

“Sierra Leone’s Former Child Soldiers: A Longitudinal Study of Risk, Protective Factors, and Mental Health” (2010), by Theresa S. Betancourt, Robert T. Brennan, Julia Rubin-Smith, Garrett M. Fitzmaurice, and Stephen E. Gilman [1]

By: Ali, Hira

In 2010, Theresa S. Betancourt, Robert T. Brennan, Julia Rubin-Smith, Garrett M. Fitzmaurice, and Stephen E. Gilman, published “Sierra Leone’s Former Child Soldiers: A Longitudinal Study of Risk, Protective Factors, and Mental Health” in the *Journal of the American Academy of Child and Adolescent Psychiatry*. The paper describes the results of a longitudinal study of former Sierra Leone child soldiers that examines how protective and risk factors affect children’s post-conflict mental health outcomes over several years of development. Researchers from Harvard University in Cambridge, Massachusetts, conducted the study in collaboration with the International Rescue Committee and the Post-Conflict Reintegration Initiative for Development and Empowerment in Sierra Leone. The study investigated different factors that affected the development of 260 former child soldiers at three points in time post-conflict. The authors found that besides war experience, post-conflict factors such as discrimination and community acceptance contribute to the mental health of former child soldiers. The study results have helped intervention programs focus on post-conflict factors to heal children from the harmful effects of war.

The paper “Sierra Leone’s Former Child Soldiers: A Longitudinal Study of Risk, Protective Factors, and Mental Health” reports results from a longitudinal study. Longitudinal studies are studies that observe participants repeatedly over long periods of times. The authors who conducted the study were all affiliated with Harvard University, either through the School of Public Health or the Medical School.

The paper begins with an introduction that summarizes prior research on child soldier development and discusses the authors’ goals in conducting the study. Following the introduction is the methods section, which discusses the study cohort, measurement instruments and assessments, and methods for statistical analysis. The authors then discuss the results, and highlight various models of mental health and adaptive behaviors. The authors conclude with a discussion of the study’s contributions and suggestions for future research.

In the introduction, the authors define child soldiers, what recent studies have discovered, and their goals in conducting their own longitudinal study. According to the authors, worldwide there are approximately 300,000 child soldiers, or children below the age of 18 years involved with armed forces and armed groups. The authors state that little is known about what factors influence long-term mental health of child soldiers and their ability to successfully reintegrate into society. The authors state that previous studies have shown that mental health problems are not only attributed to the experience of conflict, but also to post-conflict conditions, such as a poor economy or facing social stigma. The authors claim that wartime experiences, such as being forced to kill or harm others, sexual violence, and personal victimization, cannot alone account for the long-term burden of mental health problems. Thus, the authors state that they seek to study how post-conflict factors may contribute to changes in long-term mental health.

Betancourt and her team divide their method section into three parts. First, they discuss their study cohort and procedure. A study cohort is a group of participants that researchers follow over a long-term period, usually in an observational study. The authors describe the study cohort as consisting of 260 children between the ages of 10 and 17 years of age who had been involved with the armed group Revolutionary United Front, in Sierra Leone, before entering a reintegration program. The authors state that they conducted a series of survey interviews at three points in time, in 2002, 2004, and 2008. However, the authors note that the number of participants varied between each interview time. During the second interview session in 2004, only 56.5 percent of the original cohort participated. During the third interview session in 2008, 68.8 percent of the original cohort participated. The authors state that research assistants in Sierra Leone conducted private face-to-face interviews, one-to-three hours long, with both the children and their caregivers.

The authors then discuss the study instruments or assessments for the interviews. The authors state they used a variety of standard measures, including the Oxford Measure of Psychosocial Adjustment, and locally derived measures aimed at assessing the effect of post-conflict factors on mental health. According to Betancourt and her team, study measures were complicated by language differences between the researchers and participants, the diversity of the participants, and the developmental age differences between the participants. Thus, it was necessary to use a mix of several measures.

