nervous, tense or worried (42.4 %), while the corresponding percentages for males were (25.3 % and 28.3 % respectively). Females having headaches are almost twice the percentage for males. Also, females feeling nervous is almost 1.5 times more than males.

Table(2) shows the odds ratios of the prevalence of poor health as the young people assessed their own. It shows four models where the odds ratios were estimated from logistic regression models. The first two were carried out for educational qualifications, age and residence for male and female separately. The other two were carried out for the wealth index, age and residence for both sexes. The first two indicate that higher education reduces the likelihood of poor health where all odds are less than one for both sexes (the category of education for primary graduated are not significant for both sexes). However, the odds for higher males education are lower than that for higher females education except for the university graduated and above where the female odds is lower than males. Which means higher education for males is having a greater negative effect on poor health than that for females. While the opposite is true for university graduates and above. Moreover the female odds for university graduates and above is the lowest compared to all odds which shows the great negative effect on the prevalence of poor health. As expected, residence in urban areas reduces the likelihood of poor health than rural for both sexes. The males odds for urban and rural residence are lower than those for females although it is not significant for males. Younger age seems to have a negative effect on poor health especially among females where the odds is less than the males odds. However it is not significant for males. The negative effect of wealth index seems more evident among females where higher wealth index reduces the likelihood of poor health and the females odds are lower than males odds. However, not all the wealth index quintils for males are significant except for the middle and the highest quintiles. Also, the females odds for the highest wealth index is the lowest compared to all odds which indicates the greatest negative effect on poor health. In contrast, the OR for urban and rural males are lower than that for females. Moreover, males who are residence in an urban or rural areas are having the lowest OR which means having the greatest negative effect on poor health. The age odds shows the same pattern of the former two models.

Table (3) declares the same pattern shown in table (2) where higher education reduces the prevalence of poor health and the males odds are lower than females odds except for university graduates. Still the category of primary education is not significant for both sexes. Also, the males odds for urban and rural residence are lower than those for females. Since this table shows the odds for the age group (22-29), it is assumed that they have already finished their education and engaged in employment. This variable shows a negative effect on poor health for both sexes although they are not significant for both.

A higher wealth index also generally reduces the likelihood of poor health for both sexes and still evident among females than males especially the two highest wealth quintiles. Also, the wealth index quintiles are highly significant for females model while the same is not true for males model. Residence in an urban or rural area also generally reduces the likelihood of poor health especially for males more than females. The odd ratio (OR) values for the employment are similar for both sexes, however they are not significant.

Table(4) shows the odds ratios where subjects assessed their mental health and social development according to the self – reported questionnaire. The first two models indicate that higher education, for both sexes, reduces the likelihood of poor mental health. However, the males education OR are the lowest ever when either compared with females OR or comparing with other males OR in all tables and highly significant which indicates the great negative effect on poor mental health. Also, the male university graduates and above OR here have the lowest OR ever followed by male secondary graduates. Younger males seem to suffer much less than young females from poor mental health (.505 vs. .997 for males and females respectively) although it is not significant for females.

As expected, higher wealth index reduces the likelihood of poor mental health. However and unlike the former two models (table 2 and 3), the males OR are less than those for females. Once again, young males suffer less than young females from poor mental health (0.573 vs. 0.995 for males and females respectively), yet it is not significant for females .

Table(5) clearly indicates that males university graduates and above and secondary graduates have the lowest OR (.250 and .336 respectively) compared with (.685 and .753 for females). That mean that those having higher stages of education are having the greatest negative effect on poor mental health. Those findings are similar to those of table 4 where the gender gap is in favour of males.

Almost all tables indicate that males OR for residence in an urban or rural areas are less than those for females. While employment odds for male are lower than for females (.399 vs. .972 for males and females respectively). However, it is not significant for females. Again, the OR for wealth index are almost constant with OR at table 4 with contrast to tables 2 and 3, where males OR for higher wealth index are lower than OR for females. Also, the odds for being an urban or rural resident continue the same pattern of lower males OR than females. The males OR for employment is lower than the females (.426 vs. .966). However, it is not significant for females.

Table(6) presents cross-tabulations for the self-rated health indicator. The educational qualifications are grouped into two categories, the first category is the elementary group and it includes primary and preparatory stages. The second category includes secondary and university and above stages. Also, the wealth quintiles are grouped into three classes. The lowest which includes the first and the second quintiles, the middle and the highest which includes the fourth and the highest quintiles. The table shows a comparison between the males and females percentages. As expected, both sexes with low education or low wealth have higher rates of poor health than those with higher education or wealth. However, female rates are lower than male rates.

