

Gender inequities and HIV prevalence and AIDS mortality: Findings from the United Nation countries

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Abstract

In the last years, the prevalence Human immune deficiency virus (HIV) have increased worldwide, specifically in developing countries due to a number of causes. This study aimed was to determination the relationship between gender inequities, HIV prevalence and AIDS mortality in the United Nation countries. A cross-sectional retrospective study was conducted in 2013 and all the countries (187 countries) which were included in the WHO and UN Annual Reports (2012) were considered. One hundred and forty four countries were selected which had the completed indices of gender inequities (GI), HIV morbidity and AIDS mortality in the reports. The findings showed that there was direct association between the gender inequities, HIV prevalence and AIDS mortality ($p=0.001$). The level of GI among low-income countries (0.41) was higher than others groups, and approximately twice as much as that of high-income countries (0.19). It was noted that GI had a significant association with the AIDS mortality in the high-income countries ($p=0.031$). Moreover, in the upper middle income countries, the both indices (HIV morbidity and AIDS mortality) had significant positive association with the GI ($p<0.05$). However, the highest level of significant relationship was between being HIV/AIDS mortality and morbidity with the GI in low income countries ($p<0.001$). It was observed that GI led to HIV/AIDS mortality and morbidity in all countries specifically in developing countries. Specific strategies should be implemented to decrease the gender inequities by the provision of women education and empowermen and improvement of socio-economic status to reduce HIV/AIDS morbidity and mortality.

Keywords: Gender inequities, HIV, AIDS, Developing countries, United Nation countries.

Introduction

Acquired immune deficiency syndrome (AIDS) emerges as a result of being infected with human immune deficiency virus (HIV). This deadly illness, in its third decade of appearance in the twenty-first century, has become a widespread disease that threatens the world population.¹ This disease in many countries, especially in developing countries, is rooted in many factors such as unemployment, addiction to injected drugs, poverty and prostitution, and holds a dreadful place as the second most common cause of death in the world.²

The possibility of HIV spread is very high among the vulnerable strata of community, so that its scope has embraced a vast area from Africa to India, and the reports showed that it is spreading quickly in developing countries.¹ It has been estimated the approximately 6800 people are daily infected with HIV, and more than 5700 infected patients lose their life due to the lack of health-care facilities.³ In addition, AIDS related death in the European countries, especially in the Eastern European has also risen.⁴ AIDS is not only a health-related problem, but also it is a socio-economic plague, and its spread in African countries, whose population have low income, is far more common.⁵

According to the spread and the high risk of this disease, one of the aims of the United Nation (UN), and one of the

Practice Points

- Gender inequity (GI) is a significant socio-economic and public health problem in the united nation countries.
- GI in low income countries is higher than other countries.
- GI had direct correlation with HIV/AIDS morbidity and mortality.
- A significant relationship observed between GI and HIV/AIDS morbidity and mortality.
- Specific strategies should be implemented to decrease the gender inequities by the provision of women education and empowerment and improvement of socio-economic status to reduce HIV morbidity and AIDS mortality.

development indices for the current millennium is the reduction of infection via sexual intercourse, especially HIV.⁶ This is important as the infection affects women more than men due to biological, social and cultural factors.⁶ On the basis of the published information by the international organizations, the number of the people infected with HIV was almost 34 million people of which 48% were pregnant women.⁷ According to the

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spread of sexual transmitted diseases (STD) especially AIDS, international organizations especially World Health Organization (WHO) have tried to evaluate and improve the women's health.⁸ Studies conducted in the different countries showed that the qualities of women's health were lower than that of men, and gender inequality (GI) and male dominant society are the main reasons.^{9,10} Moreover, the UN has already declared the reduction of the GI as one of the developmental goals.¹¹ Gender Inequality Index (GII) is a combinative measure that reflects the gender inequality between men and women in three aspects: pregnancy health, empowerment, and labor.¹² The magnificence of this numerical index varies from zero (when women and men are equal) and one (when there is inequality between the two sex according to all aspects). The aspect of health is measured through two indices of the ratio of mothers' death and the rate of teenage pregnancy. The aspect of empowerment is measured by two indices of having a place at parliament seats occupied by women and the level of achieving intermediate and higher levels of education.¹¹ The aspect of labor is measured by women's participation in labor. These three aspects are actually three aspects of human sources development, a factor which is destroyed by gender inequality.¹²

