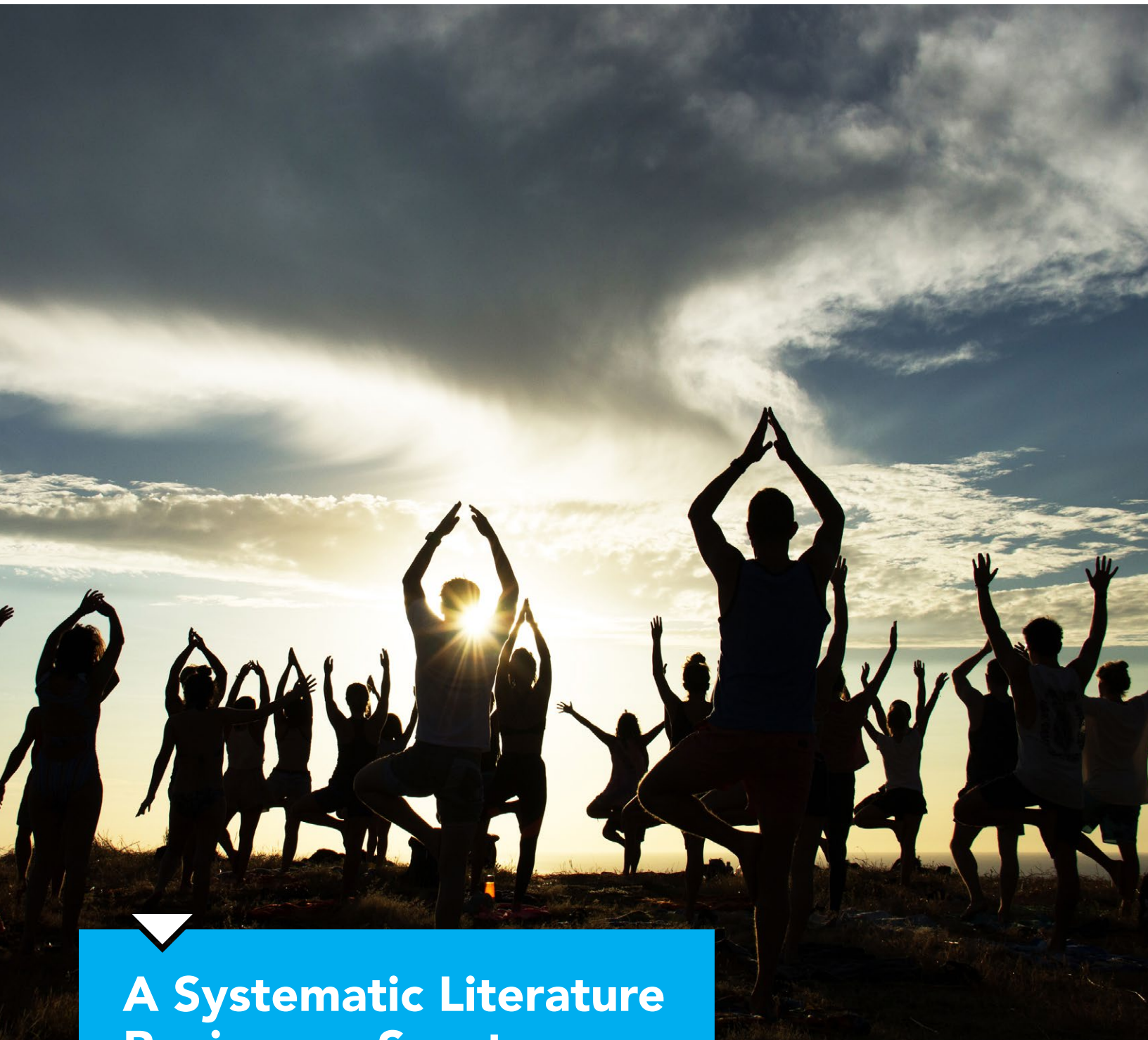




USAID
FROM THE AMERICAN PEOPLE



**A Systematic Literature
Review on Sports
Programming for
Survivors of Trafficking**

ABBREVIATIONS AND ACRONYMS

4Ps	Prevention, Protection, Prosecution, and Partnerships
ACE	Adverse Childhood Experiences
CTIP	Counter-Trafficking in Persons
PTSD	Post-Traumatic Stress Disorder
RCT	Randomized Controlled Trial
SAMHSA	Substance Abuse and Mental Health Services Administration
SfD	Sport for Development
SLR	Systematic Literature Review
SROI	Social Return on Investment
USAID	United States Agency for International Development
UNODC	United Nations Office on Drugs and Crime

Copyright ©2024 Winrock International all rights reserved. Winrock International is a recognized leader in U.S. and international development, providing solutions to some of the world’s most complex social, agricultural, and environmental challenges. Inspired by its namesake Winthrop Rockefeller, Winrock’s mission is to empower the disadvantaged, increase economic opportunity and sustain natural resources. The information appearing in this publication may be freely quoted and reproduced provided the source is acknowledged. No use of this publication may be made for resale or other commercial purposes

Disclaimer: This report was made possible through the generous support of the American people through the United States Agency for International Development (USAID). The contents do not necessarily reflect the views of USAID or the United States Government.

Authors: Jonathan Chang and John Luke Chua

Photo credit: USAID Asia Counter Trafficking in Persons and iStock Photo

TABLE OF CONTENTS

- ABSTRACT 4**

- INTRODUCTION 4**
 - Rationale 4
 - Objectives..... 5

- METHODS 6**
 - Trafficking Survivors and Survivors of Trauma 6
 - Eligibility Criteria..... 7
 - Identification 8
 - Screening and Selection Process 9

- RESULTS 10**
 - Study Selection..... 11
 - Study Characteristics..... 11
 - Individual Study Results 14

- DISCUSSION 16**
 - Overall Results 16
 - Understanding the Mechanisms of SfD Programs 17
 - Limitations and Gaps in the Literature 18
 - Implementation Lessons and Challenges 19
 - Possibilities for CTIP Programming 20

- CONCLUSION..... 21**

- CITATIONS 22**

ABSTRACT

Trafficking survivors are often subjected to complex and multiple traumas leading to adverse psychological symptoms such as post-traumatic stress disorder (PTSD) and depression, challenges to reintegration into society and connection with family, and poor livelihood outcomes.

Sport for Development (SfD) programs are popular and receive hundreds of millions of dollars annually in funding. This study conducted a systematic literature review (SLR) in order to examine whether and how sports for development programming can be used effectively to provide trauma-informed care to trafficking survivors to address negative psychological, social reintegration, and livelihoods outcomes. Despite SfD's popularity, we did not find existing research on SfD programs specifically for trafficking survivors with the exception of a pilot study on a yoga program for trafficking survivors in Uganda (Namy et al., 2022). We thus expanded the list of eligible research papers to include those studying trauma survivors that face comparable types of traumas as trafficking survivors.

After screening 7,230 studies, we identified seven additional papers (bringing the total to eight studies) which provided relevant evidence for the effects of sports programming on survivors of trafficking. Based on these studies, we found compelling evidence that these Sport for Development programs improved psychological outcomes for survivors of trauma and moderate evidence supporting improved reintegration outcomes. There was no evidence for or against the effectiveness of these programs on survivor livelihoods outcomes.

The literature also provided important insights into the mechanisms by which these SfD programs work. Socialization with other people, the motivational and distraction effects of exercise, and the physical component of sport itself all appear to be essential elements of SfD. Organizations interested in implementing their own programs should carefully match their target population's needs with the type of sports program and any complementary programming.

The use of SfD programs for trafficking survivors can complement the 4Ps Framework - Prosecution, Protection, Prevention and Partnerships - of CTIP projects in several ways. While the most obvious link is Protection, there are also potential connections to Prevention and Partnerships.

INTRODUCTION

Rationale

The use of sports programs to reach development outcomes is a hugely popular trend with massive global participation. While this movement is most commonly referred to as Sport for Development (SfD or S4D), it is also called Sports for development and peace (SDP), Sport for Change (SFC), Development through Sport (DTS), and Sport and Development (S&D) (Beaman et al., 2021). In this paper, we will use the term "Sport for Development" going forward to refer to the phenomenon of using sports programming to achieve specific development objectives.

Sport for Development has been defined as the broad effort to "engage people from disadvantaged communities in physical activity projects that have an overarching aim of achieving various social, cultural, physical, economic or health-related outcomes" (Schulenkorf and Adair, 2013) and "the use of sport to exert a positive influence on public health, the socialization of children, youths and adults, the social inclusion of the disadvantaged, the economic development of regions and states, and on fostering intercultural exchange and conflict resolution" (Lyras and Peachey, 2011).

SfD is the recipient of significant development spending, with sources estimating expenditures hundreds of millions annually. Beaman et al. (2021) found \$220 million in annual expenditures on sport for development programming by searching financial disclosure records of SfD organizations. However, the authors believed that these expenditures are massively undercounted and could be multiple times the disclosed amount (p. 130).

