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Review Report

Assessment of Psychological Treatments and Its Affordability Among Students with Post-Traumatic Stress Disorder: A Scoping Review

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Abstract: PTSD is a common mental health disorder among students across the globe that manifests after encountering traumatic events. This study explored the nexus between poverty and PTSD among students. This review employed a scoping review lens to examine the nexus between PTSD and poverty among students. Literature search was conducted in online databases such as PubMed, Google Scholar, Scopus, and Semantic Scholar. This study followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) extension for scoping reviews (PRISMA-SCR) for study selection and data extraction. Poverty is a significant factor that predisposes individuals to the development of post-traumatic stress disorder after experiencing a traumatic event, as determined by this review. In addition, this review discloses that psychological treatments such as Trauma Focused Behavioural Therapy, Cognitive Behavioural therapy for PTSD, narrative exposure therapy among others have been identified as effective for treating PTSD; however, the cost of treatment has been found to be unaffordable among poor individuals. This study also revealed that there is a dearth of empirical studies that focus specifically on students' PTSD and Poverty or studies conducted in educational settings with reference to PTSD and poverty. In light of this, this study recommends that feature research should investigate the relationships between PTSD and poverty among students.

Keywords: Post-Traumatic Stress Disorder, Poverty, Psychological treatments, Students

1. Introduction

Post-traumatic stress disorder (PTSD) is a mental health disorder that can emerge after someone experiences or witnesses a traumatic incident. It gives rise to symptoms like reliving the trauma, and nightmares and taking extreme measures to avoid anything that will bring back such memories. In most cases, young adults of university age (16 to 20 years) are exposed to traumatic events due to the activities of life that they are yet to phantom or another occurrence (Cusack et al., 2019; Idoiaga et al., 2022). PTSD expressively reduces the quality of academic work, individual satisfaction, and one's outlook on life (Rodríguez-Rey et al., 2019). PTSD and trauma are common among higher education students. Nonetheless, trauma is not particular to any race, age grade, class, or group; anyone can witness it. Research indicates that around 6% to 12% of students who have experienced trauma exhibit symptoms of PTSD significant enough to meet diagnostic criteria (Frazier et al., 2009)**.** Also, students exposed to traumatic events, coming as physical assault, life-threatening events, serious injury, environmental factors, sexual assault, family history, etc. tend to experience PTSD (Pai et al., 2017). Other influences like gender, type, level of trauma exposure, and age contribute to the variability of PTSD development (Eseadi et al., 2019; Rakesh et al., 2019). Additionally, in a seminar study, 46% of women and 65% of men developed PTSD following rape whereas 8.8% of women and 6.3% of men developed PTSD following accidents (Rakesh et al., 2019).

Nonetheless, the prevalence of PTSD among university students has posed a topic of discourse amongst researchers, in a bid to decipher the likelihood of its treatment, and affordability for students who more often than none face financial crises. Speculatively, it is possible that the academic performance of students could be adversely impacted by PTSD. PTSD has also increased the rate of suicide, depression, anxiety, crime rate, and school dropout, among others (Cusack et al., 2019). For instance, during the Covid 19 pandemic, university students' mental health was affected, World Health Organization documents that one out of every four students experienced PTSD (Idoiaga et al., 2022). Findings associated with PTSD and its being an academic problem for students are dominant in most research (Cusack et al., 2019; Idoiaga et al., 2022; Tomaszek & Muchacka-Cymerman, 2022).

Furthermore, there are three common ways of treating PTSD, but one must seek the direction of a professional mental health practitioner. The three methods of treatment are as follows: Therapy, Prescribed medications, and Alternative practices like yoga (Read et al., 2014). These treatments are dependent on the needs of the individual. Regardless of the available treatments, the cost of psychological treatment appears to be exorbitant for higher education students. Even so, other factors like individual financial situation, insurance coverage, and available resources in school affect the affordability of PTSD treatment for higher education students. Also, few studies have been done on the aspect of the cost of treatment of PTSD (Bothe et al., 2020). Moreover, vast research is being done on the causes, symptoms, and effects of PTSD, as opposed to the cost and affordability of its treatment. Generally specialized therapy comes with extra costs due to its nature and requirement of expertise. In addition, things like continuous therapy sessions in a particular timeframe can also add up to a high cost (Bothe et al., 2020), whereas some individuals might decide to terminate the service as soon as the slated period of treatment has been exhausted. A study examining the cost of treatment for PTSD patients and non-PTSD patients showed that in five (5) years, the amount spent on treatment for PTSD patients is three times higher than that spent by non-patients (Bothe et al., 2020). It is imperative to note that students with PTSD tend to suffer from more complex disorder conditions and health impairments like cardiovascular and pulmonary diseases thus, exposing PTSD patients to more charges.

