

# Understanding cohort differences in appraisals of reconstruction priorities of mental health systems in post-conflict Liberia

DA Gray<sup>1</sup>, CPC Borba<sup>1,2</sup>, BL Harris<sup>3</sup>, S Domínguez<sup>1</sup>, R Boxill<sup>1</sup>, EKS Wang<sup>1,2</sup>, DC Henderson<sup>1,2</sup>

<sup>1</sup>The Chester M. Pierce, MD Division of Global Psychiatry, Massachusetts General Hospital, Boston, MA, USA

<sup>2</sup>Harvard Medical School, Boston, MA, USA

<sup>3</sup>A.M. Dogliotti College of Medicine, University of Liberia, Monrovia, Liberia

## Abstract

**Objective:** This study analyzes the relationship between informants' age and their assessment of mental health needs in post-conflict society and examines if mental health needs assessment priorities differ depending upon whether or not the informant was exposed to the Liberian civil war. **Method:** A cross-sectional survey was conducted in March 2009 to obtain data on mental health needs of Liberian children, adolescents and young adults. A total of 171 individuals were interviewed. The data were analyzed using a two-way ANOVA. **Results:** Elder respondents expressed a preference for young adults to receive services in a church/mosque ( $F = 4.020, p < .05$ ); for adolescents in volunteer programs ( $F = 3.987, p < .05$ ) and for children in sports programs ( $F = 4.396, p < .05$ ). Experiencing conflict did exert some influence on treatment setting preferences. Those who resided outside Liberia during the conflict cited a preference for traditional healers and medical clinics. However, this preference was for the children and young adult age categories. Those who experienced the civil war reported significantly higher preferences for adolescent services to be located in medical clinics, with traditional healers, and in churches/mosques. **Conclusion:** This study provides additional support for the premise that the utilization of psychiatric services needs to be viewed from the perspective of Liberians and that there are differences in preferences across groups. Our results suggest that service providers and policy makers take into account the age of the patient when deciding where to locate treatment settings for the population.

**Keywords:** Mental Health; Liberia; Treatment Settings; Elders; Needs Assessment

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## Introduction

"War is hell... it has an impact on the people who take part that never heals."<sup>1</sup> The traumatic events and stress of societal conflict on individuals can be quite severe. The United Nations, the World Bank, and other agencies have focused efforts on peace building. However, attempts by the international community to end war and establish peace frequently fail on two fronts; low prioritization of rebuilding local institutions and a lack of understanding of local and regional conditions.<sup>2</sup> Collier et al. found that within five years of the

end of civil war there is a 44% likelihood of return to conflict.<sup>3</sup>

The effects of 14 years of conflict have been devastating to the Republic of Liberia. According to the UNDP's National Human Development Report Liberia, 95 percent of the nation's health facilities were rendered non-functional or had been destroyed.<sup>4</sup> Only 7% of the rural dwelling population had access to clean drinking water. Liberia's annual rate of growth from 1980 – 2006 was only 2.6%, leading it to be termed a "low development country" by the UNDP. It was ranked 169 of 177 nations in terms of annual economic growth as of 2007. For the period 2000 – 2007 Liberia's annual growth rate showed a paltry improvement of 0.77%. The GDP per capita is USD \$362. The most recent statistics indicate 55.5% of the adult population aged 15 and older is literate. As of 2007 (the last year for which figures are available) approximately 26% of children up to the age of 5 are under

## Correspondence

Ms D Gray  
25 Staniford Street, 2nd Floor, Boston, MA 02114, USA  
email: [deborahagray@comcast.net](mailto:deborahagray@comcast.net)

weight.<sup>5</sup> According to a global risk assessment by Rost et al. there is a predicted probability of 13.5% that Liberia will experience another civil war between 2008 -2012.<sup>6</sup> It is within this context that the challenge of rebuilding Liberia must be understood.

