

Sheera F. Lerman, PhD¹, Scott Sylvester, MD², Carrie Cox, MSN, RN², C. Scott Hultman, MD, MBA², Julie Caffrey, DO, MS²

¹ Department of Psychiatry and Behavioral Sciences; Johns Hopkins University School of Medicine, Baltimore, MD, USA

² Department of Plastic and Reconstructive Surgery, Division of Burn Surgery; Johns Hopkins University School of Medicine, Baltimore, MD, USA

Introduction

- Burn injuries are associated with substantial pain and disability and may lead to significant long term psychological distress including suicidality.
- Suicide is among the leading causes of death in the United States.
- Suicidality is defined as the following behaviors:
 - Suicidal ideations (thoughts, plan or intent)
 - Suicide attempts
 - Completed suicide
- Burn survivors may be at increased risk for suicidality due to the nature of their injury and psychiatric comorbidities.

Objectives

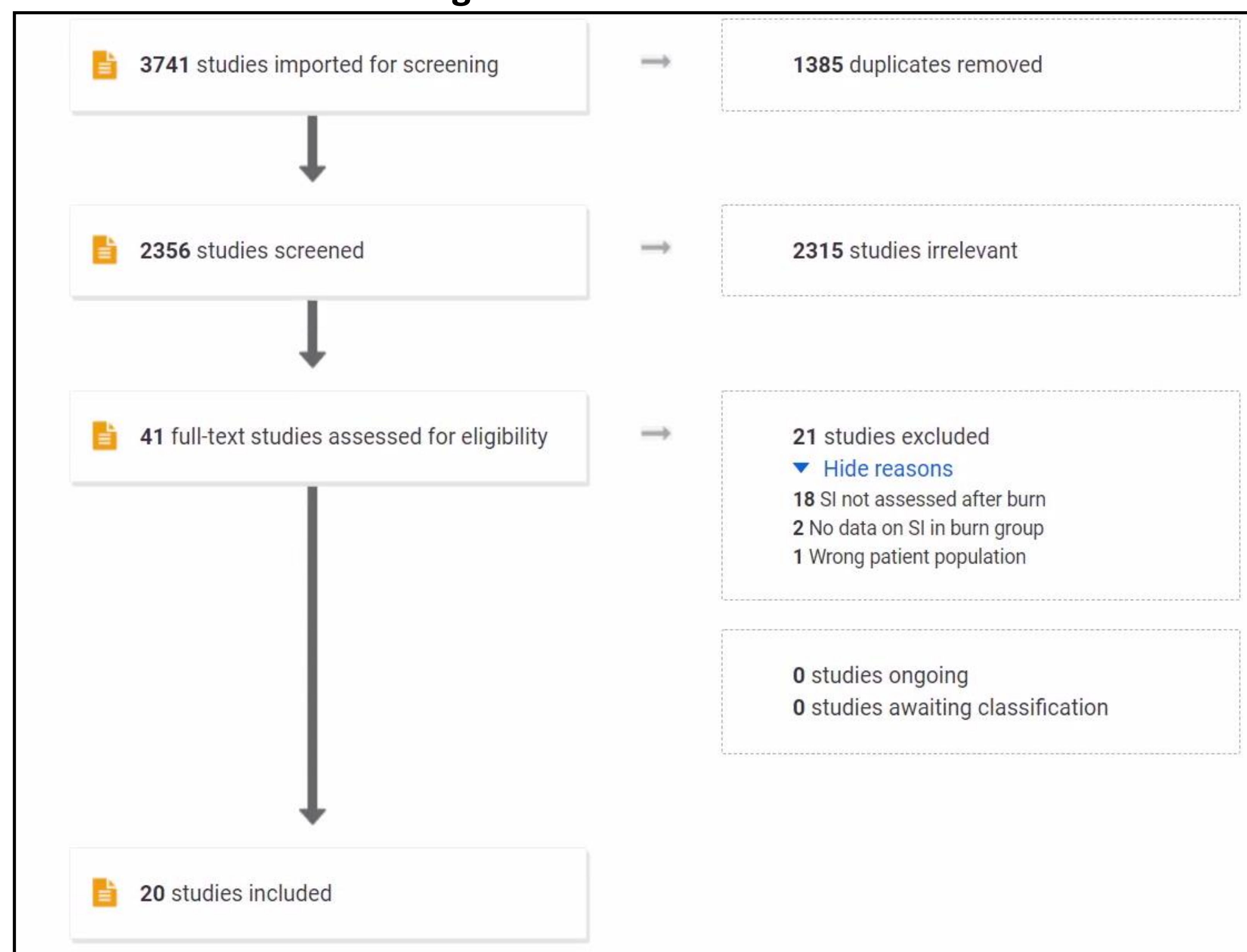
- Assess the evidence as to the prevalence of suicidal behaviors in burn survivors after their burn injury.
- Explore the tools used to measure suicidality.
- Understand risk and protective factors for suicidal behaviors.

Materials and Methods

- The online databases PubMed, Embase Cochrane, PsycINFO and Web Science databases were searched using search terms regarding suicide, suicidality and burn.
- Review was performed by two independent researchers.
- Studies evaluating self-immolation were excluded unless they also measured suicidality after the burn injury.
- Twenty observational and population-based studies which measured any type of suicidality (ideation, attempts or completed suicide) post-burn injuries underwent critical appraisal.
- Six studies were published abstracts, out of which 3 were later published as full manuscripts.