These large expenditures are matched by the very broad range of desired outcomes for SfD programs. USAID listed outcomes ranging from: physical education, humanitarian response, reconciliation and peace building, rehabilitation and integration of persons with disabilities, advocacy and social/policy change, awareness raising and education, and economic development (USAID, 2005).

From our preliminary review of SfD studies, we found that measured outcomes can be categorized into:

1. Physical health outcomes. E.g., proficiency in a particular sport, changes in cardiovascular health measures, physical strength improvements

2. Psychological outcomes. Change in PTSD/ anxiety/depression symptoms, healing from psychological trauma

3. Social outcomes. E.g., integrating people into a broader community, rebuilding social structures post-disaster, conflict resolution

4. Economic outcomes. E.g., labor market outcomes for participants

Objectives

The purpose of this research is primarily to provide practical insight into whether there is evidence that supports sport or physical activity-based programming for trafficking survivors. In particular, we aim to investigate the efficacy of sports interventions on three specific *reintegration outcomes*: 1) psychological effects (i.e., emotional, behavioral, and mental health), 2) social outcomes (which we define as acceptance by and/or connection to society/family), and 3) economic livelihood outcomes of trafficking survivors. The concept of *reintegration outcomes* is derived from prior research on survivor reintegration conducted by USAID Asia Counter Trafficking in Persons (CTIP) in partnership with Humanity Research Consultancy (see Kasper and Chiang, 2020).

While there are examples of sports initiatives for survivors of trafficking (e.g., The Salvation Army's Anti-Trafficking and Modern Slavery's "Team International", a badminton and football program for residents from five safehouses in the UK (Salvation Army, 2023), a review of the literature revealed no academic research of sports interventions specifically for trafficking survivors, with the exception of a pilot study on a yoga program for trafficking survivors in Uganda (Namy et al., 2022). However, there are several limitations of this study including the methodology (pre-post study), relatively small sample size, and potential conflicts of interest (three out of the five authors are directors of the programs running the intervention).

Thus, we expanded the SLR to include studies about sports interventions on survivors of the types of traumas that survivors of trafficking collectively face. We defined this list of potentially comparable populations in the next section.

Because the positive effects of exercise on various aspects of psychosocial wellness including depression (Kvam et al, 2016), body-image (Hausenblas & Fallon, 2006), cognition (Chang et al., 2012), quality of life (Martin et al., 2009), and loneliness (Pels & Kleinert, 2016) has already been extensively explored, this systematic review focused specifically on the efficacy of sports for development programming for trauma survivors. We thus excluded papers that only look at physiological/sports-performance outcomes (e.g., changes in strength, cardiovascular health, muscle growth, running speed, resting heart rate, etc.). We discussed the study inclusion criteria further in the Methods section.

Given this SLR's emphasis on sports programming, we also look for any mention of the practical insights related to the implementation of SfD interventions. We also hope to gain insight into the challenges of implementing these sports interventions – including logistical hurdles, ensuring the safety of participants (e.g., preventing re-traumatization), and the limitations of sport and physical activity as sole interventions. We also hope to gain insight on the prevalence and use of trauma-informed approaches in these programs, given the increasing awareness around the importance of trauma-informed and -focused interventions.

METHODS

Before defining the research question and eligibility criteria, the research team conducted an initial scoping of literature on SfD programs for trafficking survivors. The team determined that there was no existing research for SfD programs specifically aimed toward people that had experienced trafficking. Thus, the SLR was extended to include research on a subset of trauma survivors that face the most comparable types of traumas as trafficking survivors.

We aim to identify a reasonable comparison group for trafficking survivors, which is somewhat subjective. Because the authors of this study are not trained psychologists nor trauma experts, we consulted existing literature to identify the types of trauma survivors to include in this SLR. This approach of studying comparable groups is also supported by Hossain et al. (2010), who noted that the high prevalence of post-traumatic stress disorder (PTSD), anxiety, and depression among war trauma survivors and refugees fleeing disasters is also shared by survivors of trafficking:

“This higher level of PTSD suggests the need for future research to test whether intervention approaches for girls and women subjected to partner violence or war trauma might be beneficial for trafficked girls and women.” (p. 2445)

Trafficking Survivors and Survivors of Trauma

Trafficking survivors collectively face a complex array of traumas. Survivors may face multiple forms of trauma, and this can occur over a long period of time, sometimes even before the trafficking process. (UNODC, 2009) According to Clawson et al. (2007),

“Trauma exposure occurs along a continuum of complexity, from the less complex single, adult-onset incident (e.g., a car accident) where all else is stable in a person’s life, to the repeated and intrusive trauma frequently of an interpersonal nature, often involving a significant amount of stigma or shame and where an individual may be more vulnerable... It is on this far end of the continuum where victims of human trafficking, especially sex trafficking, can be placed.” (p. 1)

From the literature, trafficking traumas commonly include violence and abuse, including physical violence, intimate partner violence, sexual violence,

and extortion (Marti Castaner et al., 2021), and loss of autonomy and restriction of movement (UNODC, 2009). Hossain et al. (2010), documents seven types of trafficking trauma:

1. **Sexual violence (forced or coerced sex)**
2. **Physical violence (being hit, kicked, or physically hurt)**
3. **Physical violence with a weapon (being assaulted with a weapon)**
4. **Threats of harm against the participant**
5. **Threats of harm against the participant’s family or loved ones**
6. **Restricted freedom of movement and activity (how free the participant felt to do what she wanted or go where she wanted)**
7. **Severe injury during trafficking.**

Trauma “overwhelms the victim’s psychological and biological coping mechanisms. This occurs when internal and external resources are inadequate to cope with the external threat” (Saporta Jr & Van der Kolk, 1992). As a result of trafficking trauma, a host of negative symptoms arise including higher levels of PTSD, depression, and anxiety (Hossain et al., 2010).

It is important to note the wide range of experiences that trafficking survivors face and the subsequent symptoms that develop. Hopper & Gonzalez (2018), when comparing the psychological symptoms of survivors of sex trafficking versus labor trafficking, found no significant differences in the prevalence rates of diagnoses of PTSD or depression between survivors of sex and labor trafficking (p. 182). However, survivors of sex trafficking had more severe symptoms of PTSD and were more likely to experience complex PTSD symptoms. Further, survivors of sex trafficking experienced higher incidence of physical and sexual violence during trafficking (p. 183).

In order to better understand other potentially relevant traumas, we consulted the existing literature for frameworks of trauma types. The World Health Organization utilized seven categories in its World Mental Health survey (Kessler et al., 2017): 1) war related trauma, 2) physical violence, 3) intimate partner or sexual violence, 4) accident (including natural disaster), 5) unexpected death of loved one, 6) other traumas of loved ones or witnessed, and 7) other traumas.

Geoffrion et al. (2022), classified traumatic events into five categories: 1) interpersonal trauma (e.g., physical, assault with a weapon, sexual assault or attempted sexual assault, captivity), 2) accident-related trauma (e.g., transportation accident, serious accident at work), 3) disaster-related trauma (e.g., natural disaster, fire, or explosion), 4) life-threatening illness

(e.g., being diagnosed with or having a child diagnosed with a cancer), and 5) war-related trauma (e.g., combat or exposure to a war zone in the military or as a civilian).

By matching these standardized categories of trauma to the descriptions of the types of traumas that trafficking survivors most commonly experience, we argue that the most relevant comparison group to trafficking survivors are:

- ▶ **Survivors of gender-based violence, intimate partner, and sexual violence.** Both this group and survivors of trafficking likely share similar experiences of sexual violence, physical violence, threats of harm to self and loved ones, and severe injury.
- ▶ **Survivors of war and conflict trauma (both combatants and civilians affected by conflict).** Both this group and survivors of trafficking likely share exposure to severe injury, threats of harm to self, threat of harm to family or loved ones, physical violence, physical violence with a weapon, and sexual violence.
- ▶ **Survivors of forced migration and refugee trauma.** Both this group and survivors of trafficking likely share restricted freedom of movement and activity, and increased risk of threats of harm, physical violence, and sexual violence.

Eligibility Criteria

Informed by the initial research, we use the following eligibility criteria:

TABLE 1 – ELIGIBILITY CRITERIA AND RATIONALE

	INCLUSION CRITERIA	RATIONALE
Years considered	Published since January 1, 2013	We wanted to review relevant literature that is relatively current, which we deemed to be from the last decade.
Methodology	Quantitative and Qualitative	We focused on papers using quantitative and qualitative methods including randomized control trials (RCT), focus groups, observations, and interviews. We excluded theory-only studies.
Data Source	Primary	
Language	English	We included English-language papers as the database search strings are in English.
Publication Type	Peer Reviewed	Peer review ensures the review is based on high-quality, credible, and relevant research. We excluded post-graduate theses and dissertations which are not peer reviewed.
Intervention type	Sports / physical activity intervention	The intervention must be sports and exercise related. We allowed for individual and team sports, as well as general recreational activities.
Study sample	Survivors of gender-based violence, intimate partner or sexual violence, war / conflict related trauma, forced migration and refugees	Survivors of trauma that can serve as a plausible comparison group for trafficking survivors.