Liberia is situated in West Africa, and shares a border with Sierra Leone, Guinea and Cote D'Ivoire. It is the fastest growing among African nations, with an estimated annual population growth rate of 2.66%.<sup>7</sup> The population of Liberia is young. Youth less than 20 years old account for 54% of the population while less than 3% of the population is 65 or older. The social definition of youth in Liberia is 15 - 35yrs old, accounting for 55.6% of the population of 3.5 million and the highest source of human capacity. As of 2009 life expectancy at birth was 41.84 years.<sup>7</sup>

During the past 20 years Liberians have been in conflict for 14 of those years. A total of 250,000 – 400,000 Liberians are estimated dead; hundreds of thousands are injured. Many of the injured remain untreated.<sup>8</sup> As of 2003, USCRI reported that nearly half of the country's population was displaced (1.5 million out of approximately 3 million). Violent conflict has led to massive disruption of social services. The Liberian population suffers from malnutrition, illiteracy, and unemployment. The mental health effects of witnessing or being conscripted into combat are not trivial and include post-traumatic stress disorder, depression, general psychological distress and functional impairment.<sup>9-11</sup> According to the Republic of Liberia National Mental Health Policy it is estimated that the total mental illness count (mild to severe cases) would be 1,640,000 or ~46.86% of the population.<sup>12</sup> This is well in excess of the worldwide average of 10% of any nation's population expected to experience mild to severe mental illness.<sup>13</sup>

An integral part of rebuilding societies is the establishment of reconstruction priorities. Needs Assessment Surveys are one tool often used to prioritize the many tasks required to rebuild a society after devastating conflict.<sup>14</sup> A Needs Assessment Survey generally survey key informants to ascertain their views on priorities and problems on a diverse range of issues. This information then serves as the basis for policy documents and guides strategic planning.

The tools used to assess post-conflict needs have been criticized for not collecting relevant data, failure to adequately sample key informants, and lack of evidence based responses.<sup>15</sup> For example, the need for mental health services are largely ignored on such needs assessment surveys. Yet, conflict and disasters have been identified as major causes of mental health disorders.<sup>16</sup> In fact, the WHO estimates that the number of individuals with mental disorders increases by 6-11% in these conditions.<sup>17</sup> Another criticism of these surveys is that they do not specifically call for inclusion of elders as respondents.<sup>18-20</sup> To ensure community members' diverse cultural and political interests are reflected, a subset of the entire community needs to be included.<sup>12,21,22</sup>

Currently 62% of the world's older population lives in developing nations.<sup>23</sup> Developing economies (formerly referred to as developing nations) are defined as low- and lower middle-income countries or those with Gross National Income per capita less than US \$3,975. There is an 18% chance the lowest income economies will experience civil war, in contrast to the 1% risk for nations with high income economies. With the increased likelihood of conflict and the growing number of older adults in low-income countries it is important to understand how they prioritize reconstruction tasks.<sup>23</sup>

### **Liberian Mental Health System**

A shortage of mental health professionals has been shown to be the main limiting factor for psychiatric care in African countries.<sup>24,25</sup> Large scale migration and evacuation of trained professionals during the civil war resulted in an acute shortage of personnel in the mental health sector. The projected mental health needs discussed earlier greatly exceed provider capacity. There is one practicing psychiatrist in this nation of over 3 million people. In 2009, in addition to the lone psychiatrist, Liberia's entire medical team is comprised of 46 NGO doctors and 30 professionally trained government medical doctors.<sup>8</sup>

Until recently there was no mental health policy.<sup>12</sup> No national mental health program exists, nor has any mental health legislation been passed since 1970.<sup>20</sup> While there is great need, mental health care is woefully underfunded. It comprises less than 1% of the total spending on health services in Liberia.<sup>12</sup>

Similar to other non-Western nations, Liberians have traditional explanations for mental health problems and traditional systems for mental health interventions. Liberians may seek treatment from faith healers as well as traditional Western doctors. According to Wokocha mental poisoning by an enemy, a curse by an elder, failure to perform a ritual or possession by an evil spirit are among the most common explanations of mental health symptoms.<sup>26</sup> Interventions for these symptoms frequently include family interventions, consultations with traditional healers, and psychotropic drugs. Support for this comes from Hales who surveyed elders' attitudes toward mental illness in West Africa.<sup>27</sup> The most frequently cited causes of mental illness were being "witched" by someone else, it was an illness that was "passed down the line" or a result of one's own wrongdoing. Recommended treatments included sacrifices and purification.