Women especially who are at the age of pregnancy (15 to 49 years old), due to being placed in discriminative situations and being pressurized by social inequality, are more exposed to the gender inequality.¹³ Gender and social inequality put on immense influence on social and economic status of people, especially their income. Some studies reported that women being infected with HIV because of poverty and high risk affairs.^{9,14} In addition, women living in developing countries have low knowledge of HIV morbidity, which is one of the factors of GI in these countries.¹⁵ Whereas, WHO experts believe that evaluating the knowledge of HIV morbidity in communities can be helpful to reduce the number of people infected with HIV.¹⁶ Moreover, women education, especially in developing countries, leads to increase quality of life of women and their family members.¹⁷ The present study was aimed to evaluate the association between gender inequality, HIV morbidity and AIDS mortality in the UN member countries in 2012.

Materials and Methods

A cross-sectional study was conducted in 2013 and all countries (n-187) which were included in the WHO and UN Annual Reports were considered.¹¹ The countries which had partial data (43 countries) were excluded. Therefore, 144 countries were selected which had the indices of GI, HIV morbidity and AIDS mortality in 2012 Reports. Based on the country's income levels and the distribution of diseases,^{9,14} the countries were categorized in to four income groups, i.e. high income (\$12,476 or more), upper middle income (\$4,036 to \$12,475), lower middle income (\$4,036 to \$12,475) and low income (\$1,025 or less). Data was collected by referring to the World Health Report in 2012 and the Human Resources Development Report in 2012.¹⁸

All the statistical analyses were performed using the SPSS statistical software (version 16). Descriptive statistics, Pearson correlation coefficient and one-way ANOVA were used to analyze the data. Besides, *p*-values less than 0.05 were considered as statistically significant.

Results

The results of the study showed that 45% of the UN countries were low or low-middle income (Table 1). Moreover, a positive association between the GI, HIV morbidity and AIDS mortality was observed in all countries specifically in developing countries (Table 2). In addition, the level of GI among low-income countries (0.41) was higher than others groups, and approximately twice as much as that of high-income countries (0.19).

Giving to the results, the GI had a significant association with the AIDS mortality in the high-income countries ($p=0.031$) (Table 3). Moreover, in the upper middle income countries, the both indices (HIV morbidity and AIDS mortality) had significant positive association with the GI ($p<0.05$). In the countries with lower-middle income, only being infected with HIV morbidity had association with the GII ($p=0.029$). However, the highest level of significant relationship was between being HIV morbidity and AIDS mortality with the GI in low income countries ($p<0.001$). It indicates that the gender inequality in this category is more affect on being affected by HIV and consequently death in comparison to the others income groups. Besides, the results of one-way ANOVA showed that the GII had a significant relationship between four categories of the UN countries.

Discussion

The key findings of the study showed that GI led to HIV morbidity and AIDS mortality in the UN countries. This result has confirmed in some studies.^{19,20} A case study in 2012 showed that in the families in which the sexual intercourse was dominated by the man, the level of the GI increased. In addition, the possibility of having sexual intercourse with prostitutes increased, and this might lead to increase HIV morbidity in wife.¹⁹ Moreover, a study conducted in high risk area of HIV showed that the most of community believed that women had more vulnerable to being infected with HIV than men.²⁰ The GI and women inadequate social and economic conditions are considered a major obstacle in countries development.²¹ Hence, increasing GI leads not only to the spread of AIDS, but also to a slow rate of development in countries.

