GUYANA’S FIRST SUICIDE PREVENTION EDUCATIONAL PROGRAM

THE EXPERIMENTAL PROPOSAL

Andrea Garraway

Liberty University

Abstract

This experimental study, conducted in Guyana, would provide evidence for the causal relationship between the high suicidal behaviors rates and mental illness.

The significance of this study proposes interventions/solutions to save Guyana’s children. Implementations of suicide prevention programs to reduce suicide rates in Guyana that would, in turn, shift the country from its present number one status of highest suicide rates in the world to the second highest. The effectiveness of this study would be most beneficial with the at-risk population. Utilization of previous data would serve as a background and an identification of the need for capacity. The statistical procedures for this experimental design comprised of randomized group selections, a controlled group of 256 (N) individuals and. The and a post intervention survey method. In order to contextualize the data, this paper explores unique factors contributing to suicidal behaviors. These identifications will be essential to tailoring interventions that would be applicable to Guyana’s cultural, sub-cultural and situational contexts in which suicide occurs.

Keywords:

 South America, Guyana; Suicidal behaviors; Suicide Prevention; Awareness program

INTRODUCTION

Reducing the number of suicide related occurrences in Guyana, South America, is vitally important. Suicidal behaviors of Guyanese people come at a high cost. The costs of suicidal behaviors include, premature loss of life, the provision of medical, surgical, mental health and rehabilitative services to those making non-fatal suicide attempts, bereavement and other psychological impacts on family and others closely involved with individuals making fatal or non-fatal suicide attempts and issues to do with lost productivity (National Youth Suicide Prevention Strategy, 1999). This paper offers a brief overview of the current state of the epidemiology of suicide in Guyana and proposed an experimental study to determine probability of implementation of a psychosocial intervention geared to moving Guyana, from its status as the country with the highest suicide rates in the world to the second highest (World Health Organization, 2014). This task begins with connecting suicidal behaviors and mental health illness. Empirical evidence underpinning the research study, shows, Guyana’s cultural norms does not associate suicidal behaviors to mental health illness (Melton, 2010). Based on this premise, it has been hypothesized, if there is an increase of mental health awareness and counseling services, the rate of suicidal behaviors would decrease.

The Pan- American Health Organization estimates roughly that 142,000 to 179,500 Guyanese individuals need mental health services; yet, the country retains less than five full-time psychiatrists, less than 300 beds in the National Psychiatric Hospital, and no day treatment or community residential facility (Scutti, 2014). The importance of mental health wellness can be viewed from a top-down approach; the lack of structural governmental support of mental health wellness exposes the correlate of negligence. Guyana is one of the many countries, located in that region of the world, that experienced historical oppression, intergenerational trauma, and ongoing marginalization due to its present socio-economic status, which are all associated with mental illness.

Research shows, even if, individuals are diagnosed with a disorder, such as, major depression and bipolar disorder, these individuals are usually untreated to the social norming an acceptance of mental illness present in Guyana (Williams, Gonralez, Neighbors, Nesse, et. al., 2007). The clear majority of people who die from suicide (i.e., approximately 95%) suffered from mental disorders (Van, Witte, Cukrowicz, Braithwaite, Selby, & Joine, 2009). Suicidal behaviors are a serious clinical problem worldwide, and understanding ways of reducing it is a priority, starting in the country with the highest rates, Guyana (Tarrier, Taylor & Gooding, 2008).

**Purpose of the Study**

The purpose of this study is to statistically determining the relationship between mental health illnesses and suicidal behavioral rates (See figure 1). The study utilizes the path model to illustrate the moderating and mediating relationship among variables. Per the model *Mental Health Illnesses,* defined as mental health conditions, is a predictor of suicidal behaviors. The directional arrows depict the relationship between the predictor and its mediator, individuals’, *Foundational Belief,* defined as attitude toward suicidal behaviors. The *Foundational Belief* aims to understand “why” suicidal behaviors occur. This data will help identify the underlying mechanisms that may be important to targeted counseling intervention which would optimize the change process (Hepner, Kivlighan & Wampold, 2008). The relationship between the moderator and mediator seek to determine the criterion, *Suicide Behaviors*, statistical significant strength. This research strategy, guided by Baron and Kenny’s Path Model (1986), is commonly used for understanding more complex relationships among variables are commonly used (Hepner, Kivlighan & Wampold, 2008).