We also specifically excluded the following types of traumas from our SLR, which were recurring in our search results:

- Disease-induced trauma (e.g., cancer or heart disease)
- Sports-induced injury
- General mention of adverse childhood experiences (ACE). While a subset of ACE falls within the relevant list of traumas listed above, ACE is very broad and includes other types of traumas which fall out of the scope of our study.
- Natural disaster related trauma. While natural disaster trauma does sometimes cause forced migration, and associated traumas (prolonged and uncertain asylum process, fear of deportation, restricted living conditions (see Drozdek, 2015; Nickerson et al., 2011)), many studies we reviewed did not fall into that category.

We also excluded the following types of studies:

- Papers that don't study a particular sports intervention (e.g., only survey people who are already involved in a particular sport).
- Performance related studies (elite sport).
- Study population with mental health issues or depression but no mention of the trauma which caused these symptoms in the first place.
- Safeguarding in sport (preventing abuse from happening within sports contexts).
- Papers focused solely on physiological health outcomes (rather than psychosocial outcomes).
- Theoretical studies.

Identification

We utilized four databases to identify potential papers for our literature review: Google Scholar, ProQuest, Scopus, and the University of Sussex's library. Google Scholar, ProQuest and Scopus are among the most frequently used databases for systematic literature reviews (Gusenbauer, 2018). The University of Sussex's library was chosen due to prior available access to the database.

For each of the databases, over one dozen search string combinations were used (see table below). Each search string included "sport", the population of interest (e.g., "trauma victim", "survivor"), plus an outcome of interest (e.g., "reintegration", "mental health", "life skills").

TABLE 2: LIST OF SEARCH TERMS

sport AND ("trauma victims" OR "victims of trauma") AND reintegration
sport AND ("victims of trauma" OR "trauma victims") AND psychosocial
sport AND ("victims of trauma" OR "trauma victims") AND "mental health"
sport AND ("trauma victims" OR "victims of trauma") AND psychological
sport AND ("victims of trauma" OR "trauma victims") AND "life skills"
sport AND ("victims of trauma" OR "trauma victims") AND livelihood
sport AND ("victims of trauma" OR "trauma victims") AND "community integration"
sport AND survivor AND reintegration
sport AND survivor AND "mental health"
sport AND survivor AND psychosocial
sport AND survivor AND psychological
sport AND survivor AND "life skills"
sport AND survivor AND livelihoods

Note that we did not search for specific sports or exercises (e.g., "football" or "yoga"), since this would greatly increase the number of search strings required and require us to make subjective decisions on the list of sports and exercises to include. Further, this also raises the issue of what is considered "sport". For example, while we include yoga programs in our SLR, it is often not included in the list of activities that fall under the SfD umbrella. Rather than making this determination ourselves, we leave the decision of whether to use "sport" to describe the evaluated program up to the authors of the studies.

The databases were searched for the above search strings between February 1 – 13, 2023. In total, the queries yielded over 130,000 results from the four databases:

- 124,016 results from Google Scholar (retrieved on Feb 3, 2023)
- 5,508 results from ProQuest (retrieved Feb 13, 2023)
- 925 results from Scopus (retrieved Feb 1, 2023)
- 509 results from Sussex (retrieved Feb 9, 2023)

Google Scholar returned a much larger number of results compared to the other databases, which was expect-

ed since it is a crawler-based search engine, which works differently than bibliographic databases based on a curated catalog of information (Gusenbauer and Haddaway, 2019). It is well documented that Google Scholar's constantly changing content, database structure, and algorithms often produce duplicate, irrelevant, and inconsistent results, which reduces its suitability for systematic literature reviews on its own (Giustini & Boulos, 2013; Gusenbauer and Haddaway, 2019). However, we included it as a supplementary resource in this research due to the broad coverage offered by Google Scholar in the humanities and social sciences (Martín-Martín et al., 2018).

Because the relevance and quality of the results from Google Scholar decreased with each additional page, the team retrieved results until the search results were no longer relevant. For each search term listed in Table 2, the team retrieved no less than 20 pages of results (and up to 50 pages of results on some terms).

In total, the team retrieved 7,230 abstracts and titles for review (see table below).

TABLE 3: SEARCH RESULTS BY DATABASE

DATABASE	DATE SEARCHED	SEARCH RESULTS	DUPLICATES	ABSTRACTS/TITLES RETRIEVED FOR REVIEW
Scopus	February 1, 2023	925	184	741
ProQuest	February 13, 2023	5,508	0	1,786
Google Scholar	February 3, 2023	124,016	64	4,296
Sussex	February 9, 2023	509	102	407
Totals	-	130,958	350	7,230

Screening and Selection Process

The team then conducted three rounds of searches in order to narrow down the search results. In the first round, the team screened 7,230 paper titles and abstracts and ranked them based on the inclusion criteria determined by the research question. The team used the criteria outlined in Table 4 to rank the abstracts.

TABLE 4: RANKING AND CRITERIA OF STUDIES

RANKING	CRITERIA
1 (YES)	a) Focus of research on effect of sports or exercise-based intervention on trauma recovery AND b) Research participants comprised of <i>most comparable</i> victims of trauma
2 (MAYBE)	a) Focus of research on effect of sports or exercise-based intervention on trauma recovery AND b) Research participants comprised of victims of trauma other than disease-related
3 (NO, non-communicable disease-specific)	a) Focus of research on effect of sports or exercise-based intervention on trauma recovery AND b) Research comprised of victim's disease-related trauma
0 (NO)	a) Not focused on research on effect of sports or exercise-based intervention on trauma recovery

TABLE 5: RETRIEVED AFTER REVIEW OF PAPER ABSTRACT AND TITLE

DATABASE	ABSTRACTS/TITLES RETRIEVED FOR REVIEW	EXCLUDED AFTER REVIEW	RETRIEVED
Scopus	741	741	0
ProQuest	1,786	1,746	40
Google Scholar	4,296	4,232	64
Sussex	407	407	0
Totals	7,230	7,126	104

Following the screening, the full text of the papers that were ranked 1 or 2 (104 papers in total) were then retrieved and assessed for quality and relevance. For the 91 studies that could be retrieved, two members of the research team then ranked these papers “yes” or “no” based on the following criteria:

- The study assessed an implemented sports intervention program.
- The study sample population was comprised of people that had experienced a type of trauma relevant to trafficking survivors (discussed above).
- The study was reasonably rigorous.

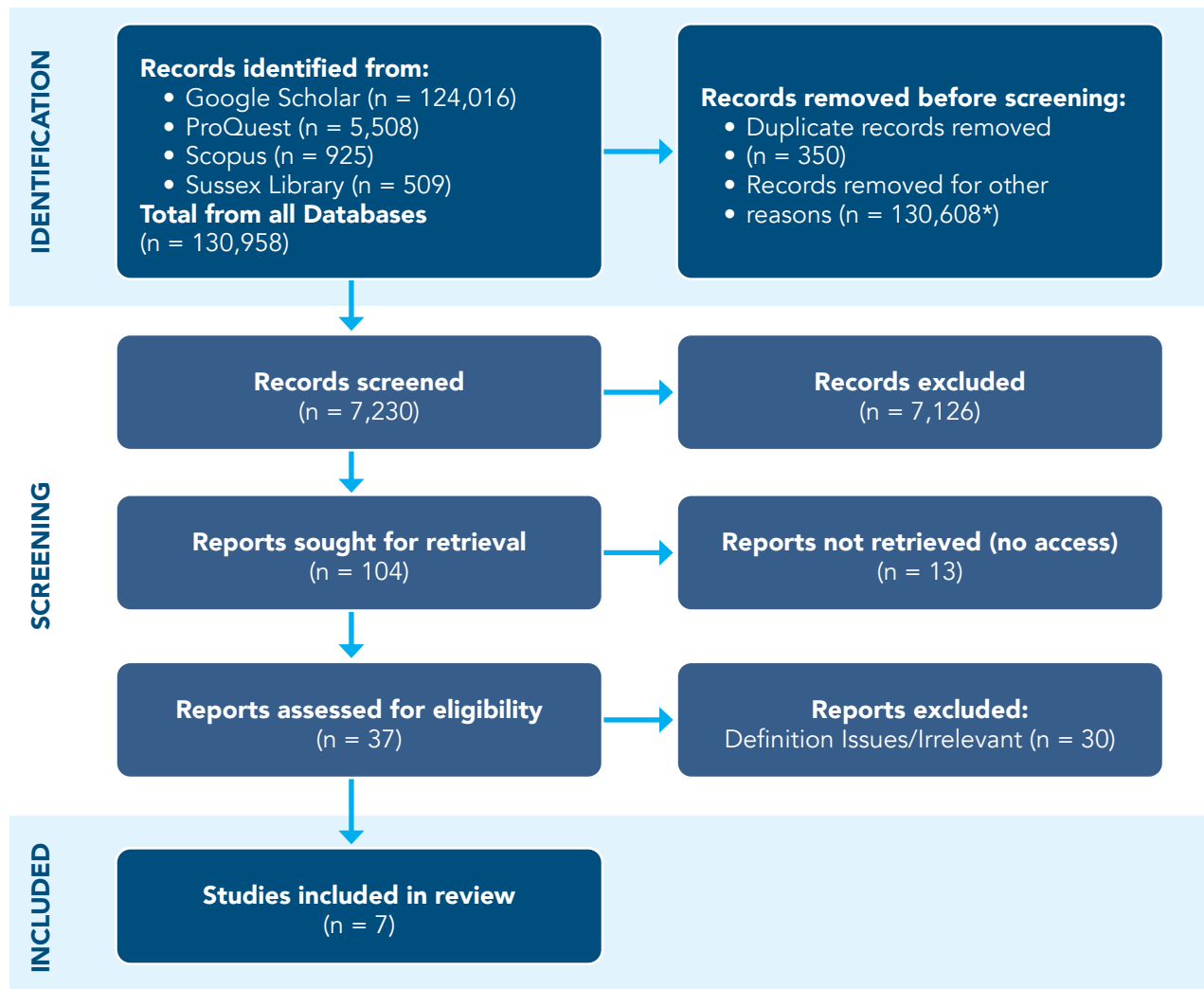
Following this round of screening, the team selected seven papers for inclusion in the SLR, to be considered in addition to Namy et al. (2022).

