Original Article

AIDS and Human Security in Orphan Adolescents, Sub-Saharan Africa

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■Abstract

Human security has been defined as the dignity, mental peace, and stability of the individual (UN 2003). This study examines human security factors of adolescents orphaned by AIDS in two sub-Sahara African countries – Uganda and South Africa. Six hundred and eighty-eight adolescents aged 10-19 (M=14.1 years) in three groups: AIDS-orphaned (n=178), other-causes orphaned (n=217), and non-orphaned (n=293) are recruited from schools, and child support centres in Kampala (Uganda, n=371), and Mafikeng/Klerksdorp (South Africa, n=317). Human security factors are food availability, perceived good health, friendly environment, and education. Others are self-esteem, social support, and foster/parental care. Child abuse, social discrimination, anxiety and depression are categorized as human security threat factors. The ANOVA showed that while adolescents orphaned by other-causes scored lower human security than did non-orphaned group, AIDS-orphaned adolescents scored lowest human security in the 3 groups. We concluded that although orphans face great human security threat factors, adolescents orphaned by AIDS face the greater threats.

Keywords: human security; orphan health; AIDS-orphaned adolescents

1. Introduction

1.1 Human Security

The traditional concept of security, with roots in the cold-war era, is the territorial protection of the state against external aggression; in most cases by military power. The result is the unprecedented arms race of the era (for defense and deterrence) that has failed to guarantee world peace. In the post-cold war era has emerged the contemporary advocacy for paradigm shift from “state” to “human” security.

Human security is less about armament or surveillance cameras to monitor crime, but more about the dignity and well-being of the individuals of the nation. It is the totality of grass root food security, health security, environment/community security, and political security (UNDP, 1994) for the mental peace and comfort of the individual. Human security not only *protects* the individual from the daily dangers of violence, hunger and poverty, but *empowers* him/her to overcome these dangers (UN, 2003). Ultimately, the individual’s security translates to community, state/national, regional, and international safety.

According to US President J.F. Kennedy, “Political sovereignty is but a mockery without meeting poverty, illiteracy and disease. Self-determination is but a slogan if the future holds no hope” (UN

General Assembly, 1961). Human security guarantees 3 freedoms to the individual: freedom from fear, freedom from want, and freedom to live in a dignified mental state (UN, 2003). These freedoms are crafted in the UN Millennium Development Goals. Regrettably, one of the greatest threats to meeting the millennium goals and human security are the challenges of global infectious diseases, particularly HIV/AIDS.

1. 2 HIV/AIDS

Over the centuries, science has resolved the global infectious disease challenges of the time – from the bubonic plague of the medieval era in Europe to the cholera in Latin America, pneumonic plague in India, ebola in Africa, dengue fever in Southeast Asia, mad cow in UK, anthrax attack in USA, SARS (severe acute respiratory syndrome) in China, bird flu in Korea, and swine flu in Mexico, among others – but AIDS that has defied resolution/cure.

"HIV/AIDS is … the greatest weapon of mass destruction on the earth" (Collin Powell, US Secretary of State, 2004). It is a threat to human peace and security (US National Intelligence Council, 2000; G8 meetings in Okinawa 2000, in Genoa 2001; UN Security Council, 1999). "The impact of AIDS is no less destructive than that of warfare itself …. Last year, AIDS killed about 10 times more people in Africa than did armed conflict." (Koffi Annan, UN Secretary General, June, 2000). In July 2001, the UN Resolution 1308 officially recognized AIDS as the global "risk to [human] stability and security" of our time.

Since its emergence over a quarter of a century ago, AIDS has claimed more lives than the two World Wars, the Vietnam War and the Korean War combined did (*Washington Post Editorial*, 2000). In 2007 alone, about 2 million adults and children died of AIDS, 33.2 million living with the virus, and 1.7 million new infections reported, worldwide (UNAIDS, 2008). Of these, over 67% occurred in sub-Saharan Africa (UNAIDS, 2008). Among children and adolescents below 18 years in sub-Saharan Africa, over 12% (or 42 million) of the children are orphans and 35% (or 15 million) of them orphaned by AIDS (UNAIDS, 2006).

