

AWARD NUMBER: W81XWH-20-2-0016

TITLE: Strength at Home Couples Program: Examining Sexual Aggression

PRINCIPAL INVESTIGATOR: Dr. Emily F. Rothman

CONTRACTING ORGANIZATION:

Trustees of Boston University
85 E. Newton St, M-921
Boston, Massachusetts 02118-2340

REPORT DATE: October 2021

TYPE OF REPORT: Annual

PREPARED FOR: U.S. Army Medical Research and Development Command
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;
Distribution Unlimited

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE OCTOBER 2021		2. REPORT TYPE Annual		3. DATES COVERED 9/15/2020-9/14/2021	
4. TITLE AND SUBTITLE Strength at Home Couples Program: Examining Sexual Aggression				5a. CONTRACT NUMBER W81XWH-20-2-0016	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Emily F. Rothman, ScD and Casey Taft, PhD E-Mail:				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) TRUSTEES OF BOSTON UNIVERSITY BOSTON UNIVERSITY MEDICAL CAMPUS 85 E NEWTON ST M-921 BOSTON MA 02118-2340				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Medical Research and Development Command Fort Detrick, Maryland 21702-5012				10. SPONSOR/MONITOR'S ACRONYM(S) CDMRP	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This study represents a secondary analysis of couples-data collected from an implementation-effectiveness study of an IPV prevention intervention, <i>Strength at Home- Couples (SAH-C)</i> . We will examine the primary outcome of sexual aggression between members of the couple. Given links between sexual aggression/other IPV and suicidal ideation and behavior, and since <i>SAH-C</i> targets risk factors for these related problems, this study also proposes to examine suicidality-related outcomes in secondary analyses. The <i>SAH-C</i> intervention is a trauma-informed, couples-based group intervention that uses a social information processing model and incorporates cognitive behavioral strategies to prevent relationship conflict by assisting participants in better interpreting and responding to communication from their intimate partners. The overarching objectives/hypotheses are that relative to a Supportive Prevention intervention (SP), <i>SAH-C</i> will be associated with greater decreases in sexual aggression by service members and their partners at post-treatment and 3-month follow up, and reduced suicide-related problems. Both study aims will be evaluated via a sample of 140 couples obtained from a parent study that randomly assigned them to 10 sessions of <i>SAH-C</i> versus 10 sessions of SP. It is expected that greater reductions in sexual aggression and suicidal ideation and behavior will be found in couples receiving <i>SAH-C</i> relative to SP. It is also expected that those receiving <i>SAH-C</i> will evidence greater increases in perceptions of belongingness relative to SP.					
15. SUBJECT TERMS NONE LISTED					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (include area code)
Unclassified	Unclassified	Unclassified	Unclassified	8	

TABLE OF CONTENTS

	<u>Page</u>
1. Introduction	4
2. Keywords	5
3. Accomplishments	5
4. Impact	6
5. Changes/Problems	6
6. Products	6
7. Participants & Other Collaborating Organizations	7
8. Special Reporting Requirements	8
9. Appendices	8

1. Introduction

Sexual violence is a serious public health problem for people in the general population and for military personnel. One form of sexual violence that has been under-researched among military populations to date is intimate partner sexual aggression (IPSA). Couples that are experiencing relationship distress and possible intimate partner violence (IPV) may experience high rates of IPSA, and may need specific interventions that address the IPSA in their relationships.

One promising solution for IPV in military populations is the *Strength at Home Couples* intervention (SAH-C). SAH-C has already been subjected to an implementation-effectiveness study, completed at Joint-Base Lewis-McChord, through separate DoD funding. In this annual report, we refer to the SAH-C implementation-effectiveness study as the “parent study.” The parent study evaluated implementation efforts and physical/psychological IPV outcomes for the *Strength at Home Couples* (SAH-C) intervention among active duty service members and their intimate relationship partners. Previously, before the parent study was conducted, our team also conducted a randomized controlled trial of SAH-C among recently returning veterans which was funded by the Centers for Disease Control and Prevention (CDC). A preliminary analysis of the CDC data suggested that SAH-C was effective in reducing IPSA. Now, for the present research study, our team is analyzing the data collected through the DoD-funded Joint-Base Lewis-McChord parent study, to determine if SAH-C decreased IPSA and decreased suicidality in military personnel.