This study examined the relationship between informants' age and their assessment of mental health needs in post-conflict society. As a result of different experiences and the imprint of those experiences, older respondents are expected to assign different priorities relative to younger respondents. It is first hypothesized that older key informants assessments will have higher mean scores for items which are associated with traditional healing methods or treatment locations compared to younger key informants.

This study also explored if mental health needs assessment priorities differ depending upon whether or not the informant had been exposed to the violent Liberian civil wars. Those who experienced the long term impact of conflict are expected to differ from those who did not have that history. The wars in this country are known for their extreme brutality and human rights atrocities. The experience of war or witnessing war can lead to psychological difficulties. In addition to those mentioned earlier, it can be difficult for individuals to imagine rebuilding their lives. They can also be preoccupied with the past.<sup>28</sup> It is further hypothesized that relative to those who did not experience the conflict, residing in the country during conflict will lead to prioritization of traditional settings for both age groups.

### **Method**

#### **Sample and Data Collection**

A cross-sectional survey was conducted in March 2009 to obtain data on mental health needs of Liberian children, adolescents and young adults. A total of 171 individuals were interviewed. Selection criteria included use of proxies to avoid inflicting additional trauma on the victims. Due to their exposure to victims

respondents were from the following sectors: Health care (including traditional healer), Education, Religion/Faith Based, and NGO (not health specific). Informants spoke or understood English. Because this study is interested in Liberian cohort differences in priorities for mental health services, analysis was restricted to Native Liberian respondents (n=162).

### Data Collection

Members of the Massachusetts General Hospital (MGH/Harvard Liberia Working Group) and a sociologist from the Mother Patern School of Social work trained Liberian interviewers to conduct the survey. Twenty-one local Liberian interviewers were used to conduct the survey. They were students from Mother Patern College of Health and Sciences (Social Work Program) and held at least an Associate Degree in Social Work. Training included extensive classroom instruction, role play and field observation. This training included the philosophy of data collection, privacy issues, protection of human subjects, consenting process and survey interview and administration techniques.

### Measures

This research used a mixed methods strategy for studying post-conflict mental health needs. Quantitative measures such as age, gender, employment, and education as well as qualitative assessments of trauma were collected. The structure of the survey instrument was a combination of checkboxes, Likert scale, and open ended questions.

The survey instrument was based on similar studies in other post-conflict states and was written in English. To ensure that culturally-based expressions of mental health were incorporated, resident Liberian mental health professionals (e.g. the sole practicing psychiatrist, Ministry of Health and Social Welfare policy committee members, social workers) were consulted. The survey was also amended based on a pilot test of 20 individuals who were not interviewed for the main study. This pilot test resulted in changes in language (i.e. how questions were asked) as well as the consolidation of groups by age.

### Statistical Analysis

Response means for appropriate treatment setting was compared using a Two-Way Analysis of Variance (ANOVA). The factors examined were binary variables representing informant presence in Liberia during the conflict (1=yes, 0=otherwise) and age (0=less than or equal to 45 years old, 1=46+ years old).

#### • Key Independent Variables

**Age.** This variable was based on UNICEF data<sup>29</sup>, which cites a Liberian's life expectancy at birth as 45 years. The variable has been coded as 1=respondent is 46 years of age or older, or 0=otherwise. The 19 respondents who did not fill out this survey question were coded as missing and eliminated from the analysis.

**Experience Conflict.** Liberia experienced two periods of civil war, beginning in 1989 and ending with the signing of a peace agreement and establishment of the National Transitional Government of Liberia in 2003.<sup>30</sup> Exclusive of short term personal travel, respondents who reported that their years in Liberia included the entire timeframe from 1989 – 2003 were coded as a 1; those who reported otherwise were coded as 0. The 10 respondents who did not fill out this survey question were coded as missing and were excluded from the analysis.