1.3 Orphaning

Adolescents orphaned by AIDS may experience unique human security threat factors (Chitiyo, Changara, and Chitiyo, 2007). In sub-Saharan Africa, they face dual sad experiences: first, they are affected by AIDS when parent falls sick and they have to shoulder stressful responsibilities such as nursing ailing parent and/or engage in income generating activities; next they are affected by orphaning when parent dies (Gillespie, Norman, & Finley, 2005). These adolescents tend to grieve longer before parental death than other orphans, owing to the human wasting, AIDS-defining illnesses that often precede death (WHO, 2005). Because of the moral shame and life-terminality associated with AIDS, children left behind by AIDS-deceased parents may encounter higher externalized (Cluver, Gardner, & Operario, 2008) and internalized (Nyblade et al., 2003) social stigma/discrimination than children orphaned by other reasons. It is often

believed that AIDS-orphaned children, like their departed parents, may be HIV-positives who may die earlier than the “normal” children.

According to the UN, the distinctive social characteristic of AIDS is that it is more likely than other causes of death to create double orphaning - the loss of both parents (UNAIDS, UNICEF, & USAID, 2004). In South Africa and Uganda, double orphaning is four times more likely in AIDS-affected homes than in other homes (UNAIDS, UNICEF, & USAID, 2004). Studies of adolescent parental loss report that orphans tend to encounter such human security threat factors as social depression (Furukawa, Yokouchi, Hirai, Kitamura, & Takahashi, 1999), personality disorders (Paris, Zweig-Frank, & Guzder, 1994), anxiety/insomnia (Tweed, Schoenbach, George, & Blazer, 1989), hopelessness, and frustration (Mbozi, Debit, & Munyati, 2006). Abebe and Aase (2007), however, disagree. They argue that the symptomatic construct of orphans are media-induced stereotyping, orchestrated by academic scholars of traditionalist persuasions. Most orphans have the resilience and agency to get on with the challenges of life following parental death (Abebe & Aase, 2007).

The purpose of this study is to examine the human security of sub-Sahara African adolescents orphaned by AIDS. Human security is defined as mental peace and stability of the individual (UN, 2003; UNDP, 1994). The design is people-focused rather than hardware-concerned. Thus it captures the main thrust of human security – the individual. We hypothesized that adolescents affected by AIDS may show lower human security factors than

those orphaned by other reasons.

2. Method

2.1 Participants

The initial study participants are 957 sub-Sahara African adolescents in Uganda (n=474) and South Africa (n=483), recruited from 9 community schools, and 6 NGO child support centres in two towns – Mafikeng/Klerksdorp (South Africa) and Kampala (Uganda). The World Health Organization definition of adolescence as persons aged 10-19 years (WHO, 2003), and the UN classification of orphanhood as the loss of one or both parents (UNAIDS, UNICEF, & USAID, 2004) guided the study.

The study design has 3 groups: AIDS-orphaned, other-causes orphaned, and non-orphaned. Participants who responded in the affirmative to the questions: “Is your father living? (Yes/No); is your mother living? (Yes/No)” are categorized as non-orphans (n=293). Those who responded “no” to either question are asked the cause of death: “1. HIV/AIDS, 2. Others, 3. Don’t know.” Responses 1=HIV/AIDS (n=178), and 2=Others (n=217) are so categorized. Those who “don’t know” cause of parental death (n=269) are excluded from the study.

2.2 Ethical consideration

The Uganda National Council for Science and Technology (UNCST), the School of

Economics & Decision Sciences, North-West University, South Africa, and the Department of Human Care Science, University of Tsukuba, Japan, approved the study protocols, which required confidentiality, anonymity, and voluntary participation of the study participants (Mann & Tolfree, 2003).

Interviewers were Luganda (Uganda) and Xhosa/Afrikaans (South Africa) speaking research collaborators. When expedient the interviewer-administered questionnaire method was adopted for the low educational level participants; otherwise the self-report method was dominantly used. The first method required the interviewer to read out the question items in the local language to the respondent, and filled out the questionnaire on his/her behalf. In the second, the respondent completed the questionnaires unassisted. The interview duration lasted approximately 45 minutes per session at the end of which the respondent received a ball pen.

2.3 Measures

Food availability, perceived good health, education, friendly environment, self-esteem, social support, and foster/parental care as human dignity enhancing factors constituted the human security measures. In contrast, factors such as child abuse, social discrimination, anxiety, and depression are human security threats (UN, 2003).