But the more interesting finding is that among the poor health rated females the percentage of secondary graduates at the lowest wealth quintiles is lower than those elementary graduates at the middle wealth quintiles. This indicates that the educated poor females are better than less educated with greater wealth. The same pattern is seen among the poor health rated males who are secondary graduates and above at the middle wealth quintiles compared to the elementary graduates at the highest wealth quintile.

Table (1-A) distribution	of social	and health
measure		

	male	%	female	%
Total number	4884	100	6084	100
10000 1101001				
Age (15-21)	2596	53.15	2840	46.68
1160 (13 21)	2370	00.10	2010	10.00
$A_{00}(22-20)$	2288	16.85	3244)	53 32
Age (22-27)	2200	40.05	3244)	55.52
Education				
Less than primary	177	3.6	849	13.95
Primary	744	15.23	833	13.70
Preparatory	1284	26.29	1285	21.12
Secondary	2057	42.12	2335	38.38
University and		12.73		12.85
above	622		782	,
Place of residence				
Urban	1836	37.60	2077	34.14
Rural	2619	53.62	3403	55.93
Slum	429	8.78	604	9.93
				,,,,,
Wealth index				
quintiles				
Lowest	820	16.79	1167	19.18
Second	962	19.70	1260	20.95
Middle	1084	22.19	1275	20.96
Fourth	1068	21.87	1243	20.43
Highest	950	19.45	1139	18.72
- ingrest	200	171.0	1107	101/2
Employment				
status	25.50	53.50	520	0.71
Yes	2568	52.58	530	8.71
No	2316	47.42	5554	91.29
Self – rated	673	13.78	707	11.62
health fair/poor				
Self –rated health	4211	86.22	5377	88.38
good/excellent				
Self-reported				
questionnaire	001	4.5	1054	22.26
Poor	221	4.5	1354	22.26
boot	4663	95.5	4730	11.14

	variable	Male	Female
	Variable	yes	yes
1	Do you often have headaches?	25.3	48.9
2	Is your appetite poor?	17.0	32.7
3	Do you sleep badly?	16.4	33.8
4	Are you easily frightened?	7.4	40.6
5	Do your hands shake?	10.7	15.5
6	Do you feel nervous, tense / worried?	28.3	42.4
7	Is your digestion poor?	9.5	22.5
8	Do you have trouble thinking clearly?	17.7	27.3
9	Do you feel unhappy?	17.9	24.7
10	Do you cry more than usual?	4.4	23.7
11	Do you find it difficult to enjoy your dairy activities?	12.8	21.3
12	Do you find it difficult to make decisions?	17.9	26.9
13	Is your daily work suffering?	6.8	17.7
14	Are you unable to play a useful part in life?	8.3	17.6
15	Have you lost interest in things?	8.9	15.0
16	Do you feel that you are a worthless person?	3.4	11.1
17	Has the thought of ending your life been on your mind?	2.0	9.5
18	Do you feel tired all the time?	6.1	23.5
19	Do you have uncomfortable feelings in your stomach?	5.6	19.1
20	Are you easily tired?	5.0	24.4

Table (1-B) distribution of self-reported questionnaire

Table (2) Health Inequalities measured by the odds ratios. Self-rated health

		Male	9		Female			
Variable	B.	S.E	Р.	Odds	B.	S.E	Р.	Odds
	coefficient		value	ratios	coefficient		value	ratios
Education less than primary								
(reference								
category)								
Primary	-0.252	0.210	0.229	0.777	- 0.167	0.139	0.232	0.847
Preparatory	-0.591	0.208	0.004	0.559	-0.383	0.136	0.005	0.682
Secondary	-0.650	0.196	0.001	0.522	-0.486	0.116	0.000	0.615
University and above	-0.597	0.220	0.007	0.550	-0.975	0.172	0.000	0.377
Age group $(15 - 21)$	-0.094	0.104	0.363	0.910	-0.228	0.091	0.012	0.796
(22-29) (reference category)								
Residence urban	-0.713	0.136	0.000	0.490	-0.416	0.140	0.003	0.660
Rural	-0.556	0.126	0.000	0.573	-0.248	0.129	0.054	0.780
Slum (reference category)								
Wealth Index first (reference								
category)								
Second	-0.026	0.132	0.844	0.975	-0.379	0.120	0.002	0.684
Middle	-0.282	0.134	0.035	0.754	-0.259	0.117	0.027	0.772
Fourth	-0.179	0.134	0.190	0.836	-0.484	0.128	0.000	0.616
Highest	-0.409	0.158	0.010	0.665	-0.895	0.155	0.000	0.408
Age group $(15-21)$	-0.074	0.094	0.433	0.929	-0.170	0.083	0.041	0.844
(22-29) (reference category)								
Residence Urban	-0.666	0.137	0.000	0.514	-0.321	0.141	0.023	0.725
Rural	-0.624	0.132	0.000	0.536	-0.304	0.132	0.022	0.738
Slum (reference category)								
Percentage of correctly		86.2				88 3		
classified cases		00.2				00.5		
Significant $(P < 0.05)$								