*Figure 1.* Moderator and Mediator

Foundational Belief

(Attitude toward suicidal behaviors)

Mental Health Illnesses

(Mental Health Conditions)

Suicidal Behaviors

**Research Design**

The study was structured to allow an experimental design that is open, randomized and controlled which examines causal inferences between mental health illnesses and suicidal behaviors. Additionally, the study would assess foundational beliefs of perceived stigma caused by suicide and the attitudes toward suicide as in impact the Guyanese families and communities. The population of the study would be a representative sampling of Guyana’s population, in terms of the, racial, cultural, and religious aspects. The participants would be initially obtained through random sampling and snowball sampling to generate a study population pool of 3000 subjects ranging in age 12-80. The desired sample size is 256 (N) using the *Research Design in Counselor* table tables to decide the sample size (Hepner, Kivlighan & Wampold, 2008). The sample size being128 for two groups with a medium effect size of 0.50, signiﬁcance at an a of 0.05 and a power of 0.80 for the t-test (Cohen, 1992).

**Recruiting**

The recruiting process would begin with locating volunteers. The creation of social movement, an organized group of individuals with the common purpose of promoting social change of the present acceptability towards suicidal behaviors (Harris, 2015). A large percent of the Guyanese’s community has been effected the high rate of suicide present in the country. By tapping into the emotional impact of suicide may connect volunteers to this cause. One’s values, beliefs, and passion are essential persevering through hardships to conduct important research with target population (Hepner, Kivlighan & Wampold, 2008). Having passion, commitment, dedication and perseverance identified within Guyanese local leaders is beneficial to the recruitment of others (Hepner, Kivlighan & Wampold, 2008). Local leaders publicly endorsing the study offering culturally and linguistically appropriateness to research goals, gains legitimacy and ease of acquiesce the study by recruitment (Creswell, 2007).

The taskforce of volunteers would work to create the recruiting strategies that would generate study participants pool. Suggested sources to seek participants includes:

An alliance with the National Psychiatric Hospital of Guyana would allow access to archival registry, waiting list and current patients. Alternative recruiting methods, include, advertising to the school systems and the general public, seeking access to the primary schools (middle schools), secondary schools (high schools) through the Ministry of Education (Department of Education), independent trade school, colleges, universities and homeless shelters, also knowns, as boys and girls homes would be a source engage an diverse population. With a list of catalogued pool of participant sources, customization of personalized messages to each would employ easy-to-understand print and multimedia materials in the languages commonly used. These efforts would be supported with using one social network to enhance study participation (Hepner, Kivlighan & Wampold, 2008).

Incentives for volunteerism and study participation would comprise of offering community service hours, that may be mandatory by some primary and secondary schools and colleges for graduation or credits. In addition, school book, school uniforms voucher would be offered to student age participants. Gas cards and door locks would be offered to adult participants. While specific incentives are given by age and successful completion all requirements or selected levels of requirements, all participants would be given a to-go lunch.

**Methodology**

  The approach to identifying if there is in linkage between mental health illnesses and suicidal behavioral, in Guyana, a large population pool of 3,000 is required. These subjects would receive assessments using the following instruments: (a) Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association, 2013) to determine morbidity (b) Suicide Stigmatization Scale (Feigeleman & Feigelman, 2011) to measure societal mediators (c) Attitudes Toward Suicide Scale to measure the relationship between foundational beliefs around suicidal behaviors (ATTS; Lester & Bean, 1992; Knight, Furnham, & Lester, 2000) (d) John Henryism’s Active Coping Scale would be used to measure cognitive function and coping skills before and after intervention implementation (James, 1983).

The data would be gathered through the following collections methods: face to face, web supported means such as facetime or skype surveys. Data would be reported through hand written notes and tape-recordings. All research process would follow, The National Institute of Mental Health (2016) published guidelines that highlight several ethical, legal, and safety considerations associated with such studies.

Analyses made on the original pool of participants would service as the baseline data. The next step would identify participants who are in immediate need of psychiatric attention and make a referral. A convenience sample would be gathered from the remaining original pool of subjects to participate in the educational component (the intervention) of the study. The inclusion criteria for participants are as follows: the participant had to (1) be 18 years old years or older, (2) attempted suicide at least once (3) had been the primary care giver of an individual of someone who completed suicide (3) cared for individual who had previously attempted suicide or with suicidal tendencies for at least 30 days (4) Met the DSM-5 for depressive episode has nine symptoms and one of them is suicidal ideation. The exclusion criterion for participants was having had mental impairments that would affect their ability to ﬁll out these questionnaires or respond to interview question.