We utilized Schwarzer and Schulz (2000) Received Support Scale, as adapted (alpha=.72), to estimate *perceived social support* received by the adolescents. The measure positively associated with self-esteem ($r = .42$, $p < .01$) and negatively with anxiety ($r = -.37$, $p < .01$). The

measure requires the respondent to “think about person(s) that is closest to you - your friend(s), guardian(s), or parent(s)/foster parent(s) - how does this person treat you?” Typical items are: S/he “is there when I need him/her; shows love to me; takes care of my financial needs; in general, I am satisfied with the way s/he treats me.”

Self-esteem is estimated with the Rosenberg (1965) Self-Esteem Scale, the most utilized measure of the favorable/unfavorable perceptions of the self (Blascovich & Tomaka, 1991). The Cronbach alpha for the Scale in the present study is .60, which compares favorably with the value found by Lorenzo-Hernandez and Ouellette (1998). The measure shows negative associations with anxiety ($r = -.34$, $p < .01$), and social discrimination ($r = -.38$, $p < .01$), suggestive of its validity.

We assessed *foster/parental care* with the Parker, Tupling, and Brown (1979) Parental Bonding Instrument (PBI). The PBI assesses both parental care and parental over-protection. Support for the reliability and validity of the PBI has been reported (Neale et al., 1994). We utilized the “care” subscale (alpha = .82) which estimates empathy, affection, warmth, and independence in the present study. Typical items include parents/foster parents: are affectionate to me; understand my problems and worries; let me do things I enjoy doing; enjoy discussing things with me; give me as much freedom as I want.

We utilized the anxiety subscale of the renowned General Health Questionnaire (GHQ-28, Golderberg & Hillier, 1979) to estimate *anxiety*. The subscale (alpha = .82) negatively ($r = -.34$, p

< .01) correlates with self-esteem, and positively (r = .40, p < .01) with the Weissman, Orvaschel, and Padian (1980) Center for Epidemiological Studies Depression Scale (CES-DC), as adapted.

The CES-DC, which test-retest reliability and concurrent validity are adequate (Faulstich, Carey, Ruggiero, Enyart, & Gresham, 1986) measures *depression.* Sample items on the Scale (alpha=.77) include: "I was bothered by things that usually don't bother me; I didn't feel like eating, I wasn't very hungry; I wasn't able to feel happy, even when friends tried to make me feel good; I felt like I was too tired to do things."

The 1995 Detroit Area Study Measure of Discrimination as modified (alpha = .77) measures *social discrimination*. In your daily life, *compared to other people around you,* do you: Feel differently treated? Feel unfairly treated? Made to feel inferior? Prevented from doing things others are allowed to do? People behave as though they are afraid of you? – are the typical questions. The measure correlates positively with depression (r = .38, p < .01), but negatively with social support (r = -.27, p < .01).

The *Child abuse* scale measures the physical, verbal, sexual, and labor dimensions of child abuse (Bagley & King, 1990). For example, are you - physically beaten in a manner you consider unfair; verbally abused in a manner you consider unfair; forced to "sleep"/have sex with anyone; forced against your wish to work on the farm for someone? The alpha reliability of the measure, which discriminates depression (r = .22, p < .01) and self-esteem (r = -.27, p < .01) is 0.76.

Food availability. On a scale of 0 to 3 times, respondents rated their daily meal intake.

Perceived good health: On a score of 0=don't know, 1=sick, 2=a little sick, 3=good health, respondents rated their perceived health status. We scored *If currently attending school* as Yes=2, No=0. *Friendly environment* is estimated with the question: Is the person you are living with kind to you? Yes=2, No=0.

Human security factors (25 items, alpha = .86) are the summation of food availability, friendly environment, good health, currently attending school, social support, parental/foster care, and self-esteem scores. *Human security* threat factors (24 items, alpha = .87) summated child abuse, social discrimination, anxiety, and depression scores.

3. Analysis

We performed the alpha reliability of the human security factors to estimate the internal consistency of the measures. Table 1 shows Pearson's directional association of the factors with human security to establish the validity of the measures. We executed the ANOVA of human security factors in the 3 groups to estimate the performance of the AIDS-orphaned adolescents (Table 2). We separated the orphan groups into single and double orphan-types, and examined their human security scores (Table 3).