**Treatment Setting.** In order to examine the relationship

between age, experiencing conflict and treatment setting priority, respondents were asked the following question. "Which of the following settings are best for the care of the mental health problems of children, adolescents, and young adults in Liberia? Please mark all boxes that apply." Children were those ages 5 – 12 years old; adolescents were 13 -18 years old and young adults are ages 19 – 22. The response options were medical clinic, non-medical clinic, church/mosque, traditional healer, school, home visit, sports, work, volunteer program, community leader, family elder, and NGO. Responses were coded 1 = box was checked 0 = box was not checked.

### Ethics

The Liberian Ministry of Health and Social Welfare review board served as the ethical approval body for this research. Written permission was obtained from all key informants prior to participation. Participants were given the right to refuse participation, instructed that they could withdraw consent or decline further participation at any time. No compensation was provided. Identifying information was removed prior to analysis to ensure participant confidentiality.

### Results

Demographics for the sample are found in Table I. The mean age of respondents was 43 years, +/- 9.5 years. Approximately two-thirds (63.6%) of the sample was male. The majority of interviewees (64.1%) report that they were Health Care professionals. The average respondent lived in Liberia for 39 years, +/- 13 years. The majority of respondents who provided data for county (37.0%) lived in Montserrado. The next most populous counties were Bong and Grand Bassa, where 3.1% of the sample resides in each of these counties.

Regarding the appropriate treatment setting for children, a Two-Way ANOVA test found that Age was significant for choice of sport as a treatment setting for mental health problems ( $F = 4.396, p < .05$ ). Older informants demonstrated a slightly higher preference for sports settings ( $M = 1.45, SD = .503$ ) than did younger informants ( $M = 1.32, SD = .470$ ). Experiencing conflict was significant for Medical Clinic ( $F = 5.612, p < .05$ ) and predicted as expected. Those who did not experience the conflict ( $M = 1.26, SD = .443$ ) expressed a higher preference for treating in medical clinics than those who did experience the conflict ( $M = 1.06, SD = .245$ ). Traditional healers predicted contrary to our hypothesis that those who experienced conflict would indicate a preference for traditional settings ( $F = 10.388, p < .01$ ). Here we found that informants who were not in Liberia from 1989 -2003 expressed a greater preference for traditional healers ( $M = 1.88, SD = .328$ ) than those who remained ( $M = 1.69, SD = .463$ ). There was no statistically significant difference in the interaction between age and experiencing conflict for any of the treatment settings. (Table II).

Turning to the results of appropriate treatment setting for adolescents (Table III) we see that those who experienced conflict expressed a greater preference for medical clinic ( $F = 7.863, p < .01$ ), church/mosque ( $F = 4.442, p < .05$ ) and traditional healers ( $F = 5.251, p < .05$ ) than those who were not present during the conflict. There was also a significant effect for age when assessing volunteer programs ( $F = 3.987, p < .05$ ) with older respondents assessing this setting at a higher rate ( $M = 1.40, SD = .494$ ) than younger respondents ( $M = 1.28, SD = .450$ ). The interaction for age and experiencing conflict was also

**Table I: Demographics of Study Sample (n=162)**

Variable	Mean (SD)
Age (Years)	43.6 (9.46)
Years in Liberia (Years)	39.0 (13.15)
	N (%)
<b>Gender</b>	
Male	98 (63.6)
Female	56 (36.4)
<b>County</b>	
Gbarpolu	1 (0.6)
Grand Bassa	5 (3.1)
Montserrado	60 (37.0)
Lofa	3 (1.9)
Bong	5 (3.1)
Nimba	2 (1.2)
River Gee	3 (1.9)
Sinoe	2 (1.2)
Maryland	5 (3.1)
Margibi	2 (1.2)
Grand Kru	3 (1.9)
Bomi	3 (1.9)
Grand Gedeh	4 (2.5)
<b>Sector</b>	
Health Care	91 (64.1)
Education	24 (16.9)
Religious/Faith Based	7 (4.9)
NGO (not Health Specific)	20 (14.1)
<b>Degree</b>	
None	3 (1.9)
MD	12 (7.4)
RN	14 (8.6)
Bachelors	41 (25.3)
Masters	15 (9.3)
Associates	6 (3.7)
Certificate	12 (7.4)
High School Diploma	2 (1.2)
Social Worker (BSW, MSW, AASW)	20 (12.3)
Physician Assistant	9 (5.6)
Certified Midwife	1 (0.6)
PhD	1 (0.6)
JD/LLN	3 (1.9)
Teacher/Educator	5 (3.1)
University Student	2 (1.2)
Counselor	3 (1.9)
Other/Not Specified	13 (8.0)