Participants who meets the outlined DSM-5 criterion would then be randomly assigned participation to one of two computer generated groups. The independent variable would be the treatment modality of cognitive-behavioral therapy (CBT). The control group would comprise of individual on a waiting list; waiting to receive treatment. The treatment services would be delivered face to face in a therapeutic setting. The counseling procedures would comprise: (a) 3 consecutive months of therapeutic services (b) appropriate levels of care: 3 times per week with 3-hour session for 12 weeks or 5 times per week with 5-hours session for 12 weeks.

At the end of the intervention period, the participants would be reassess using 3 out of the 4 instruments, Suicide Stigmatization Scale (Feigeleman & Feigelman, 2011), Attitudes Toward Suicide Scale (ATTS; Lester & Bean, 1992; Knight, Furnham, & Lester, 2000) and John Henryism’s (James, 1983), utilizing the SPSS Statistics software 22.0.

Both test and retest would encounter the same statistical process. An ANOVA and cluster analysis would be use to compare group racial, cultural, and religious group for variable specific predictors. The goal would be to examine causality by systematically varying one set of construct which measuring significant changes. A one and two tailed test would be used to support to direction data. Other consideration that will be measure is the standard error measurement is the standard deviation. Additional data would be graphed utilized normal distribution charts at the time of data collection.

**Research Questions and Hypothesis**

**The research problem: How does the lack of mental health awareness, in Guyana, impact the perception of mental health and its connection to suicidal behaviors?**

*RQ1: What percentage of Guyana’s population surveyed suffers from mental health disorder?*

H1: Less than 50% of the population surveyed suffers from a mental disorder as measured by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association, 2013).

H2: More than 50% of the population surveyed is presently suffering from a mental disorder as measured by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association, 2013).

*RQ2: Is there a significant relationship between the lack of mental health awareness, in Guyana, contributing to the people’s foundational belief of suicidal behaviors?*

H1: There is no relationship between the increase awareness of mental health illness and the suicidal behavior rate decrease measured by the Suicide Stigmatization Scale (Feigeleman & Feigelman, 2011) and Attitudes Toward Suicide Scale (ATTS; Lester & Bean, 1992; Knight, Furnham, & Lester, 2000).

H2: There is statistically significant relationship between the increase awareness of mental health illness and the suicidal behavior rate decrease as measured by the Suicide Stigmatization Scale (Feigeleman & Feigelman, 2011) and Attitudes Toward Suicide Scale (ATTS; Lester & Bean, 1992; Knight, Furnham, & Lester, 2000).

*RQ2: Is there a significant perception change, of suicide acceptability between the group that receive treatment (mental health treatment /CBT) then the control group?*

H1: There is no relationship change in perception between treatment group and the control group measured by the Suicide Stigmatization Scale (Feigeleman & Feigelman, 2011) and Attitudes Toward Suicide Scale (ATTS; Lester & Bean, 1992; Knight, Furnham, & Lester, 2000).

H2: There is statistically significant change in perception between treatment group and the control group measured by the Attitudes Toward Suicide Scale (ATTS; Lester & Bean, 1992; Knight, Furnham, & Lester, 2000) and John Henryism’s Active Coping Scale would be used to measure cognitive function and coping skills (James, 1983).

**Delimitations /Limitations of the Study**

Several factors can affect the accuracy and meaningfulness of this study. There is no published randomized trial has shown that interventions targeting mental disorders result in significant reductions in suicide attempts or death by suicide (Linehan, 2008). This is despite thousands of randomized clinical trials investigating interventions for schizophrenia, depression, anxiety disorders, and substance abuse, disorders commonly linked to suicidal behaviors (Linehan, 2008). Although many of these trials excluded highly suicidal patients, many did not. In sum, reducing symptoms of schizophrenia, depression, anxiety disorders, and substance abuse has not been shown to reduce the incidence of suicide attempts or suicide (Linehan, 2008).