RESULTS

Overall, 7,230 studies were screened and 7,126 were excluded based on their titles and abstracts. 104 documents were targeted for retrieval. 91 were able to be retrieved and reviewed for quality and relevance based on the inclusion criteria. Seven documents were included as the final result (in addition to the study found in the preliminary scoping).

FIGURE 1: PRISMA FLOW DIAGRAM

IDENTIFICATION OF STUDIES VIA DATABASES AND REGISTERS



Study Selection

In total, there were eight studies selected for this review. One study was found in our preliminary scoping:

1. **Namy et al. (2022) - Healing and Resilience after Trauma (HaRT) Yoga: programming with survivors of human trafficking in Uganda**

Seven additional papers were found via the search strategy outlined above:

2. **Bennett et al. (2014) - Addressing Posttraumatic Stress Among Iraq and Afghanistan Veterans and Significant Others: An Intervention Utilizing Sport and Recreation**
3. **Knappe et al. (2019) - Impact of an 8-Week Exercise and Sport Intervention on Post-Traumatic Stress Disorder Symptoms, Mental Health, and Physical Fitness among Male Refugees Living in a Greek Refugee Camp**
4. **Craig et al. (2020) – The Transformative Nature of Fly-Fishing for Veterans and Military Personnel with Posttraumatic Stress Disorder**
5. **Ley et al. (2018) - “In the sport I am here”: therapeutic processes and health effects of sport and exercise on PTSD**
6. **Staempfli & Matter (2017) - Exploring the Impact of Sport and Play on Social Support and Mental Health: An Evaluation of the “Women on the Move” Project in Kajo-Keji, South Sudan**
7. **Crews et al. (2016) - The use of yoga to build self-compassion as a healing method for survivors of sexual violence**
8. **Van der Kolk et al. (2014) - Yoga as an adjunctive treatment for posttraumatic stress disorder: A randomized controlled trial.**

Study Characteristics

STUDY	DATABASE	TYPE OF PUBLICATION	RESEARCH METHODS	SAMPLE SIZE	COUNTRY
Namy et al. (2022)	Preliminary scoping	Journal Article	Pre/post study	11 girls (ages 15-20) living in a shelter for trafficking survivors	Uganda
Bennett et al. (2014)	ProQuest	Journal Article	Quasi-experiment (2 treatment arms, 1 control group)	17 couples (treatment A- 5 couples, B- 6 couples, control - 6 couples)	USA
Knappe et al. (2019)	ProQuest / Google Scholar	Journal Article	Pre/post study	45 male refugees (from Syria, Iraq, Palestine, Kurdistan)	Greece (refugee camp)
Craig et al. (2020)	ProQuest	Journal Article	Focus group	9 war veterans	USA
Ley et al. (2018)	Google Scholar / Sussex	Journal Article	Case study	1 participant (20-year-old, South Asian man)	A refugee in Austria
Staempfli & Matter (2017)	Google Scholar	Journal Article	Pre/post study	340 women at baseline	South Sudan
Crews et al. (2016)	Google Scholar	Journal Article	Structured interview	8 women (white, ages 14-60)	USA
Van der Kolk et al. (2014)	Backchain	Journal Article	Randomized control trial	64 women (32 treatment, 32 control) at baseline	USA

STUDY	TYPE OF TRAUMA	TRAUMA SYMPTOMS	TYPE OF SPORTS INTERVENTION	OTHER ELEMENTS OF THE INTERVENTION (E.G., THERAPY, FINANCIAL LITERACY, ETC.)
Namy et al. (2022)	Trafficking	Depression	Yoga	Breathwork, visualizations, mindfulness practices, theme-based discussions
Bennett et al. (2014)	War	PTSD	Winter sports (snowboarding and skiing)	Discussions at mealtimes and journaling encouraged, with materials provided
Knappe et al. (2019)	Refugee / Forced displacement	PTSD, Depression, Anxiety disorders	Wide range, but primarily football, boxing and a combination of calisthenics and weight training	N/A
Craig et al. (2020)	War	PTSD	Fly fishing	N/A
Ley et al. (2018)	War, torture, forced displacement	Depression, PTSD, acute suicide risk	Group sports (basketball, Ultimate Frisbee, tchoukball); endurance, coordination, and mobilization exercises; respiration and relaxation techniques	Trauma expert present to provide support
Staempfli & Matter (2017)	War, sexual-violence, gender-based violence	PTSD, depression; social	Group football ¹ on outdoor fields	Group counseling sessions, life skill games, savings and loan groups
Crews et al. (2016)	Sexual and domestic violence	PTSD, depression, anxiety disorder, suicidal tendencies, eating disorder, self-harm, substance abuse	Yoga	Traditional peer-support group offered
Van der Kolk et al. (2014)	Sexual and domestic violence	PTSD, anxiety, depression, physical health problems (obesity, heart disease, chronic pain)	Yoga for treatment arm, support/education group for control	N/A

1 See further information at <https://www.sportanddev.org/latest/news/women-move-sport-supporting-displaced-women-and-girls>

STUDY	PSYCHOSOCIAL EFFECTS (e.g., changes in mood and/or behavior)	REINTEGRATION	LIVELIHOODS / ECONOMIC EFFECTS	IMPLEMENTATION LESSONS / CHALLENGES
Namy et al. (2022)	Statistically significant improvement in several self-reported depression symptoms	N/A	N/A	Program was feasible to implement in a shelter setting
Bennett et al. (2014)	Statistically significant reduction in PTSD symptoms for both experimental groups	Experimental Group B showed significant increases on the marital adjustment measure	N/A	Intervention placed emphasis on creating a recreational environment for participants which did not feel like traditional psychosocial therapy.
Knappe et al. (2019)	Statistically significant decrease in PTSD symptoms, depressive symptoms, and sleep complaints of participants who completed the study	N/A	N/A	All interested participants had the opportunity to participate in the program, and to ensure full participation, participants were organized into small groups and provided translation and support to complete questionnaires
Craig et al. (2020)	Mood regulation and expression of feelings; Improved patience and concentration; Generating motivation; Helped restore a sense of control in their lives.	Fostering connections through shared experiences	N/A	N/A
Ley et al. (2018)	Increased positive affective states while exercising, increased confidence and mastery	Increased group experience and sense of belonging, though subject did not establish any solid relationships	N/A	Communication with other participants was hindered by different languages, exercise led to physical pain which triggered memories of past traumatic experiences
Staempfli & Matter (2017)	Statistically significant decrease in PTSD symptoms	Statistically significant difference in social support, emotional support, positive social interactions	N/A	Programs should adhere to the Substance Abuse and Mental Health Services Administration (SAMHSA) ² guiding principles of trauma-informed care
Crews et al. (2016)	Qualitative evidence of increased self-care, self-kindness	Qualitative evidence of increased connection with others	N/A	Program focused on self-autonomy, allowing participants to control aspects of program
Van der Kolk et al. (2014)	Significant decrease in PTSD and depression for yoga treatment group; significant decrease in depression but not PTSD for peer support control group	N/A	N/A	N/A

2 The Substance Abuse and Mental Health Services Administration (SAMHSA) is a subordinate operating agency under the U.S. Public Health Service, Department of Health and Human Services. SAMHSA's six principles include safety, trustworthiness & transparency, peer support, collaboration & mutuality, empowerment, voice & choice, and cultural, historical & gender issues. For more information on SAMHSA's guiding principles, please see SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach (Huang et al., 2014), <https://store.samhsa.gov/sites/default/files/sma14-4884.pdf>

Individual Study Results

NAMY ET AL. (2022)

At the time of the publication of this SLR, this is the only publication we found that studied a sports and exercise program's effects specifically on trafficking survivors. This study utilized a pre-post design on a sample of 11 girls ages (15-20) in Kampala, Uganda who were living in the same shelter after being trafficked. The girls participated in a group-based yoga course which integrated yoga poses with breathwork, visualizations, mindfulness practices, and a guided group discussion. The program lasted for 12 weeks and met once a week for 60 to 90 minutes.