Table 1.
Pearson's correlation coefficients showing the association of human security with its factors

	child abuse	social discrimi-nation	depre-ssion	anxiety	social support	foster/ parental care	self esteem	good health	food	kind environ-ment	school	human security
human security	-0.40 **	-0.35 **	-0.23 **	-0.43 **	0.83 **	0.84 **	0.69 **	0.40 **	0.45 **	0.43 **	0.09 **	1.00
human security threat	0.59 **	0.71 **	0.75 **	0.77 **	-0.40 **	-0.32 **	-0.43 **	-0.20 **	-0.32 **	-0.27 **	-0.07 *	-0.47 **

**p < .01

Table 2
ANOVA showing lowest human security factors in the AIDS-orphaned group

Variables	AIDS orphaned[a] n	M	(SD)	Other-causes orphaned[b] n	M	(SD)	Non orphaned[c] n	M	(SD)	Bonferroni Posthoc
1. Child abuse	176	3.33	(2.79)	215	2.75	(2.95)	293	2.06	(2.06)	a>b*, a>c**
2. Depression	178	10.95	(5.05)	217	9.92	(5.06)	292	9.21	(5.17)	a>b*, a>c**
3. Social discrimination	176	6.96	(6.96)	216	5.29	(3.73)	293	6.06	(4.37)	a>b**, a>c*
4. Anxiety	176	11.84	(6.34)	215	6.28	(4.33)	292	5.49	(3.77)	a>b**, a>c**
5. Parental/foster care	176	11.84	(6.34)	216	14.06	(6.58)	293	15.81	(6.00)	a<b**, a<c**
6. Self-esteem	178	14.25	(4.94)	217	16.29	(4.97)	293	17.24	(4.64)	a<b**, a<c**
7. Social support	176	8.12	(4.41)	215	9.52	(4.12)	292	10.01	(4.11)	a<b**, a<c**
8. Perceived good health	175	1.51	(1.18)	211	2.00	(1.18)	291	2.29	(1.04)	a<b**, a<c**
9. Food availability	172	1.59	(0.88)	212	2.00	(0.95)	287	2.21	(0.94)	a<b**, a<c**
10. Friendly environment	173	1.71	(0.45)	210	1.83	(0.37)	284	1.94	(0.24)	a<b**, a<c**
11. Currently in school	177	1.81	(0.59)	214	1.89	(0.46)	290	1.94	(0.33)	a<b*, a<c**
human security factors	178	39.46	(13.89)	217	46.67	(14.08)	293	51.15	(11.97)	a<b**, a<c**
human security threat factors	178	31.49	(12.53)	217	25.57	(11.85)	293	24.15	(11.97)	a>b**, a>c**

*p < .05, **p < .01

Table 3
ANOVA showing highest human security threat factors in both single/double AIDS-orphaned groups

	single AIDS-orphaned M(SD)[1]	double AIDS-orphaned M(SD)[2]	single other-causes orphaned M(SD)[3]	double other-causes orphaned M(SD)[4]	non-orphaned M(SD)[5]	Bonferroni Posthoc
Human security factors	41.02(14.52)	38.58(13.49)	48.13(12.80)	47.11(12.22)	51.05(12.06)	1>2[d], 3>4[d] 1<3*,4*,5* 2<3*,4*,5*
Human security threat factors	31.61(13.46)	31.80(12.33)	24.67(11.22)	25.36(10.91)	24.39(11.37)	1<2[d], 3<4[d] 1>3*,4*,5* 2>3*,4*,5*

[d] not significant, *p < .01

4. Results

Demographic characteristics: Six hundred and eighty-eight (688) sub-Saharan Africa adolescents of Ugandan (n=371) and South African (n=317) origins validly participated in the study. There were significantly more females (56%) than males (44%), $p < .01$. But between participants in the three groups no significant sex difference was observed [$F(1,686)= 0.78$, $p=.38$]. Age was significantly different between the three groups – AIDS (M=13.8 years), other-causes (M=14.3 years), and non-orphaned (M=14.2 years), $F(2,685)=2.94$, $p < .05$; grand age mean = 14.1 years. Expectedly, educational levels also varied between the groups, with the non-orphaned showing the highest education (M=1.64, SD=.73), and AIDS-orphaned showing the lowest (M=1.42, SD=.69), $p < .01$.

Other outcomes. Alpha reliability for each of the study measures was admissible (alpha M = .75). The measures also showed admissible discriminant validity (Table 1). Human security threat factors were significantly higher in adolescents orphaned by AIDS, than in the other two groups, $p < .01$. AIDS-orphaned adolescents showed highest child abuse, social discrimination, anxiety, depression, and lowest self-esteem, social support, and foster/parental care (Table 2). There was no significant human security risk difference between adolescents whose one parent died of AIDS, and those whose both parents died of the disease (Table 3). However, each of the two groups of AIDS-orphaned adolescents showed lower human security than their other-causes orphaned counterparts.