Table 1: Four income groups of the United Nation countries

Income groups	UN Countries (n-187)	Percent
High income	49	26.2%
Upper middle income	52	27.8%
Lower middle income	51	27.3%
Low income	35	18.7%

Table 2: Gender inequality Index and prevalence of HIV/AIDS mortality in the United Nation countries

Variables	Mean	SD	r	p- value
Gender inequity	0.3942	1883	-	-
HIV morbidity	1185.4	2732.9	0.908	0.000
AIDS death	59.43	124/3	0.355	0.000

Table 3: Gender inequality, HIV prevalence and AIDS mortality in four income group countries

Groups	Variables	Frequency	Mean	SD	r	p-value
High income	Gender Inequity Index	44	0.19	0.18	1	-
	HIV morbidity	42	52.23	113.48	0.268	0.055
	AIDS mortality	39	8.53	20.77	0.314	0.031
Upper middle income	Gender Inequity Index	37	0.29	0.18	1	-
	HIV morbidity	35	61.49	13.26	0.366	0.025
	AIDS mortality	37	1.44	35.07	0.317	0.041
Lower middle income	Gender Inequity Index	37	0.38	0.19	1	-
	HIV morbidity	33	34.94	63.60	0.363	0.029
	AIDS mortality	33	7.75	15.14	0.280	0.067
Low income	Gender Inequity Index	28	0.41	0.18	1	-
	HIV morbidity	29	78.39	141.10	0.499	0.006
	AIDS mortality	29	1.31	22.49	0.489	0.007

In addition, inequity in the high income and upper middle income countries lead to AIDS mortality. Logie *et al.*²² stated that the level of being infected with HIV and death related that in women living in the suburbs of Canadian cities was rising due to gender and racial inequality. Gohagan *et al.*²³ found that there was evidence which GI between men and women result in less access to HIV test, treatment and programs related to cure. Moreover, in the some East European countries as upper middle income, the rate of AIDS mortality is rising very quickly, and it has highly damaged their health service systems.⁴ Thus, health policy makers in these countries should be attention to this index and decrease the mortality of this disease.

Moreover, GII in low-income countries result in AIDS mortality more than the others categories. It means that poverty and low developing level increase the possibility of HIV morbidity and death in these countries more than the others countries. Also, reduce the incidence of AIDS-related deaths is a main goal of the UN Millennium Development Goals. A case study in India indicated that men, because of traditions and customs, were allowed to marry many wives as a result the possibility of being infected with HIV among women risen.²⁴ Also, because of GI the women living in the suburbs are of higher vulnerability of AIDS.²⁵

A study conducted in Uganda showed that the rate of AIDS prevalence among women was 27%²⁶ and the most of these women were engaged in prostitution only to provide their children's needs.¹³ Therefore, GI decreases women's social and economic potential and opportunity for a better life, and results in the increase of high risk behaviors and subsequently the increasing widespread of STD such as AIDS. Hence, GI in poor countries is higher than others countries, and the possibility of being infected with HIV is higher in the poor countries.

Therefore, it is concluded that in all UN countries GI is a main cause of being infected with HIV and subsequent death of AIDS. Garica and de Souza²⁷ reported that the AIDS knowledge in 45 year old women and low-income countries was less than others women and these women were most vulnerable group to AIDS. Moreover, 15% of the women who suffer from GI were infected with HIV. Also, decrease of GI and violence towards women were the most important activities to prevent of AIDS mortality.²⁸

Conclusion

Gender inequity is a significant socio-economic and public health problem in the united nation countries. We found that GI led to HIV mortality and AIDS morbidity in all countries specifically in developing countries. Since reduction of the incidence of AIDS-related deaths is a main goal of the UN Millennium Development Goals, therefore, some strategies are recommended to decrease GI-related morbidity and mortality which include: provision of women education and empowerment and improvement of socio-economic status.

Competing interest

The authors have declared that no competing interests exist.

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