significant for the assessment of traditional healers ( $F = 4.999, p < .05$ ). Those who witnessed the war ( $M = 1.74, SD = .443$ ) evaluate this setting at a higher rate than those who did not ( $M = 1.60, SD = .92$ ) and older respondents ( $M = 1.67, SD = .474$ ) assign a higher mean score than the younger informants ( $M = 1.63, SD = .485$ ).

Finally (Table IV), a Two-way ANOVA revealed a significant effect of age ( $F = 4.020, p < .05$ ), experience conflict ( $F = 5.956, p < .05$ ), and the interaction between age and experience conflict ( $F = 6.437, p < .05$ ) on the question concerning appropriateness of church/mosque as a treatment setting for

young adults. When it comes to young adults, the elder respondents ( $M = 1.35, SD = .485$ ) expressed a higher preference for the church/mosque setting relative to younger respondents ( $M = 1.28, SD = .450$ ) and those who were not present for the civil war ( $M = 1.40, SD = .495$ ) assessed its appropriateness at a higher mean than those present in 1989 – 2003 ( $M = 1.26, SD = .443$ ). Results also indicate a significant difference for medical clinics ( $F = 5.612, p < .05$ ) and traditional healers ( $F = 4.307, p < .05$ ). Those who did not experience civil disruption assessed clinics ( $M = 1.22, SD = 1.08$ ) and traditional healers ( $M = 1.66, SD = .479$ ) at higher rates than those who experienced disruption ( $M = 1.08, SD = .279$ ) and ( $M = 1.52, SD .502$ ), respectively.

## Discussion

Given the scale of mental health issues to be supported, it is imperative that any potential treatment strategies be implemented in a culturally relevant manner.<sup>31</sup> This study provides additional support for the premise that the potential utilization of psychiatric services needs to be viewed from the perspective of Liberians, and that there are differences in preferences across groups. Our results suggest that service providers and policy makers take into account the age of the patient when deciding where to locate treatment settings for the population. A useful addition to future mental health service offerings would be to integrate these resources in a viable treatment location.

Elder respondents expressed a preference for young adults to receive services in a church/mosque (a traditional setting); their view of appropriate setting for adolescents was in volunteer programs and for children in sports programs. While elders did demonstrate some key differences in appropriate treatment setting by age stratification (relative to younger informants), we did not observe a widespread effect. Due to the stigma of mental illness, it is conceivable that there is a protective element to the difference in treatment setting preferences for the younger age groups. Mental health stigma is a world-wide phenomenon and can be best understood as a combination of discrimination, prejudice and ignorance.<sup>32-34</sup> Mental illness is believed by some Liberians to be caused by talisman, drug use, or voodoo. Individuals are reluctant to seek treatment due to the shame of "craziness." Those with mentally illness are subject to verbal harassment and physical violence.

Additionally, our findings indicate that experiencing conflict did exert some influence on treatment setting preferences. Those who resided outside Liberia during the conflict cited a preference for traditional healers and medical clinics. However, this preference was for the children and young adult age categories. Those who experienced the civil war reported significantly higher preferences for adolescent services to be located in medical clinics, with traditional healers, and in churches/mosques.

Our hypothesis that those who experienced conflict would express a higher preference for traditional healers was not borne out by the results. As discussed by Bracken et al., in addition to their role as health care providers traditional healers "...functioned as a link with the past and thus contributed to a sense of continuity in the community."<sup>31</sup> Individuals returning post-conflict, by stating their preference for healers, may be expressing a commitment to reintegrating with their community and cultural institutions. Further research is warranted.