Following the intervention, participants reported statistically significant increases in overall perceptions of physical and emotional health. There were also significant improvements in depression. Using a standard health questionnaire that measured nine symptoms of depression, Namy et al. found that there was a statistically significant improvement ($p < .05$) in four out of nine symptoms ("felt tired/no energy", "felt sad/hopeless", "felt like a failure", "trouble concentrating"). There were borderline significant effects ($p < .10$) in the other five symptoms related to sleep, headaches, fear, eating, and back pain.

However, the pre-post study design prevented the impact to be causally attributable to the program. In particular, it is possible that the shelter's normal services were driving the improvements in depression symptoms (i.e., the girls would have improved over time even without the yoga program simply because they were in the shelter, which provided stability and security).

BENNETT ET AL. (2014)

Bennett et al. (2014) showed through their quasi-experimental study ($n=17$) the positive impact of an adaptive sport and recreational program on the psychosocial well-being of military veterans and their marital partners. The two experimental groups in this study showed statistically significant decreases in PTSD symptoms after participating in winter sport-based interventions. Conversely, the control group showed increases in PTSD symptoms in the post-test, although this was not statistically significant.

Further, couples who received communication-focused support in addition to the sport-based intervention showed significant increases in marital satisfaction from pretest to post-test, compared to couples who took part in the sport-based interventions only.

KNAPPE ET AL. (2019)

An 8-week pre-experimental study conducted by Knappe et al. (2019) with male refugees (from Syria, Iraq, Palestine, and Kurdistan) with psychopathological symptoms at a refugee camp in Greece showed that exercise and sport participation had a positive effect on mental health of participants across a range of variables including PTSD symptoms, depressive symptoms and anxiety symptoms. One statistically significant finding was that increased frequency of participation in sport and exercise was associated with a reduction in anxiety scores. Another statistically significant finding was the effect of higher frequencies of sport and exercise on improved self-reported health-related quality of life scores.

Note however, that the pre-post study design prevented the impact to be causally attributable to the program (there may be issues with self-selection and/or a bi-directional relationship between frequency of participation and the mental health of the participants).

CRAIG ET AL. (2020)

Craig et al. conducted focus groups with a total of nine veterans and military personnel with PTSD to explore ways in which fly-fishing may serve as a coping resource in transcending negative life events. Fly-fishing is a form of recreational/sport fishing where the angler wades into the water and utilizes a unique casting technique; the use of fly-fishing for therapy reflects the growing popularity of nature-based approaches to address PTSD in military personnel.

There were several psychosocial related benefits which were thematically inferred from the focus groups. Firstly, there were the calming and mood regulation effects of fly-fishing. Further, other participants mentioned that fly-fishing fostered an awareness of challenges associated with mood regulation, a symptom common with PTSD. A second theme which emerged was how fly-fishing sustained coping effort and commitment by generating motivation and providing challenges for participants. Thirdly, several participants mentioned how fly-fishing helped move them towards personal transformation and post-traumatic growth. The fourth theme related to the benefits of fly fishing on social reintegration through the shared group experience of participating in the program activities.

LEY ET AL. (2018)

Ley et al. took a qualitative health approach and utilized a case study methodology in order to closely examine the therapeutic processes and health effects of sports on a survivor with severe war, torture, and

migration trauma. This study closely examined a young South Asian man (around 20 years old), who fled from conflict and torture in his home country that killed his family. After arriving as a refugee to Greece, he was imprisoned and later lived unhoused with other refugees before arriving in Austria. He was diagnosed with a recurrent depression disorder, deemed to be at acute suicide risk, and taking various neuroleptic and antidepressant medication.

This man was enrolled in a program for three months, with two weekly sessions of 90 minutes based on sport, exercise, and movement therapy principles. The study documented improved affective states (such as joy, and pride) during these sessions, which were the only times the subject displayed positive emotion during his week. The program also appeared to have a restorative effect and allowed the subject to become more present in the moment as the sport and exercise distracted him from his PTSD. The subject was also initially very socially isolated; these sessions gave him positive social interactions and an increased sense of belonging. The program appeared to increase the subject's motivation and the authors observed that the subject built up resilience to push through physical pain while exercising. After the program concluded, the subject decided to join a commercial gym.

STAEMPFLI AND MATTER (2017)

This study evaluated 340 women survivors of war, sexual, and gender-based violence in the Kajo-Keji county of South Sudan between 2012 and 2016. These women were between 18-40 years old and were participants of the Women on the Move project, which was offered bi-weekly, two-hour sport and play activities across the county; these activities were complemented by group counseling sessions, sensitization and awareness raising meetings, and education on topics such as alcoholism, HIV, and child protection. In addition, life skill games were introduced to build skills in problem-solving, proactiveness, and decision-making. Finally, livelihood, as well as savings and loan groups, were introduced to empower the women economically and build social support networks.

Following a pre-post evaluation, the authors concluded that 83.1% of study participants had PTSD based on a standard self-report instrument at the time of the baseline data collection while three and a half years later, this share dropped to 63.4%. There was also a significant change in the self-reported perception of overall social support available to the women. Note however, that this study design did not establish a control group, making the attributable effect of

the program unclear. And while the program had a livelihoods component, the study did not report any data on livelihoods.

CREWS ET AL. (2016)

Crews et al. studied the effect of a yoga program on survivors of sexual and domestic violence. The researchers (who have expertise in social work), approached this research from a social work perspective, utilizing structured interview questions, in order to study the themes of self-compassion, common humanity, self-kindness, and mindfulness.

This study found qualitative evidence suggesting that practicing yoga in a group setting that was sensitive to the issues of trauma survivors increased participants' self-compassion, leading to feelings of trauma reduction and better overall physical and emotional wellness for survivors. The authors suggested this happens from increased self-kindness (and decreased self-judgment), increased mindfulness, and increased connection to their community (and decreased self-isolation).

VAN DER KOLK ET AL. (2014)

The study of Van der Kolk et al. was unique among this collection of studies because of the methodology used – randomized control trial (RCT). This study used a clinical psychology approach and focused on a group of 64 women from the USA who experienced trauma from interpersonal violence and assault, resulting in symptoms including PTSD, anxiety, and depression. These women were then randomized into a treatment or control group for 10 weeks– the control arm was comprised of a weekly hour-long supportive group and women's health education class that emphasized social interaction, while the treatment arm was a weekly, hour-long yoga program.

This study showed that the yoga program was more effective than the supportive therapy in reducing PTSD symptomatology in women with chronic treatment-resistant PTSD, with effect sizes comparable to well-researched psychotherapeutic and pharmacologic approaches. In contrast, after an initial positive response, the control group reverted to baseline. However, the depression scores of both groups declined significantly and continued to improve in the control group, even as their PTSD scores relapsed.

DISCUSSION

Overall Results

Overall, we see very strong qualitative and quantitative evidence that SfD programs can improve psychological outcomes related to symptoms of PTSD, anxiety, depression for survivors of the types of traumas that trafficking survivors frequently experience. There is also moderately strong evidence, both quantitative and qualitative, that suggests that SfD can improve social reintegration outcomes for these survivors of trauma. However, these social reintegration outcomes are measured in a somewhat subjective manner. Because none of the studies in this SLR address livelihood outcomes, we are unable to conclude anything about the impact of SfD programs on the livelihoods of trauma survivors.

PSYCHOLOGICAL RESULTS

The literature provides strong qualitative and quantitative evidence that SfD programs can improve the psychological well-being (e.g., symptoms of PTSD, anxiety, and depression) of trauma survivors.

The quantitative evidence is extremely strong for psychological outcomes – each study in this SLR with quantitative measures of psychological outcomes finds statistically significant results. Namy et al. (2022) found statistically significant improvements in depression symptoms related to fatigue, feelings of sadness and hopelessness, feelings of failure, and difficulty with concentration.

Craig et al. (2020) found a statistically significant decrease in PTSD in their treatment group; Van der Kolk et al. (2014) found a statistically significant decrease in PTSD and depression in the treatment group. Knappe et al. (2019) also found statistically significant decreases in PTSD, depression, and sleep complaints. These studies all indicated that the sport programs had a non-zero effect on their treatment group.

In addition to a statistically significant difference, the effect size observed is also large. Craig et al. and Van der Kolk et al. both noted that the effect size of their respective sports programs was similar to that of pharmacological treatment. In Craig et al., where many participants on the program were or had previously relied on more conventional psychotherapeutic or pharmacologic interventions to manage their trauma symptoms, several participants saw fly-fishing as an effective substitute for medication or found that it reduced reliance on medication for symptom management (p. 160).