5. Discussion

The dignity of the individual rests in the self-esteem (Trzesniewski, Donnella, & Robins, 2003). Self-esteem defines everything about us. It is the foundation of personality (Spritize.blogspot, 2006). Self-esteem is more than self-confidence, the knowledge that one can succeed. It is the sum of self-confidence, self-acceptance and self-identity, each of which is desirable for human security. If one is not happy or satisfied with one's life for reasons one cannot pinpoint, it is probably because of one's self-esteem, which might be at a low ebb (Spritize.blogspot, 2006).

In the present study, adolescents orphaned by AIDS showed significantly lowest self-esteem. They scored significantly highest on the items "felt useless at times, felt unhappy with myself, people don't respect me, and overall I'm a failure." Reasons for their low self-esteem were not obvious. But the Pearson's association of variables suggests that social discrimination which showed the weightiest negative association with self-esteem in the group - followed by anxiety and child abuse, in that order – might account for their low self-esteem. It seemed likely that highest social discrimination against the AIDS-affected adolescents, could trigger their highest anxiety that precipitated lowest self-esteem and human dignity in the group.

The strongest associate of self-esteem was social support. The preponderance of psychosocial health literature agrees that social support is a rich factor for human dignity, mental peace and stability (Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Social support whether tangible (monetary, social participation, material care) or intangible (emotional care, cognitive guidance) is

essential for the affective enrichment of the mind and body. But the AIDS-orphaned participants, in the study, scored least on all domains of this important factor, and in the foster/parental care variable. Friends and family members showed them least love, least comforted them when they felt bad, least took care of their financial needs or helped them do things they could not do. In general, compared with participants in the control groups, AIDS-orphaned adolescents were significantly most marginalized from the available social support in their environment. Perhaps the outcome to the question “are persons you are living with kind to you” further illustrates the unfriendly immediate social milieu of the AIDS-orphaned participants. Half (50%) of them reported “no”, compared with few (34%) other-causes orphaned, and less (17%) non-orphaned groups that so reported.

Food insecurity and malnutrition are critical in sub-Saharan Africa, where the vagaries of desertification and famine are not uncommon. But the depletion of the available productive human labor by AIDS may exacerbate the food situation. AIDS-affected households, typically characterized by double-parental loss, are most likely to confront food and nutritional inadequacy. In this study, over half (53%) of the AIDS-orphaned adolescents retired to bed daily on one or less meal intake, against 34% and 23%, respectively, in the other-causes and the non-orphaned groups. Any wonder that perceived good health was significantly lowest in the AIDS-orphaned group?

There was no measure of the daily meal intake of parents/guardians to permit an informed judgement whether the highest hunger prevalence among the AIDS-orphaned adolescents may be attributed to child abuse, social discrimination or their unfriendly immediate social environment. However, if as many as 23% of the non-orphaned adolescents had zero to one meal daily, then it may be a pointer to the permeating presence of material poverty in the study population.

Poverty has a symbiotic relationship with human insecurity; each strives on the other. Thus, locally and internationally, whereas poverty may be the underpin for most economic, food, health, environmental, community, political and personal insecurity crises, these crises themselves produce and deepen poverty. Most intra-community or state armed conflicts, private/organized crimes, “failed” state syndromes, terrorist actions, drug and human trafficking, environmental degradation, infectious disease spread, voluntary and involuntary human movements, and many other antisocial human activities that threaten local, national, regional and global peace are the direct or indirect products of poverty. In sub-Saharan Africa, poverty is both a cause, and a consequence of AIDS. The sexually active male poor, unable to afford condoms may engage in unprotected sex probably with multiple partners. The female poor, unable to provide for herself, may indulge in unprotected transactional sex with multiple partners that may lead to infection. Infected, the poor may be unable to afford ARV treatment, may borrow money to meet rising

hospital bills, may be unable to work on his/farm to guarantee food supply, and may be fired from work, among other adverse consequences that deepens poverty and human insecurity.