**Table II: Two-Way Analysis of Variance of Experience Conflict and Age – Appropriate Treatment Setting for Mental Health Problems Experienced by Children**

	<i>Medical Clinic</i>			<i>Non-Medical clinic</i>			<i>Church/Mosque</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.023	1	.211	.032	1	.141	.012	1	.048
Experience Conflict	1.116	1	10.338**	.497	1	2.199	.420	1	1.659
Age * Experience Conflict	.003	1	.028	.012	1	.054	.200	1	.789
*p < .05; **p < .01									
	<i>Traditional Healer</i>			<i>School</i>			<i>Home Visit</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.203	1	1.142	.329	1	1.410	.036	1	.162
Experience Conflict	1.405	1	7.907**	.057	1	.246	.005	1	.023
Age * Experience Conflict	.299	1	1.682	.036	1	.153	.036	1	.162
*p < .05; **p < .01									
	<i>Sports</i>			<i>Work</i>			<i>Volunteer Program</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	1.009	1	4.396*	.055	1	.292	.081	1	.345
Experience Conflict	.660	1	2.873	.075	1	.400	.057	1	.244
Age * Experience Conflict	.513	1	2.233	.019	1	.101	.228	1	.968
*p < .05; **p < .01									
	<i>Community Leader</i>			<i>Family Elder</i>			<i>NGO</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.032	1	.135	.030	1	.126	.013	1	.050
Experience Conflict	.001	1	.006	.875	1	3.625	.302	1	1.202
Age * Experience Conflict	.137	1	.586	.313	1	1.295	.013	1	.050
*p < .05; **p < .01									

From the survey we could not determine whether the overall low ratings for treatment setting preference reflected a call for treatment regardless of situation (due to the extensive nature of the trauma) or was an indication of its relative unimportance; further research is warranted.

The purpose of this study was to examine the relationship between age, experiencing conflict and mental health needs assessment prioritization in a post-conflict setting. To the best of our knowledge this is the first study of its type. As local preferences for treatment setting will in part define health seeking behaviors it is important to understand if there are differences by age segment and what the appropriate place for age-specific services are.

This work will be of interest to researchers, policymakers, government officials, health professionals and international peacekeepers because it will help them to deliver culturally relevant care, it will guide post-conflict reconstruction programs, it enables the design of evidence-based responses, and finally, it contributes to the mental health needs assessment body of knowledge in post-conflict settings.

### **Limitations**

There are some study limitations that should be noted. Liberia has a high illiteracy rate, yet 98.1% of the sample reported having earned at least a high school diploma. It is possible that those with an education prioritize age groups and/or mental health needs differently, thus differences may be attributed in part to a key informant's educational attainment and not their own age or conflict experience. There was also a range in the quality of responses, and the interviews were not recorded. It is not possible to determine if the quality of the response was attributable to the interviewer or interviewee. However, in spite of these shortcomings we believe that our empirical findings have important implications for policymakers interested in post-conflict rebuilding.

### **Implications for Policy**

Three policy implications of this study have been identified; they are the impact of inaccurate needs assessments, the failure to meet government reconstruction goals and the

**Table III: Two-Way Analysis of Variance of Experience Conflict and Age – Appropriate Treatment Setting for Mental Health Problems Experienced by Adolescents**

	<i>Medical Clinic</i>			<i>Non-Medical Clinic</i>			<i>Church/Mosque</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.033	1	.248	.012	1	.047	.085	1	.372
Experience Conflict	1.051	1	7.863**	.086	1	.337	1.019	1	4.442*
Age * Experience Conflict	.090	1	.670	.091	1	.358	.598	1	2.607
*p < .05; **p < .01									
	<i>Traditional Healer</i>			<i>School</i>			<i>Home Visit</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.384	1	1.732	.064	1	.265	.002	1	.008
Experience Conflict	1.163	1	5.251*	.007	1	.028	.038	1	.185
Age * Experience Conflict	1.107	1	4.999*	.000	1	.001	.061	1	.298
*p < .05; **p < .01									
	<i>Sports</i>			<i>Work</i>			<i>Volunteer Program</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.182	1	.919	3.72E-6	1	.000	.858	1	3.987*
Experience Conflict	.085	1	.428	.137	1	.542	.733	1	3.408
Age * Experience Conflict	.446	1	2.244	.059	1	.233	.407	1	1.890
*p < .05; **p < .01									
	<i>Community Leader</i>			<i>Family Elder</i>			<i>NGO</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.182	1	.728	.011	1	.046	.002	1	.007
Experience Conflict	.134	1	.534	.576	1	2.452	.111	1	.447
Age * Experience Conflict	.383	1	1.532	.273	1	1.206	.034	1	.137
*p < .05; **p < .01									

potential for decreased international aid. A discussion of each implication is presented in the following paragraphs.