The qualitative evidence for improved psychological well-being was extensive and documented in the majority of the papers. One recurring theme included improved mood and increased optimism. This was covered extensively in Ley et al. (2018), who noted that the exercise program provided distraction from trauma symptoms and was often the only time their subject displayed positive emotion during his week. In Craig et al., participants shared how finding a group of people that enjoyed doing the same things together gave them a renewed sense of inclusion and connection to others and provided socialization and bonding opportunities. Further, participants described a renewed sense of excitement and optimism about the future because of their fly-fishing experiences. One participant of the fly-fishing program stated “the stress immediately melts when you’re casting. It’s taught me a great deal. If I get uptight, I’ll start tying flies at home, just like it’s medication. It’s my vice, my medication. I don’t care if I even catch any fish.” (Craig 2020, p. 11).

Another theme was improved self-compassion and repairing the disconnection between body and mind following trauma. This theme was covered extensively in Crews et al. (2016), which noted that the experience of disconnecting the body from the mind was a common story for many survivors of sexual violence but “unfortunately, the disconnection that helps someone endure the violence carries on into his or her lives long after the traumatic event is over... [a participant] spoke about being present and bringing herself back to the present moment as a way of reconnecting her body and her mind” (p. 150). Van der Kolk et al. (2014) noted:

“If traumatized individuals can learn to identify and tolerate physical sensations, they are likely to increase emotional awareness and affect tolerance. The possibility of post-trauma recovery by altering body awareness has the potential of decreasing physical comorbidities in traumatized individuals, decreasing health care utilization, and increasing the capacity to tolerate and utilize bodily signals for detecting danger and discomfort, thereby opening the possibility of decreasing the high rate of revictimization in this chronically traumatized population (p. 564)”

An increase in self-confidence, self-efficacy, and empowerment was also noted across the studies. Ley et al. (2018) noted how sport provided opportunities for experiences of mastery and accomplishment, which in turn increased motivation and perceptions of self-efficacy (p. 498-499). Participants in Craig et al. (2020) were challenged by the activities in

their fly-fishing program, particularly fly-tying which helped participants develop patience and concentration. The challenge of the program in turn led to renewed levels of motivation and desire to engage in other life activities (p. 161).

SOCIAL REINTEGRATION RESULTS

Positive social reintegration outcomes are also suggested by these studies. Though reintegration into broader communities is multifaceted and difficult to measure, several studies provide evidence on various indicators related to social reintegration. Bennett et al. (2014) showed a statistically significant improvement in the marital relationships of couples participating in their winter sports programs. Staempfli and Matter (2017) also found that following the program, participants reported statistically significant increases in perceived levels of social and emotional support in their post-intervention survey.

The literature also provides extensive anecdotal instances of social reintegration. Van der Kolk et al. (2014) provided a case vignette of a woman who says

“I slowly learned to just have my feelings, without being hijacked by them. I am more present in the moment. I am more tolerant of physical touch. I finally can feel intimate with my husband.” (p. 7).

Crews et al. (2016) noted that shared experience allowed people to connect within a support network and a shared yoga group appears to help build connections that were deeper than the ones formed in talk-therapy groups (p. 149). And Ley et al. (2018) noted the participant was not able to foster any deep friendships during the program, but the authors believed that practicing sport and exercise in a safe and trustworthy group environment provided the opportunity to get out of isolation and make a meaningful step toward constructing relationships (p. 499).

LIVELIHOODS RESULTS

We find that the studies in our SLR did not address livelihoods outcomes. Except for the program studied in Staempfli and Matter (2017), the programs do not have any components that address livelihoods (the Staempfli and Matter’s study also did not seem to have collected any livelihoods data). This is likely because measuring livelihoods requires a longer evaluation period. Further, livelihoods may not be considered an immediate outcome of SfD. Many program theories of change consider livelihoods to be an outcome which follows changes to a person’s psychosocial wellbeing (Beaman et al, 2021, p. 132).

Understanding the Mechanisms of SfD Programs

Just as crucial as the results of these programs is understanding why these programs may have had these effects. These studies provide a wide range of explanations into why their SfD programs created the psychosocial outcomes observed in their participants. There are several mechanisms proposed including socialization with other people, motivation, distraction, and the physical component of sport itself.

The results from Van der Kolk et al. (2014) suggested that the physical aspect of sport itself is crucial, with a striking finding that the yoga program was uniquely able to treat survivors with PTSD symptoms compared to a traditional peer support group. The study of Van der Kolk et al. showed that while the supportive and social components of the control treatment significantly improved mood and depression, it did not result in a sustained reduction of PTSD. Thus, this suggests that the physical and interoceptive aspects (the brain’s awareness and perception of the body’s physical state) of yoga, rather than the social dimensions of the groups, were the critical mechanisms responsible for the change in PTSD symptomatology.

Ley et al. (2018) and Crew et al. (2016) proposed more conceptual frameworks. Ley et al.’s framework was comprised of three main mechanisms driving a positive response to SfD: 1) a motivational restorative effect (i.e., enjoying life more, feeling less depressed, and motivation to live), 2) a distraction effect (i.e., being free of intrusive memories and being more present), and 3) an exposure effect (i.e., increased coping ability and resilience). Group experiences, experiences of mastery and increased perception of self-efficacy, attentional focus on present tasks, and coping with pain sensations all drive these key effects (p. 498). Meanwhile, Crews et al. suggested that increases in self-kindness, mindfulness, and connection to their community led to positive psychosocial outcomes. The shared experience of yoga allowed for connection that was deeper than other groups, which led to better social reintegration outcomes (p. 149).

Namy et al. (2022) also proposed several mechanisms to address the traumas of trafficking. In their theory of change, trafficking exposes its victims to deception, coercion, and traumas from forced labor, forced sex, or other forms of physical and sexual violence. These cause a survivor to lose agency, self-determination, trust in others, and connection to the physical body. Yoga can thus facilitate healing through increasing bodily self-awareness and interoception, emphasizing individual agency, and nurturing social support through shared experiences.

While the previous studies proposed mechanisms driving the psychological outcomes, Staempfli and Matter (2017) covered mechanisms leading to better social reintegration and livelihoods outcomes. They described a very wide range of mechanisms that informed the evaluated program's theory of change including social cohesion and learning life/soft skills such as teamwork, discipline, leadership, and resilience. Ultimately, they theorized that social support networks built were the most important aspect of SfD because this network could provide an individual with the help they needed to deal with past trauma and daily life, and to cope with external shocks.

Limitations and Gaps in the Literature

There are several factors that should be considered when trying to generalize these findings. Four of the studies came from the United States, while the two studies were done in Europe, and two took place in Africa. The socioeconomic status of the participants in the US studies and the other studies vary dramatically – the two European studies were on refugees from the Middle East and South Asia, while the participants in the South Sudan study recently experienced a destructive civil war. The generalizability across these different geographies with very different socioeconomic and cultural conditions should be carefully considered. While the influence of culture on the physical and interoceptive outcomes of sports might be minimal across contexts, culture's influence on the social effects may be stronger. For Asia CTIP, we see a need for more research to be done in the Asia region.

Further, there is the lack of age diversity in the study samples. Most of the study participants were adults; there was limited evidence on teenagers and no evidence on children. Further, in several of the studies all the participants were of a single gender. Knappe et al. (2019) and Staempfli and Matter (2017) both studied men-only and women-only team-sport programs, respectively. Namy et al. (2022), Crews et al. (2016), and Van der Kolk et al. (2014) studied women-only yoga programs. We thus do not have any evidence on mixed-gender team sport programs nor any evidence on yoga programs for men.

Most of the studies in this SLR only evaluated short-term effects; there is very limited evidence extending past a few months. It is thus difficult to determine whether the beneficial outcomes described in the studies persisted or how long the effects persisted. The exception is the study of Staempfli and Matter (2017), who did a longitudinal study lasting 3.5 years. However, this study had significant attrition issues. While 86% of participants interviewed at mid-line, only 56% interviewed at end-line, clearly illustrating the challenge of studying long-term effects.

Among the studies which took a quantitative research approach, three studies (Namy et al. (2022), Knappe et al. (2019), and Staempfli & Matter (2017)) utilized a pre-post design. This design prevented the researchers from deducing the causal impact of the program (i.e., directly attributing outcomes to the intervention). Specifically, these studies suffered from a lack of randomized control to provide a valid counterfactual comparison. The absence of this randomized control creates several problems. First, there is no estimate of the counterfactual, which would have happened in the absence of the intervention. For example, it is possible that a person's PTSD symptoms would have improved over the same timeframe due to a variety of other factors. Secondly, there is biased selection into the SfD program. The people participating in the program may not be representative of the entire sample. For example, those that dropped out over the course of the study may not have been benefiting from the program, thus leading to an overestimation of program efficacy at the end of the study.

However, two studies allowed for causal inference. Bennett et al. (2014) used a quasi-experimental method (quasi-experimental because the assignment into the two treatment and one control groups was not completely random, though the groups seem reasonably balanced on observable characteristics). Van der Kolk et al. (2014) used a randomized control trial (RCT) design. This study was the most rigorous of the included studies, the RCT methodology randomly assigned the study sample to treatment and control groups, allowing for causal inference on the intervention.