1A. About SAH-C

The SAH-C intervention is a trauma-informed, couples-based group intervention that incorporates cognitive behavioral strategies to prevent relationship conflict and violence in trauma-exposed service members. The intervention is designed to mitigate the impacts of trauma-related problems that increase risk for IPV and intimate partner conflicts. Our prior published work demonstrates SAH-C to be the only intervention shown to prevent physical and psychological IPV in a military population via clinical trial (Taft, Creech et al., 2016). Further, our recent analyses indicate that the program may also be the only couples-based program to effectively prevent intimate partner sexual aggression perpetration.

SAH-C is based on a trauma-informed social information processing model that has been elaborated by study investigators (Taft, Murphy, & Creech, 2016). The model and the intervention highlight how prior trauma and other negative life events may impact the ways that we interpret and respond to social situations, including those with relationship partners. The model, which has received empirical support in research conducted by our team (Taft, Weatherill, et al., 2015), describes how prior events may lead one to develop biases when we decode the meaning of a relationship situation, and problematic behavior such as aggression may result. These problems may be exacerbated by certain associated “core themes” that may develop as a result of trauma, such as difficulties trusting others, low self-esteem, and conflicts related to power and control.

Biases in social information processing have not only been shown to be associated with physical and psychological IPV; research indicates that those who engage in sexual aggression also tend to exhibit such biases (Ciardha, 2017; [Lipton, McDonel, & McFall, 1987](#); [McDonel & McFall, 1991](#); [Treat et al., 2001](#)). Therefore, the focus of our program on identifying and correcting social information processing biases may be particularly effective in preventing and ending intimate partner sexual aggression perpetration. We are not aware of existing military sexual aggression prevention interventions that make use of the social information processing model.

In order to fully capitalize on the richness of the existing data from the parent study, and given that intimate relationship conflict (particularly sexual aggression and violence) and social information processing biases have also been linked with suicidal ideation and behavior (Beard, Rifkin, & Bjorgvinsson, 2017; Bryan, Bryan, & Clemans, 2015; Khan, Li et al., 2019; Kimerling, Makin-Byrd et al., 2016; Monteith, Holliday et al., 2019; Monteith, Menefee et al., 2015; Venta, Mellick, Schatte, & Sharp, 2014), we are examining suicide-related secondary outcomes as well as the IPSA outcomes, with the expectation that participation in SAH-C will have a preventive effect.

If found effective, the military will not only have another clear strategy to reduce risk of and protect against sexual aggression and other intimate partner aggression, it will also have an efficient way to reduce multiple forms of violence towards others and oneself through a single intervention.

2. KEYWORDS

Intimate partner violence; domestic violence; partner violence; sexual violence; intimate partner sexual aggression; sexual assault; intimate partner sexual assault; couples treatment; suicidality; trauma; marital relationship; PTSD; relationships; intervention; implementation

3. ACCOMPLISHMENTS

3a. Major goals of the project

The major goals of this project are:

Aim 1. To test the effectiveness of *SAH-C* with respect to sexual aggression perpetration for military couples on an installation, we will compare those who have previously (during the parent study) been randomly assigned to 10 sessions of *SAH-C* versus 10 sessions of *SP* under clinically representative conditions, with 140 couples who are at risk for the development of IPV. This aim will be fulfilled by accomplishing the following subaim:

Subaim 1.1: To compare the frequency of sexual aggression perpetration of both members of the couple across conditions as reported by service members and their collateral relationship partners at post-intervention and 3-month follow up. It is expected that greater reductions in sexual aggression will be found in couples receiving *SAH-C* relative to *SP*.

Aim 2. To examine the effectiveness of *SAH-C* with respect to suicidality outcomes for military couples on an installation, we will compare those who have previously been randomly assigned to 10 sessions of *SAH-C* versus 10 sessions of *SP* under clinically representative conditions, with 140 couples who are at risk for the development of IPV. This aim will be fulfilled by accomplishing the following subaims:

Subaim 2.1: To compare the frequency of suicidal ideation and behavior in both members of the couple across conditions as reported by service members and their collateral relationship partners at post-intervention and 3-month follow up. It is expected that greater reductions in suicidal ideation and behavior will be found in couples receiving *SAH-C* relative to *SP*.

Subaim 2.2: To compare the frequency of perceptions of belongingness in both members of the couple across conditions as reported by service members and their collateral relationship partners at post-intervention and 3-month follow up. It is expected that greater increases in belongingness will be found in couples receiving *SAH-C* relative to *SP*.