**Internal Validity**

No research methods are not infallible (Hepner, Kivlighan & Wampold, 2008). However, the benefit of conducting survey interview and treatment in person allows researchers to details information of values, rituals, norms, behaviors, symbols, beliefs and emotions of those being studies (Hepner, Kivlighan & Wampold, 2008). Emphasizing the human side of the social problem (Hepner, Kivlighan & Wampold, 2008). Effect on individual lives by conveying the pain and hurt associated with suicide that it not expressed through a paper survey. The report would be elicited with a level of understanding and compassion that may not be attain through survey.

A primary weakness of this experimental study is obtaining the sample size. The sensitive nature of the study may deter participants and family members’ involvements. Another factor to the small sample size limitation come from an inherit disadvantage associated with the methodology of obtaining data using interview research, that is the cost (Creswell, 2009). In addition, the lack of privacy and anonymity offered from standard survey (Warner, 2012). Thus, low participant, concealing and altering of sensitive topic information maybe prevalent (Warner, 2012).

The intervention requires researcher’s observation given cause for human errors and potential bias. Researchers over involvement in group process may also decrease objectivities. Regression may be triggered by other suicide occurring during the time of the study (Hepner, Kivlighan & Wampold, 2008). Many cultural considerations should be accounted for, included language proficiency and unknown cultural and sub-cultural characteristics that may alter interpretive factors. This threats to internal validity is especially concerning because all the testing instrumental tool were created for the western world. Maturation may occur as the participant encounter strategies for coping with stressors causing early drop out from the study (Hepner, Kivlighan & Wampold, 2008).

**External Validity**

Awareness generated by this study may trigger suicide “copy cats”, attention seekers and survey participants who may attempt to meet survey requirements for incentive purposes which can be defined as Trigger for Incentives (TFI), coined by researcher. Stop gap mechanisms need to be in place to minimize the triggers and protect those individuals who may be on the precipice of suicidal decompression.

Generalizability across populations is of interest to counseling researchers (Hepner, Kivlighan & Wampold, 2008). Limited participation to this study to restrict the study generalizability across the population. In addition, if the subjects recruited does not present a represented sample of the population would also restrict the study’s generalizability. Some limitations may very well be physical discomfort such as noise, seating arrangement, light, room temperature and humidity are all sources of error of the participant. internal consistency to estimate reliability (Creswell, 2009). Subjects retention rates may be due to unknown external variable.

**Statistical Validity**

Since this study contents more than one hypotheses there is an opportunity for all null predicts. The rejection of a null hypotheses may lead to the acceptance of an alternative hypotheses. A statistically significant t- test would indicate there is a positive relationship between independent and dependent variable (Creswell, 2009). A threat statistical validity would be to deviate from the assigned significance level of 0.05. This would indicate that the null hypothesis existing fewer than 5 in 100 causing a type 1 error.

**Expected findings**

The study would create change for the individual participants and their community. Regardless of the study’s success or failure, it is the expectation that suicide awareness would increase by the conducting of the study in Guyana. Subjective interpretation generated during recruitment and by word of mouth from the participants. Attention to the topic may regard in an increase of death for a short period before returning to a state of equilibrium before showing any signs of decrease. It is the hope this awareness services as a catalyst for other movements and prevention solution of suicide.

The utilization of the intervention CBT, in a therapeutic setting, to address their mental health issues, is expected to both a positive sense to enhance well-being, and to improve mental health literacy so that they know the signs and symptoms of mental illness and the best ways to respond, including having a positive attitude towards seeking help and awareness of appropriate sources of care (Linehan, 2008). It is expected more studies need to be develop to truly suggest significant change as one study is never sufficient to prove causality.

**Conclusion**

This is a societal problem that cannot go unsolved. While it is understood, change will be slow and methodical, merely conducting a study such as this in Guyana will begin to bring about change to the community and its culture. The impacted by this study would increase suicide awareness and reducing the stigma of mental health services, and building community infrastructure for prevention and wellness promotion.

Reference

Baron, R. M., & Kenny, D. A (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology; 51, 1173-1182. Doi:10.1037/0022-3514.51.6.1173*

Creswell, J. W. (2007). Qualitative inquiry and research design: Choosing among five approaches. (2nd ed.). Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2009). Qualitative procedures: Qualitative, quantitative, and mixed methods approaches. (3rd ed.). Thousand Oaks, CA: Sage Publications.

Cohen J (1992) A power primer. Psychological Bulletin 112, 155–159.

Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V). Arlington, VA, American Psychiatric Association, 2013.

Feigelman, B., & Feigelman, W. (2011). Suicide Survivor Support Groups: Comings and Goings, Part I. Illness, Crisis, & Loss, 19(1), 57-71.

Hepner, P. P., Kivlighan, D. M., & Wampold, B. E. (2008). *Research design in counseling*, (3rd ed.). Thomson Higher Education: Belmont CA.

James, S. A. (1993). The Narrative of John Henry Martin, Culture, Medicine and Psychiatry, 11(1), 83-106.

Knight, M. T. D., Furnham, A. F., & Lester, D. (2000). Lay theories of suicide. Personality and Individual Differences, 29, 453-467.

Lester, D., & Bean, J. (1992). Attribution of causes to suicide. The Journal of Social Psychology, 132(5), 679-680.

Linehan, Marsha M,P.H.D., A.B.P.P. (2008). Suicide intervention research: A field in desperate need of development. Suicide & Life - Threatening Behavior, 38(5), 483-5. Retrieved from http://ezproxy.liberty.edu/login?url=http://search.proquest.com.ezproxy.liberty.edu/docview/224887899?accountid=12085

Melton, J. G. (2010). Guyana. In J. G. Melton & M. Baumann (Eds.), *Religions of the World*: *A Comprehensive Encyclopedia of Beliefs and Practices* (2nd ed., Vol. 3, pp. 1293-1297). Santa Barbara, CA: ABC-CLIO. Retrieved from http://p2048-ezproxy.liberty.edu.ezproxy.liberty.edu/login?url=http://go.galegroup.com.ezproxy.liberty.edu/ps/i.do?p=GVRL&sw=w&u=vic\_liberty&v=2.1&it=r&id=GALE%7CCX1766500709&sid=summon&asid=71b21d7a98c09335f54ea556165ad2a1.

Sun, F.-K., Chiang, C.-Y., Lin, Y.-H. and Chen, T.-B. (2014), Short-term effects of a suicide education intervention for family caregivers of people who are suicidal. J Clin Nurs, 23: 91–102. doi:10.1111/jocn.12092

Tabachnick, B. G., & Fidell, L. S. (2013). Using Multivariate Statistics. (6th ed.). Boston: Pearson.

Tarrier, K., Taylor, P., Gooding. (2007). Behavior Modification Volume 32 Number 1 January 2008 77-108 2008 Sage Publications 10.1177/0145445507304728 http://bmo.sagepub.com hosted at http://online.sagepub.com

Van Orden, K. and Jr., T. E. (2009). Suicide theories. In E. Ingram, The International Encyclopedia of Depression. *New York, NY: Springer Publishing Company*. Retrieved fromHttp://ezproxy.liberty.edu:2048/login?url=http://literati.credoreference.com/content/entry/spiedep/suicide\_theories/0.

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S., Selby, E. A., & Joiner Jr., T. E. (2010). The interpersonal theory of suicide". Psychological Review, 117(2), 575-600

Vogt, P. W. (2007). Quantitative Research Methods for Professionals. Boston, MA: Allyn and Bacon.

Warner, R. M. (2012). *Applied statistics: From bivariate through multivariate techniques* (2nd ed.). Thousand Oaks, CA: Sage Publications. ISBN-13: 978-1412991346

Williams, D.R., González, H.M., Neighbors, H., Nesse, R., Abelson, J.M., Sweetman, J., Jackson, J.S. (2007). Prevalence and Distribution of Major Depressive Disorder in African Americans, Caribbean Blacks, and Non-Hispanic WhitesResults From the National Survey of American Life. Arch Gen Psychiatry.64(3):305-315. doi:10.1001/archpsyc.64.3.305.

**Internet Source**

National Youth Suicide Prevention Strategy (1999) Setting the evidence-based research agenda for Australia (A literature review), Department of Health and Aged Care, Commonwealth of Australia, Canberra.

[Scutti](http://www.medicaldaily.com/reporters/susan-scutti), S. (2014). Suicide Rates Highest in Guyana, May Be Explained by Clustering Effect. US/World. Retrieved from http://www.medicaldaily.com/suicide-rates-highest-guyana-may-be-explained-clustering-effect-306982.

World Health Organization (2014). Suicide data. Retrieved from http://www/who.int/mental\_health/prevention/suicide/suicideprevent/en/.