The authors state that they used those instruments to measure three main mental health outcomes. Those outcomes included externalized problems such as showing outward hostility, internalized problems such as feeling anxiety and depression, and demonstrated adaptive and prosocial behavior such as showing confidence. The authors describe measuring individual war experiences, including forced participation in violence, personal victimization and sexual violence. In addition to measuring wartime experiences, the authors state that they measured various protective and risk factors. The authors state that the post-conflict risk and protective factors included items such as daily hardships and stigma, school participation, community acceptance, employment, and social support.

Lastly, in the methods section, the authors discuss the various statistical analyses they used. The authors describe first establishing baselines of mental health and then recording changes in mental health outcomes over each interview in relation to risk and protective factors. Risk factors exacerbate the effects of risk and protective factors undermine the effects of risk. The authors used multilevel linear growth modeling to relate the participants' mental health statuses over time to war experience, post-war risk factors, and post-war protective factors. The statistical analysis was controlled for age, sex, and socioeconomic status.

The authors then discuss the results of the study. The authors first describe the characteristic of participants, which included predominantly males who reported being forced to join the armed forces. The authors first summarize participant characteristics, which included predominantly males, around 10.3 years of age, who reported being abducted or forced to join the armed forces. The authors state that the average participant stayed an average of 4.1 years with the armed group, and experienced an average of 6.2 violent events. Almost half the female participants and 5 percent of the male participants had been raped and more than a quarter of the participants had killed. The authors also discuss the retention rates of the study, which dropped to approximately fifty percent of the original cohort due to death of participants, change of location, or the participants denying consent.

In the results section, the authors describe several correlations between post-conflict factors, externalizing and internalizing problems, and adaptive and prosocial behavior. Although Betancourt and her team state that they found it difficult to assign a cause for behavior that externalized problems, the researchers noted that both killing and post-conflict risk factors correlated with an increase in externalizing problems. The authors state that high baseline levels for behavior that internalized problems correlated with rape. In addition, the authors describe an overall increase in internalizing problems was associated with joining the armed forces young and both economically and socially adverse conditions following the war. However, both internalizing and externalizing problems decreased with an increase in community acceptance.

In the discussion section, Betancourt and her team summarize and explain the results, the limitations, the strengths, and the applications and future directions of their research. The authors conclude that most data that showed correlations between behavior and war experiences lost statistical significance when researchers accounted for post-conflict factors. In other words, post-conflict factors, not factors during the war or before the war, significantly predicted children's mental health following the war. Thus, the authors argue that not only are post-conflict factors broadly applicable to mental health outcomes in children involved in war, but they are also crucial as intervention targets. The authors argue that community based intervention can increase mental well-being by reducing social stigma, increasing community acceptance, and increasing school attendance.

The authors acknowledge that their study was limited by little pre-conflict data, decreasing retention rates, subjectivity of self-reports, lack of comparison groups, and the fact that they studied only five of fourteen districts in Sierra Leone. The authors state that those limitations led to difficulties with determining the magnitude of the data, the data's applicability to the whole nation, and the data's use in drawing causal relationships. The authors argue that more research is needed on post-conflict factors to make intervention more efficient. They argue that the article also demonstrates the benefits of longitudinal studies and advocate for further work on long-term research devoted to monitoring and supporting child soldiers.

The paper "Sierra Leone's Former Child Soldiers: A Longitudinal Study of Risk, Protective Factors, and Mental Health" has been cited over a hundred times and has contributed to research on child development in the context of war and has guided intervention practices aimed at mitigating risk in those conditions.

Sources

1. Betancourt, Theresa S., Robert T. Brennan, Julia Rubin-Smith, Garrett M. Fitzmaurice, and Stephen E. Gilman. "Sierra Leone's Former Child Soldiers: A Longitudinal Study of Risk, Protective Factors, and Mental Health." *Journal of the American Academy of Child and Adolescent Psychiatry* 49.6 (2010): 606–615.

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