Van der Kolk et al. addressed the relative effectiveness of sport versus a traditional support group, but further research is required to understand the effectiveness of a sport program versus other types of psychotherapies (e.g., Cognitive Behavioral Therapy, Prolonged Exposure Therapy, and Interpersonal Therapy) and pharmaceutical treatments. Staempfli and Matter (2017) noted the need to "disentangle the effects of the specific intervention components by comparing different 'intervention packages', such as only sport and play, sport and play plus counseling, and sport and play plus counseling plus livelihood" (p. 9).

In addition, discussion comparing the cost effectiveness of these various treatments is noticeably missing. In the studies included in this SLR, there was no discussion about the costs associated with the programs evaluated, though Namy et al. noted that the evaluated yoga intervention is appropriate for low-resource settings such as the shelter setting (p. 87). While SfD is often touted as being cost effective, we did not see any evidence presented within these

studies. The cost-effectiveness of SfD for trauma survivors is an area that warrants further study, particularly in comparison to other types of interventions. A systematic review by Gosselin et al. (2020) found there was a positive Social Return on Investment (SROI)³ for sports interventions; they concluded that based on high-quality studies, SROI ratios vary between 3:1 to 12.5:1 return on investment. However, there was no discussion providing a comparison of these values with the SROI or cost-benefit ratio to psychotherapy or pharmacological treatments.

While there are some studies on cost effectiveness of sports programming in general, a systematic literature review from Abu-Omar et al. (2017), found the types of programs evaluated vary greatly, and the subsequent cost-effectiveness of these different programs was mixed. Studies on children's programs in the school and community settings have mixed results, while adult physical activity counseling and exercise programs in health care also return inconclusive evidence.

Implementation Lessons and Challenges

We see a broad range of approaches in the studies covered by this SLR. While covering program implementation was not the primary focus of the studies included in this SLR nor of this SLR itself, we nonetheless noticed several tangential insights from the studies which could provide practical insights for the development of an SfD program for trafficking survivors.

First, the type of sport should be considered for the particular sample and goals of the program. From the above studies, it seems clear that specific types of interventions are more relevant to specific traumas. For example, yoga is particularly focused on bodily awareness and control, which seems to be particularly important for survivors of sexual violence. Conversely, if social cohesion is a goal, team sports may be more appropriate than a more solitary exercise program.

This leads to the importance of trauma-sensitive programming. Crews et al. (2016) provided several clear examples for how the evaluated program implemented a trauma-sensitive approach. First, the yoga program was offered by a local center with experience treating sexual violence. Second, the program was facilitated by a trained sexual assault victim advocate with yoga certification. And finally, the group completed poses like a traditional yoga class, but there

was also a substantial focus in making choices for one's own body. Participants in this program had the autonomy to choose poses they were comfortable with, could influence the style of the group, and the music that was played.

Further, it is also important to consider complementary components in programming. We see sports programming was often paired with other types of interventions such as couple's therapy, mindfulness practices, financial literacy, group counseling, and health education. Programs should carefully consider how these additional components address needs in their target population.

The environment created by the program is also important. The program described in Bennett et al. (2014) placed emphasis on creating a recreational environment for participants who did not want to utilize traditional psychosocial therapy. Sport instructors and recreational therapists prepared and delivered topics for informal discussion and reflection during the sport sessions, instead of formally providing psychosocial therapy. For populations that may be uncomfortable with traditional counseling or clinical settings, a sport program may be a good entry point for the delivery of therapy in an alternative, more casual environment. Further, SfD may also provide benefits to those that do not wish to take or do not have access to pharmacological treatments.

However, it is important to realize that SfD programming also carries some risks. Though recreation is often assumed to be enjoyable, it is also potentially physically strenuous and psychologically stressful. Ley et al. (2018) noted that their program triggered pain sensations that were associated with traumatic memories and these pain sensations and associated psychological distress caused the subject to sometimes stop exercising.

In Knappe et al. (2019), despite no requirements being set regarding the level of intensity of the sport and exercise interventions implemented, the study still saw a relatively high drop-out rate of 15%. Interestingly, dropouts reported considerably higher pain levels and symptoms of mental ill-health across all indicators. While it is unclear in this instance whether the sports program contributed to higher pain levels/mental health issues or whether those with greater pre-existing issues were more likely to drop out, both the mental and physical strain of different forms of sport and exercise must be considered carefully when choosing to implement SfD interventions with victims of trauma, to optimize participation and importantly to ensure the mental well-being of all participants.

3 SROI is a principles-based method for measuring extra-financial value, such as environmental or social value, not otherwise reflected or involved in conventional financial accounts. For more information, please see Better Evaluation's (2021) guidance on SROI, <https://www.betterevaluation.org/methods-approaches/approaches/social-return-investment>

Possibilities for CTIP Programming

How do sport interventions fit into existing anti-trafficking interventions, particularly given that global CTIP programs are predominantly structured around the 4Ps Framework of Prevention, Protection, Prosecution, and Partnerships?

The most obvious connection is the Protection component, where psychosocial healing is the one of the first steps toward reintegration. Among counter-trafficking programs, existing psychosocial support and services predominantly comprise conventional psychotherapy and counseling. As discussed, there are several ways that sport-based interventions provide benefits beyond traditional approaches. The interoceptive and physical components of sports allows for improved and longer-persisting PTSD outcomes while the casual, non-clinical environment may appeal to those that do not wish to pursue more traditional forms of psychotherapy or pharmacological treatment. While standalone sport interventions may not be sufficient to meet the psychosocial needs of victims of trauma, our findings show its added value when implemented as part of a more holistic trauma recovery program.

The aforementioned U.S. Substance Abuse and Mental Health Services Administration's concept on trauma-informed approaches (Huang et al., 2014) provides several key assumptions (the "4 R's"):

*"A program, organization, or system that is trauma-informed **realizes** the widespread impact of trauma and understands potential paths for recovery; **recognizes** the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and **responds** by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively **resist re-traumatization.**"*

Based on these key assumptions, SAMHSA provides six guiding principles for programs that want to implement a trauma-informed approach:

1. **Safety;**
2. **Trustworthiness and Transparency;**
3. **Peer Support;**
4. **Collaboration and Mutuality;**
5. **Empowerment, Voice, and Choice; and**
6. **Cultural, Historical, and Gender Issues.**

We see many instances highlighted by the studies in the SLR that show how programs can apply this type of trauma-informed approach. Some good practices include creating a safe and supportive environment that acknowledges the trauma experienced by survivors and integrates principles of safety, trustworthiness, choice, collaboration, and empowerment, etc. The studies explicitly mention the dedicated counselors, psychologists, or other service providers to provide on-premises care and ensure participant safety. Every intervention studied here occurred in a group setting which allowed for collaboration. Several interventions also explicitly created peer support networks (e.g., Staempfli & Matter (2017)) and provided space during the program for participants to share and be transparent about their feelings, through journaling and discussion groups (e.g., Bennett et al. (2014). Crews et al. (2016) provides a good example of participant empowerment and choice, by allowing participants to control aspects of the program including the style of the class, types of exercises, and the music played during the session, fostering a sense of agency and self-determination.

Further programming objectives of USAID CTIP activities, as outlined in the latest field guide, places emphasis on "improved opportunities for survivor engagement" (CTIP Field Guide, 2023). From our prior research on collective action and survivor-owned groups, we understand that empowerment is a necessary step for meaningful survivor engagement (Tauson et al., 2023). The studies in this SLR suggest that sports programming can play a role in increasing self-efficacy, self-confidence, and motivation at the individual level, as well as greater social cohesion and integration at the group-level. So, while empowerment often requires some top-down transfer of power, an SfD program can play a key role in building the bottom-up capacity required for sustained collective action and survivor engagement by improving psychosocial outcomes associated with empowerment.

We also see various possibilities beyond Protection-based programming. For example, because of the popular and accessible nature of sport, an SfD intervention may fit a project's Partnership activities. Just as sponsorships are commonplace in recreational and professional sports leagues, a development project's partners can also similarly sponsor sports programs, events or competitions, and equipment. A project could also have a Prevention component, by working with populations who are at risk of trafficking and including auxiliary prevention-related education along with the sports programs.

CONCLUSION

This systematic literature review screened 7,230 studies and analyzed eight studies to find evidence on the effects of sports programming on survivors of trafficking. These studies suggest that Sport for Development programs have the potential to improve the psychological and social reintegration outcomes for survivors of trafficking. Further research is required to investigate the effectiveness of these programs on survivor livelihoods outcomes.

The literature also provided important insights into the mechanisms by which these SfD programs work. Socialization with other people, the motivational and distracting effects of exercise, and the physical component of sport itself all appear to be important elements of SfD.

Organizations interested in implementing their own programs should carefully match the needs of their target population with the type of sports program, as well as any complementary programming (e.g., education, peer support, and counseling, etc.). It is also crucial that programs take a trauma-sensitive approach to avoid any potential harm to participants. The use of SfD programs for trafficking survivors can complement the 4Ps Framework of CTIP projects in several ways. The most obvious link is Protection, though there are also potential connections to Prevention and Partnerships.

More research is needed to determine the long-term effects of SfD and the persistence of outcomes. Further, more research is needed in order to compare the effects of different types of interventions and combinations of interventions. The cost effectiveness of these programs, and the cost-benefit relative to other intervention options also need to be analyzed further.