Data guides rehabilitation and community-based programs; it also informs governments and policymakers for rebuilding and stabilization of their communities.<sup>35,36</sup> If age is a factor in informant responses, those assessments which do not have a wide age range of respondents will collect incomplete data. They will not reflect the entire spectrum of services needed nor will they represent priorities as understood by the local community. Problems stemming from incomplete information include a deficient planning process, impeded accountability, incapacity to monitor the change promoted by reforms, and the potential for developing ad hoc solutions before understanding the situation.<sup>4,14</sup>

Thus any programs implemented will fail to achieve the goals of improving mental health and social services. These goals are critical to the development and reconstruction of Liberian society. "...achieving our vision of consolidating peace, enhancing justice, deepening democracy, promoting

human development and irreversibly setting Liberia on the path towards long-term growth and development"<sup>1,37</sup>

If environment is found to exert an influence on assessments, then those policymakers who did not reside in a country during the time of civil war may assess the impact of the conflict differently from those who experienced the trauma, and may create and implement different policies and programs as a result. These resulting policies and programs may not be optimally suited (or be appropriately prioritized) to addressing the needs of a post-conflict population.

In 2007, a team from The World Bank was working in a post-conflict society to share the lesson that not only infrastructure but policy issues must be addressed in post-conflict reconstruction.<sup>3</sup> They found that immediately following the end of a civil war an economy can absorb double the aid level as compared with the normal level. The efficiency of the absorbed aid is correlated with the strength of policy. Thus those post-conflict states with weak policy could be at risk for diminished international aid.

**Table IV: Two-Way Analysis of Variance of Experience Conflict and Age – Appropriate Treatment Setting for Mental Health Problems Experienced by Young Adults**

	<i>Medical Clinic</i>			<i>Non-Medical Clinic</i>			<i>Church/Mosque</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.007	1	.058	.051	1	.203	.821	1	4.020*
Experience Conflict	.630	1	5.612*	.044	1	.173	1.217	1	5.956*
Age * Experience Conflict	.043	1	.385	.025	1	.099	1.315	1	6.437*
*p < .05; **p < .01									
	<i>Traditional Healer</i>			<i>School</i>			<i>Home Visit</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.369	1	1.519	.109	1	.451	.063	1	.288
Experience Conflict	1.046	1	4.307*	.106	1	.439	.075	1	.342
Age * Experience Conflict	.565	1	2.326	.008	1	.033	.018	1	.082
*p < .05; **p < .01									
	<i>Sports</i>			<i>Work</i>			<i>Volunteer Program</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.107	1	.515	.066	1	.298	.170	1	.899
Experience Conflict	.005	1	.023	.002	1	.008	.216	1	1.142
Age * Experience Conflict	.078	1	.375	.000	1	.001	.001	1	.004
*p < .05; **p < .01									
	<i>Community Leader</i>			<i>Family Elder</i>			<i>NGO</i>		
<i>Variable</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>	<i>Mean of Squares</i>	<i>df</i>	<i>F</i>
Age	.046	1	.180	.057	1	.248	.002	1	.008
Experience Conflict	.001	1	.004	.228	1	.985	.016	1	.068
Age * Experience Conflict	.000	1	.002	.114	1	.492	.010	1	.043
*p < .05; **p < .01									

## Conclusion

This study examined mental health needs prioritization as a function of age and environment. Our results suggest that a respondent's age is a factor in assessing post-conflict mental health needs as well as the optimal treatment setting in which the care should be delivered. There were also significant differences in responses based on whether or not an informant experienced the Liberian conflict firsthand.

Our study suggests that respondents of all ages and those who experienced civil war should be included in future needs assessments. Their exclusion could result in less effective treatment, diminished humanitarian aid, and delayed reconstruction of Liberian society.

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