In order to complete these aims, our major activities have included:

- Activity 1: Staff coordination (100% complete)
- Activity 2: IRB approval (100% complete)
- Activity 3: Data cleaning and coding (100% complete)
- Activity 4: Data sharing (0% complete)
- Activity 5: Data analysis and write-up (0% complete)
- Activity 6: Dissemination of results (0% complete)

The major activities have been to create subcontracts with the co-investigators (accomplished December 2020), to obtain IRB approval and USAMRDC HRPO approval (accomplished November 10, 2020), and data cleaning and coding (accomplished June 2021). We have not yet received institutional approval to share data from the VA with the sub-contracting co-investigators. We are awaiting that approval; anticipated by December 2021. Once that approval is in place, we can initiate data analysis, write-up, and dissemination of results.

3b. Adverse events

There have been no adverse events.

3c. What opportunities for training and professional development has the project provided?

Nothing to Report

3d. How were the results disseminated to communities of interest?

Nothing to Report

3e. What do you plan to do during the next reporting period to accomplish the goals?

Continue to work with the institutions on a data sharing agreement so that we can share data with the subcontractor co-investigator, begin data analysis, and ultimately disseminate results.

4. IMPACT

4a. What was the impact on the development of the principal discipline(s) of the project?

This is to be determined/nothing to report.

4b. What was the impact on other disciplines?

Nothing to Report

4c. What was the impact on technology transfer?

Nothing to Report

4d. What was the impact on society beyond science and technology?

Nothing to Report

5. CHANGES/PROBLEMS

5a. Changes in approach and reasons for change.

No changes in approach to report.

5b. Actual or anticipated problems or delays and actions or plans to resolve them.

We are experiencing one problem. Our project hinges on our capacity to share data from the VA with the Co-Investigator who is responsible for data analysis. At this time, the VA has yet to sign off on the data sharing. Part of the slow down in the data sharing approval is that the parent study (i.e., the study that yielded the secondary data to be analyzed in this project) is undergoing an IRB audit review at this time. The VA wants to conclude the audit before issuing an approval to share data. We anticipate that this problem will be resolved by November 30, 2021 and we will be able to make up for lost time by expending more effort in the latter part of Year 2 of the grant on the analysis.

5c. Changes that had a significant impact on expenditures.

During Year 1, we reduced Dr. Taft's salary and fringe by \$6000 and increased a research assistant salary by \$6000 in order to facilitate data coding and cleaning. That has been the only change to our expenditures.

5d. Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents.

Not applicable.

6. PRODUCTS

Nothing to report.

7. PARTICIPANTS AND OTHER COLLABORATING ORGANIZATIONS

7a. Which individuals have worked on the project?

Name	Dr. Emily F. Rothman
Project role	Co-Principal Investigator
Researcher Identifier (ORCID ID)	0000-0003-0113-2577
Nearest person month worked	1.2
Contribution to project	Dr. Rothman is providing leadership on overall project management, reporting, convening team meetings, and participating in data results interpretation and dissemination.
Funding support	Trustees of Boston University

Name	Dr. Casey Taft
Project role	Co-Principal Investigator
Researcher Identifier (ORCID ID)	0000-0002-9323-3190
Nearest person month worked	2.4
Contribution to project	Dr. Taft is providing leadership in communicating with the IRB, obtaining permissions for data sharing between institutions, planning data analyses, and contributing to interpretation of data results and dissemination.
Funding support	Trustees of Boston University

Name	Dr. Matthew Gallagher
Project role	Co-Investigator
Researcher Identifier (ORCID ID)	0000-0001-9734-9329
Nearest person month worked	1.2
Contribution to project	Dr. Gallagher is analyzing data
Funding support	University of Houston

Name	Dr. Suzannah Creech
Project role	Co-Investigator
Researcher Identifier (ORCID ID)	0000-0002-6582-1673
Nearest person month worked	0.6
Contribution to project	Dr. Creech is participating in guiding the analyses and interpretation of findings, and will participate in manuscript writing.
Funding support	University of Texas at Austin

Name	Ms. Brittany Groh
Project role	Project Coordinator / Research assistant
Researcher Identifier (ORCID ID)	N/A
Nearest person month worked	0.1
Contribution to project	Ms. Groh participated in data cleaning
Funding support	Veterans Affairs (VA)

7b. Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?

No, not applicable.

7c. What other organizations were involved as partners?

None.

8. SPECIAL REPORTING REQUIREMENTS

Please see Quad Chart in Appendix.

9. APPENDIX

Quad chart attached