Results

Figure 1: PRISMA Flow Chart

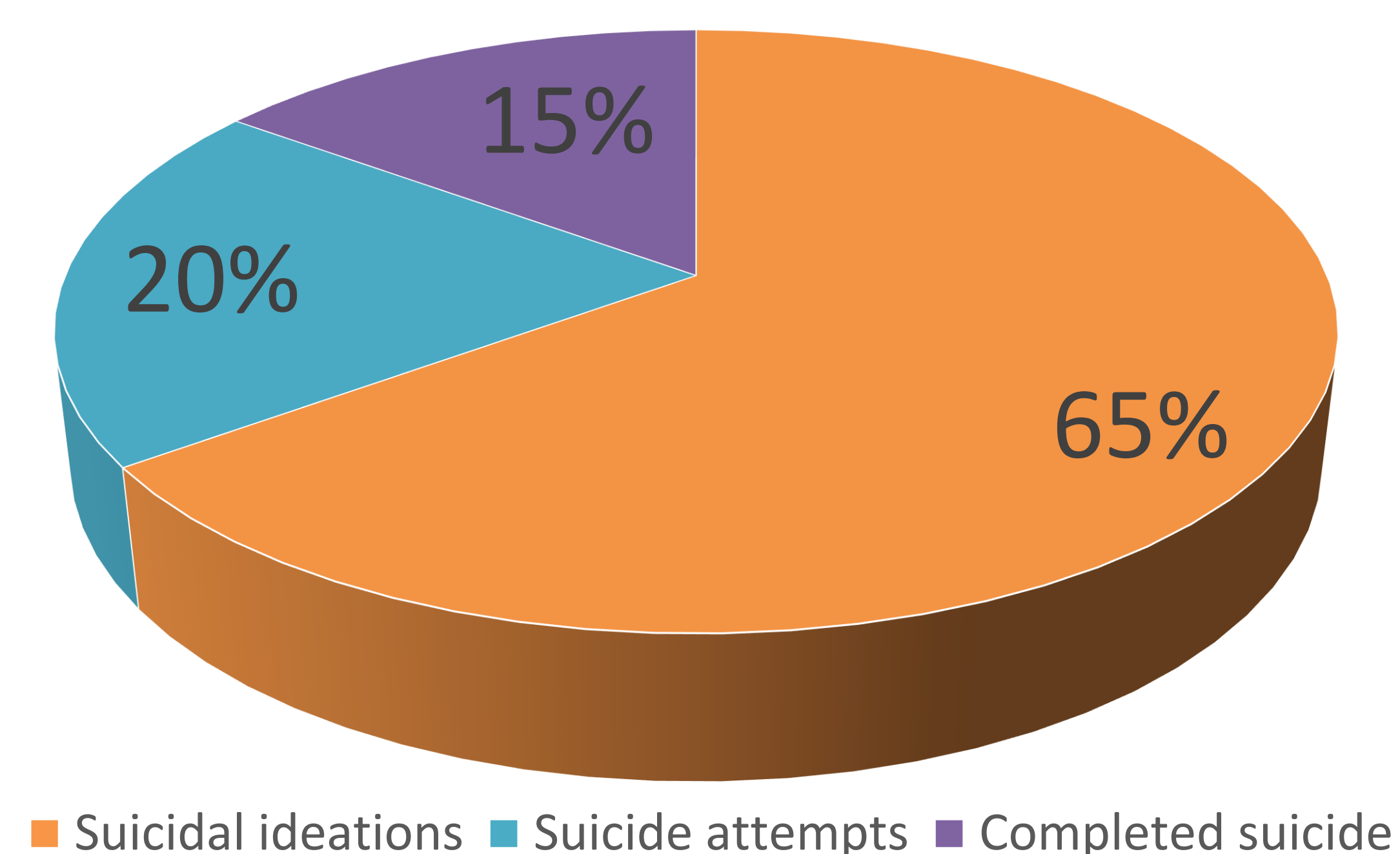


- Few studies directly measured suicidality after burn injuries and even fewer measure changes in suicidality over time.
- The majority of studies measured suicidal ideations.
- There was a large variability in the prevalence of suicidal ideations between studies ranging from 1%- 32%.
- Suicidal ideations were measured using different scales possibly contributing to the large variability in results.
- Research focuses primarily on risk factors and there is limited data regarding protective factors.
- There is mixed evidence as to rates of completed suicide post-burn injury, though rates appear to be relatively low.

Table 1: Risk and Protective Factors for Suicidality

Risk Factor
Pain severity at discharge
Emotional reactivity
Family conflict
Premorbid psychiatric comorbidities
Past suicide attempts
Women
Protective Factor
Social support
Family cohesiveness and open expression
Extroversion

Figure 2: Percentage of Studies Measuring Suicidal Behaviors



Conclusion

- Results of this systematic review shed light on the scarcity of data on rates of suicidality among burn survivors.
- Burn survivors possess multiple risk factors including chronic pain, sleep disturbances, history of substance abuse, post-traumatic stress disorder, social isolation and depression which are linked to suicidality in the general population.
- Individuals with self-inflicted burns may be at even higher risk given that previous suicide attempts are one of the strongest predictor of future suicidality.
- There is high importance in screening burn survivors for suicidal ideations at discharge from the hospital and following them over time in order to understand the magnitude of this phenomena and offer targeted interventions to vulnerable individuals.
- More research is needed to better understand the impact of these risk factors in burn survivors and inform their care.

Corresponding author: Sheera Lerman, PhD
 szohar1@jhmi.edu