Highly significant (P < 0.03)

	Male				Female			
Variable	B.	SE	Р.	Odds	B.	SE	Р.	Odds
	coefficient	5. E	value	ratios	coefficient	э.е	value	ratios
Education Primary	-0.028	0.258	0.913	0.972	-0.076	0.174	0.661	0.927
Preparatory	-0.565	0.276	0.041	0.569	-0.400	0.192	0.038	0.670
Secondary	-0.706	0.231	0.002	0.494	-0.539	0.135	0.000	0.583
University and above	-0.598	0.247	0.016	0.550	-0.940	0.181	0.000	0.391
Residence urban	-0.482	0.181	0.008	0.618	-0.363	0.175	0.038	0.695
Rural	-0.402	0.171	0.019	0.669	-0.247	0.161	0.124	0.781
Employment Employed	-0.170	0.128	0.184	0.844	-0.038	0.176	0.853	0.968
Not employed								
(reference category)								
Wealth Index Second	-0.101	0.180	0.574	0.904	-0.424	0.151	0.005	0.654
Middle	-0.410	0.186	0.028	0.664	-0.283	0.149	0.057	0.754
Fourth	-0.215	0.184	0.243	0.806	-0.536	0.162	0.001	0.585
Highest	-0.370	0.207	0.075	0.691	-1.053	0.199	0.000	0.349
Residence urban	-0.458	0.182	0.012	0.632	-0.264	0.177	0.135	0.768
Rural	-0.455	0.177	0.010	0.635	-0.292	0.165	0.076	0.747
Employment Employed	-0.116	0.126	0.358	0.891	-0.126	0.172	0.465	0.882
Not employed								
(reference category)								
Percentage of correctly classified		85.4			87.6			
cases		0.5.4				07.0		

Table (3) Health Inequalities measured by the odds ratios. Self-rated health (age group 22 - 29)

Significant(P < 0.05)Highly significant(P < 0.01)

Table (4) Health Inequalities measured by the odds ratios. Self-reported questionnaire

	Male				Female			
Variable	B. coefficient	S.E	P. value	Odds ratios	B. coefficient	S.E	P. value	Odds ratios
Education Primary	-1.157	0.296	0.000	0.314	-0.167	0.116	0.151	0.846
Preparatory	-1.063	0.278	0.000	0.345	-0.310	0.111	0.005	0.733
Secondary	-1.374	0.255	0.000	0.253	-0.330	0.096	0.001	0.719
University and above	-1.768	0.326	0.000	0.171	-0.433	0.126	0.001	0.648
Age group (15 – 21)	-0.683	0.177	0.000	0.505	-0.003	0.070	0.965	0.997
Residence urban	-0.143	0.237	0.547	0.867	-0.071	0.105	0.497	0.931
Rural	-0.365	0.230	0.113	0.694	-0.432	0.101	0.000	0.649
Wealth Index Second	-0.382	0.215	0.077	0.683	-0.157	0.096	0.102	0.855
Middle	-0.684	0.223	0.002	0.505	-0.205	0.097	0.034	0.814
Fourth	-0.503	0.218	0.021	0.604	-0.476	0.104	0.000	0.621
Highest	-0.983	0.255	0.000	0.374	-0.577	0.113	0.000	0.562
Age group (15 – 21)	-0.556	0.157	0.000	0.573	-0.005	0.064	0.938	0.995
Residence urban	-0.050	0.238	0.838	0.951	-0.018	0.106	0.867	0.982
Rural	-0.482	0.239	0.044	0.618	-0.538	0.105	0.000	0.584
Percentage of correctly classified cases	95.6 77.7							

Significant (P < 0.05)

Highly significant (P < 0.01)