CITATIONS

- Abu-Omar, K., Rütten, A., Burlacu, I., Schätzlein, V., Messing, S., & Suhrcke, M. (2017). The cost-effectiveness of physical activity interventions: A systematic review of reviews. *Preventive Medicine Reports*, 8, 72–78. <https://doi.org/10.1016/j.pmedr.2017.08.006>
- Beaman, L., Herskowitz, S., Keleher, N., & Magruder, J. (2021). Stay in the Game: A Randomized Controlled Trial of a Sports and Life Skills Program for Vulnerable Youth in Liberia. *Economic Development and Cultural Change*, 70(1), 129–158. <https://doi.org/10.1086/711651>
- Bennett, J. L., Lundberg, N. R., Zabriskie, R., & Eggett, D. (2014). Addressing posttraumatic stress among Iraq and Afghanistan veterans and significant others: An intervention utilizing sport and recreation. *Therapeutic Recreation Journal*, 48(1), 74.
- Chang, Y.-K., Labban, J. D., Gapin, J. I., & Etnier, J. L. (2012). The effects of acute exercise on cognitive performance: A meta-analysis. *Brain Research*, 1453, 87–101.
- Clawson, H. J., Salomon, A., & Grace, L. G. (2007). *Treating the hidden wounds: Trauma treatment and mental health recovery for victims of human trafficking*. US Department of Health and Human Services, Office of the Assistant <https://www.academia.edu/download/46399015/TraumaTxAndMHRRecoveryForTraffickingVic.pdf>
- Craig, P. J., Alger, D. M., Bennett, J. L., & Martin, T. P. (2020). The Transformative Nature of Fly-Fishing for Veterans and Military Personnel with Posttraumatic Stress Disorder. *Therapeutic Recreation Journal*, 54(2). https://bctra.org/wp-content/uploads/tr_journals/9965-37548-1-PB.pdf
- Crews, D. A., Stolz-Newton, M., & Grant, N. S. (2016). The use of yoga to build self-compassion as a healing method for survivors of sexual violence. *Journal of Religion & Spirituality in Social Work: Social Thought*, 35(3), 139–156. <https://doi.org/10.1080/15426432.2015.1067583>
- Droždek, B. (2015). Challenges in treatment of posttraumatic stress disorder in refugees: Towards integration of evidence-based treatments with contextual and culture-sensitive perspectives. *European Journal of Psychotraumatology*, 6(1), 24750. <https://doi.org/10.3402/ejpt.v6.24750>
- Geoffrion, S., Goncalves, J., Robichaud, I., Sader, J., Giguère, C.-É., Fortin, M., Lamothe, J., Bernard, P., & Guay, S. (2022). Systematic Review and Meta-Analysis on Acute Stress Disorder: Rates Following Different Types of Traumatic Events. *Trauma, Violence, & Abuse*, 23(1), 213–223. <https://doi.org/10.1177/1524838020933844>
- Giustini, D., & Boulos, M. N. K. (2013). Google Scholar is not enough to be used alone for systematic reviews. *Online Journal of Public Health Informatics*, 5(2), 214.
- Gosselin, V., Boccanfuso, D., & Laberge, S. (2020). Social return on investment (SROI) method to evaluate physical activity and sport interventions: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 17(1), 26. <https://doi.org/10.1186/s12966-020-00931-w>
- Gusenbauer, M., & Haddaway, N. R. (2020). Which academic search systems are suitable for systematic reviews or meta-analyses? Evaluating retrieval qualities of Google Scholar, PubMed, and 26 other resources. *Research Synthesis Methods*, 11(2), 181–217. <https://doi.org/10.1002/jrsm.1378>
- Hausenblas, H. A., & Fallon, E. A. (2006). Exercise and body image: A meta-analysis. *Psychology & Health*, 21(1), 33–47. <https://doi.org/10.1080/14768320500105270>
- Hopper, E. K., & Gonzalez, L. D. (2018). A Comparison of Psychological Symptoms in Survivors of Sex and Labor Trafficking. *Behavioral Medicine*, 44(3), 177–188. <https://doi.org/10.1080/08964289.2018.1432551>
- Hossain, M., Zimmerman, C., Abas, M., Light, M., & Watts, C. (2010). The Relationship of Trauma to Mental Disorders Among Trafficked and Sexually Exploited Girls and Women. *American Journal of Public Health*, 100(12), 2442–2449. <https://doi.org/10.2105/AJPH.2009.173229>
- Huang, L. N., Flatow, R., Biggs, T., Afayee, S., Smith, K., Clark, T., & Blake, M. (2014). SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach. <https://archive.hshsl.umaryland.edu/handle/10713/18559>

- Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., Degenhardt, L., de Girolamo, G., Dinolova, R. V., Ferry, F., Florescu, S., Gureje, O., Haro, J. M., Huang, Y., Karam, E. G., Kawakami, N., Lee, S., Lepine, J.-P., Levinson, D., ... Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology*, *8*(sup5), 1353383. <https://doi.org/10.1080/2008198.2017.1353383>
- Knappe, F., Colledge, F., & Gerber, M. (2019). Impact of an 8-week exercise and sport intervention on post-traumatic stress disorder symptoms, mental health, and physical fitness among male refugees living in a Greek refugee camp. *International Journal of Environmental Research and Public Health*, *16*(20), 3904.
- Kvam, S., Kleppe, C. L., Nordhus, I. H., & Hovland, A. (2016). Exercise as a treatment for depression: A meta-analysis. *Journal of Affective Disorders*, *202*, 67–86.
- Ley, C., Rato Barrio, M., & Koch, A. (2018). "In the Sport I Am Here": Therapeutic Processes and Health Effects of Sport and Exercise on PTSD. *Qualitative Health Research*, *28*(3), 491–507. <https://doi.org/10.1177/1049732317744533>
- Lyras, A., & Welty Peachey, J. (2011). Integrating sport-for-development theory and praxis. *Sport Management Review*, *14*(4), 311–326.
- Marti Castaner, M., Fowler, R., Landers, C., Cohen, L., & Orjuela, M. (2021). How trauma related to sex trafficking challenges parenting: Insights from Mexican and Central American survivors in the US. *PLoS ONE*, *16*(6), e0252606. <https://doi.org/10.1371/journal.pone.0252606>
- Martin, C. K., Church, T. S., Thompson, A. M., Earnest, C. P., & Blair, S. N. (2009). Exercise dose and quality of life: A randomized controlled trial. *Archives of Internal Medicine*, *169*(3), 269–278.
- Martín-Martín, A., Orduna-Malea, E., Thelwall, M., & López-Cózar, E. D. (2018). Google Scholar, Web of Science, and Scopus: A systematic comparison of citations in 252 subject categories. *Journal of Informetrics*, *12*(4), 1160–1177.
- Namy, S., Carlson, C., Morgan, K., Nkwanzu, V., & Neese, J. (2022). Healing and Resilience after Trauma (HaRT) Yoga: Programming with survivors of human trafficking in Uganda. *Journal of Social Work Practice*, *36*(1), 87–100.
- Pels, F., & Kleinert, J. (2016). Loneliness and physical activity: A systematic review. *International Review of Sport and Exercise Psychology*, *9*(1), 231–260. <https://doi.org/10.1080/1750984X.2016.1177849>
- Saporta Jr, J. A., & Van der Kolk, B. A. (1992). *Psychobiological consequences of severe trauma*.
- Schulenkorf, N., & Adair, D. (2013). Sport-for-Development: The Emergence and Growth of a New Genre. In N. Schulenkorf & D. Adair (Eds.), *Global Sport-for-Development: Critical Perspectives* (pp. 3–11). Palgrave Macmillan UK. https://doi.org/10.1057/9781137289636_1
- Staempfli, F., & Matter, D. (2017). *Exploring the Impact of Sport and Play on Social Support and Mental Health: An Evaluation of the "Women on the Move" Project in Kajo-Keji, South Sudan*. <https://www.efdn.org/wp-content/uploads/2017/11/Exploring-the-Impact-of-Sport-and-PLay.pdf>
- Survivors of modern slavery come together to play sports | The Salvation Army*. (n.d.). Retrieved August 29, 2023, from <https://www.salvationarmy.org.uk/news/survivors-modern-slavery-come-together-play-sports>
- United Nations Office on Drugs, & Crime (UNODC). (2009). *Anti-human trafficking manual for criminal justice practitioners*. UN New York.
- USAID. (2023). CTIP Field Guide. <https://www.usaid.gov/sites/default/files/2023-02/C-TIP-Field-Guide-Jan-2023.pdf>
- Van der Kolk, B. A., Stone, L., West, J., Rhodes, A., Emerson, D., Suvak, M., & Spinazzola, J. (2014). Yoga as an adjunctive treatment for posttraumatic stress disorder: A randomized controlled trial. *The Journal of Clinical Psychiatry*, *75*(6), 22573.



USAID
FROM THE AMERICAN PEOPLE



WINROCK
INTERNATIONAL