According to a model developed in Zambia (Kelly, 2000), AIDS is threatening education at three fronts: the demand for education (parents); the availability of resources for education (teachers); and the potential clientele for education (children). With fewer parents demanding to send their wards to school, fewer teachers as facilitators, and fewer children/adolescents as clients, the education demand-supply chain is at the risk of a collapse from AIDS. Yet education and human development are central to human security (UN, 2003; UNDP 1994). In the present study, we estimated education by whether or not one was "currently attending school." This measure seemed more resourceful than the measure of "educational level attainment," which varied significantly in the groups due to age variances. Adolescents orphaned by AIDS were significantly 1.64 times more likely to drop out of school than those orphaned by other causes. Against non-orphaned adolescents, they (AIDS-orphaned) were 3.48 times significantly more likely, suggesting higher diminishing prevalence of valuable human capital development in AIDS-affected households.

Good health, defined by WHO as not only the absence of disease but a positive state of physical, mental, and social well-being, is synonymous with human security. Good health

is both essential and instrumental to achieving human security. But AIDS-orphaned adolescents in the study scored the least perceived good health condition.

The human security circumstance of single and double AIDS-orphaned adolescents in the study seemed the same; no significant difference observed. So was the case between the two orphan types in the other-causes orphaned group (Table 3). The outcome was against popular view that children with no parent may show greater human security threat factors than those with at least one parent (Onuoha, et al. 2009; UNAIDS, 2004). However, irrespective of whether single or double orphaned, adolescents orphaned by AIDS scored highest human security threat factors than did adolescents in the control groups, supporting the study hypothesis.

The discussion of human security may not be complete without reference to wars as threats to global security. Wars and arms procurement for state security may continue to remain part of our human experience. But armed conflicts aid and abet the spread of AIDS. They generate displaced populations (refugees), many of whom may be single women and unaccompanied children. These women and children are vulnerable to being pressured into exchanging sex for food or being raped. Also there is a correlation between military presence and commercial sex boom in most localities. UNAIDS estimates that the military is 2 to 5 times more likely than their civilian counterparts to contract STD, including HIV, in times of peace; in times of

war, they are 50 times more likely (UNAIDS, 1998). A depleted, dilapidated, demoralized armed force from AIDS inevitably compromises state and global security.

6. Conclusions

Orphaning is a significant threat to human security. But AIDS-orphaning presents higher human security threats. In sub-Saharan Africa, prior to the advent of AIDS, deaths among persons aged 20-49 accounted for only 20% of overall deaths in the region, against prevailing 60% owing to AIDS (UNAIDS, 2006). Many of these adults bequeath children and adolescents as AIDS-orphans, whose human dignity seemed more debased than that of other orphans.

Human security epitomizes “faith in tomorrow” (UN, 2003), but adolescents orphaned by AIDS face higher uncertainty about the future owing to lower school attendance prevalence rates. If human security represents “a child who did not die, a disease that did not spread” (UN, 2003), then adolescents orphaned by AIDS are direst in need of human security owing to their lowest perceived good health conditions. We did not directly measure poverty in the study. But the invisible hands of poverty, judged by hunger prevalence was apparent in the population, especially among the AIDS-orphaned group.

In sub-Saharan Africa, AIDS may negatively impact on *good* governance required for human security. It creates high worker absenteeism, high worker mortality, high demand of medical goods and services, but lower productivity, and revenue/income tax generation. These

factors may undermine government financial resources to effectively control the disease, leading to its further aggravation.

■ Recommendations

AIDS prevention and control for enhanced human security is critical for community, national, regional, and global peace. Without intensified prevention efforts directed at the ABC (abstinence, being partner-faithful, and condom use) therapy, 62 million people are projected to be newly infected by 2015 (Global Health Council, 2009).

Expanded and free access to ARV (antiretroviral) drugs particularly in sub-Saharan Africa, where need is greatest, is advocated. The US President's Emergency Plan for AIDS Relief (PEPFAR) fund in which more than 100 countries have received support (Global Health Council, 2009) is commendable. Other major international donors for AIDS programs are the World Bank, UNAIDS, and the Global Fund. Unfortunately, as global funding increases arithmetically, global fund need seems to increase geometrically due to old and emerging new infections.

Recognizing poverty alleviation as a global responsibility is crucial for human security. The UN Millennium Summit (September, 2000) declaration to reduce global poverty at least by half by 2015 is praise-worthy. However, current global economic recession, continued intra-state armed conflicts and weak governance in Africa and elsewhere may conspire to render the millennium goals unachievable.

AIDS-orphaned adolescents are special vulnerable children, requiring distinctive human security protection policy programs

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