	Male				Female			
Variable	B. SE		Р.	Odds	B .	SE	P. Odd	
	coefficient	5. L	value	ratios	coefficient	5. L	value	ratios
Education Primary	-0.571	0.380	0.133	0.565	-0.294	0.157	0.112	0.780
Preparatory	-0.457	0.374	0.222	0.633	-0.157	0.156	0.315	0.855
Secondary	-1.090	0.322	0.001	0.336	-0.284	0.114	0.012	0.753
University and above	-1.386	0.373	0.000	0.250	-0.378	0.136	0.006	0.685
Residence urban	-0.442	0.290	0.128	0.643	-0.089	0.135	0.508	0.093
Rural	-0.480	0.277	0.083	0.619	-0.323	0.130	0.013	0.724
Employment	-0.918	0.191	0.000	0.399	-0.029	0.129	0.824	0.972
Wealth Index Second	-0.643	0.283	0.023	0.526	-0.189	0.126	0.134	0.828
Middle	-0.717	0.275	0.009	0.488	-0.242	0.128	0.058	0.785
Fourth	-0.751	0.281	0.008	0.472	-0.342	0.133	0.010	0.711
Highest	-1.264	0.336	0.000	0.283	-0.559	0.146	0.000	0.572
Residence urban	-0.357	0.292	0.222	0.700	-0.142	0.137	0.299	1.152
Rural	-0.650	0.288	0.024	0.522	-0.389	0.134	0.004	0.678
Employment	-0.853	0.187	0.000	0.426	-0.034	0.126	0.785	0.966
Percentage of correctly classified	05.0							
cases	95.0					//./		
Significant $(P < 0.05)$	Highly signi	Highly significant $(P < 0.01)$						

Table (5) health inequalities measured by the odds ratios. Self-reported questionnaire (age group 22 – 29)

	Table	(6) Self	'-rated	health b	y education	and wealt	h status fo	r males a	nd females
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CON	Hoolth 1	1 Education		Wealth index quintiles %			
SEX	Health I Education		Lowest	Middle	Highest		
	Door/fair	Elementary	16.54	14.0	13.00		
Malaa *	FOOI/Tall	Secondary and above	14.20	11.48	12.77		
wrates	Good/	Elementary	83.46	86.00	87.00		
	excellent Secondar		85.80	88.52	87.23		
Female **	Door/fair	Elementary	14.51	13.76	10.07		
	FOOI/Tall	Secondary and above	11.30	11.97	8.60		
	Good/	Elementary	85.49	86.24	89.93		
	excellent	Secondary and above	88.70	88.03	91.40		

* Total Number of males = 4884 ** Total number of females = 6084

4.Conclusion

The first main finding is that male education has a larger impact on both health indicators than female education. Analyzing and comparing the results proportionate almost reveale a consistent reduction in the likelihood of poor health with higher education for both sexes.

The self-rated health two models revealed that the university graduates and above have a gender gap in favour of girls; (0.173) for the first model at ages between (15 - 29) and (0.159) at age group (22 - 29) (tables 2 and 3)

When measuring the health inequality by using the self-reported questionnaire, the males education OR were the least among all models when either compared with other males odds or compared with females odds. This reflects that education has a larger impact on reducing the males mental disorders especially among the highest two levels of education (table 4).

The highest two wealth quintiles had lowest prevalence of poor health among females more than males either for the whole sample or for the older group (tables 2 and 3). On the other hand the highest two wealth quintiles had the least prevalence of mental disorders among males more than females either for the whole sample or the older group (tables 4 and 5).

Residence in urban or rural areas generally reduces the likelihood of poor health or mental disorders among males more than females for all models except two cases, where OR of residence in rural areas among females was lower than males (table 4).

Young age reduces the likelihood of poor health among females than males whereas; it reduces the likelihood of mental disorders among males than females.

Employment generally reduces the likelihood of poor health or mental disorders among males more than females although most of the odds are not significant.

5.Recommendation

In Egypt, many girls are living dangerously either because they have little choices or because their parents are making the wrong choices in their lives such as not sending them to schools. Schools are main source of support for girls and young women. They can provide a social space where may be few other social outlets. Thus, those parents might choose to educate and encourage their daughters in order to prevent suffers to them and to the other generations whom are coming after.

Egyptian government especially Ministry of Education should play a stronger role in reducing the gender gap in attending schools and introducing new subjects to increase the students awareness and understanding of risks to health. Also, sensible laws can reduce the gender gap in education.

Since norms and behaviors are of a great concern here, most people will choose to adopt better behaviors especially when they receive accurate information and get them involved in recognizing the problem discussed in their research. Thus, government will need to improve public dialogue and communications and develop greater levels of trust for risk prevention among all interested parties.

Since higher education means better occupation which means in turn better income and wealth status, girls must be encourage to be involved in making decisions that increasing their share of employment.

In general, the priority should be given to controlling the risk factors that are well known, common and widespread among females in the Egyptian society.

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