According to the Google Scholar and PubMed search, no review has been done on the nexus between PTSD and poverty among higher education students. Even though numerous systematic reviews have been conducted in this regard, a scoping review is necessary. A scoping review will shed light regarding the scope and depth of empirical studies on the nexus between poverty and PTSD ailment among individuals and students in higher education taking cognizance of the cost of psychological treatment and affordability and identifying gaps in the existing literature to guide future researchers or aid policymakers.

1.1. Statement of Problem

PTSD is a psychological condition that affects many students, regardless of their educational level or type of education. Literature has shown that PTSD manifests in students three to four months after experiencing traumatic events. The most common causes of PTSD within school environments and outside of school are exposure to traumatic events such as sexual abuse, kidnapping, mass failures, pandemics, physical assault, and other life-threatening incidents. Literature has shown that PTSD has devastating impacts on students' engagement in learning activities and that recovery from these unpleasant experiences takes a long time. There seems to be a positive link between poverty and the prevalence of PTSD among students and individuals. Hence, there is a need to explore the state-of-the-art of empirical evidence vis-à-vis the nexus between PTSD and poverty, the cost of psychological treatments, and affordability among individuals and students.

1.2. Purpose of the Study

This scoping review aims to establish the nexus between poverty and PTSD and discover the extent of research done on the aspect of the cost of psychological (particularly PTSD) treatment among individuals and students. Specifically, this study sought to:

(a) The nexus between PTSD and poverty.
(b) The available psychological treatment for individuals with PTSD.
(c) The affordability of PTSD treatment.

1.3. Research questions

In the course of this scoping review, we sought to answer these questions:

(a) What is the relationship between PTSD and Poverty?
(b) What are the available psychological treatment for individuals with PTSD?
(c) Is the cost PTSD treatment affordable?

2. Materials and Methods

2.1. Design for the Study

This study used a scoping review approach to examine empirical literature on PTSD as a poor student ailment mainly to determine psychological treatment and affordability among individuals and society. This scoping review adhered to the published PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) extension for scoping reviews (PRISMA-ScR) to define the context and concepts, search for, formulate inclusion criteria, extract data, and chart them using flow charts (Peters et al., 2020).

2.2. Search strategy

According to the PRISMA methodology, the following timeframes, databases, and search terms

were used during the search:

- *Time frame:* During this review time frame, there were no limitations applied to the end date of the review; however, the start date of the review was August 13th, 2023, so the authors would have enough time to evaluate the selected articles.
- *Databases:* To conduct a literature review on English language studies, the following databases and electronic journal collections were searched: PubMed, PsycINFO, Google Scholar, Scopus, and Semantics Scholar. PubMed and PsycINFO were chosen for their relevance to healthcare research; these include databases that cover all subject areas, such as Google Scholar and keyword databases, as well as databases on PTSD in psychological research (Semantics Scholar).

2.2. Inclusion and exclusion criteria

Searches were not limited by date of publication, but rather by the most relevant literature to our study. As such, articles that focused on these two aspects (PTSD as a poor student's ailment and affordability of psychological treatment for university students) were selected. In addition, only research papers written in English were considered. Inclusion was limited to peer-reviewed empirical articles. In this review, all literature reviews, conceptual papers, and theoretical articles were excluded, and no grey literature was reviewed. Studies of any design that looked at PTSD and poverty, Assessing the cost of psychological treatment (within the higher education sector), and Affordability of psychological treatment for higher education students were considered. Other articles that generalized the treatment of PTSD (including health care practitioners, military personnel, children, nursing mothers, etc.) were included. In addition, article was excluded if the article is published in other languages, published in none-peer-reviewed journal, did not capture PTSD and Poverty, or PTSD and cost

2.3. Data extraction and coding

Based on the selected search terms, the primary search was conducted in the chosen databases. The search parameters were limited to selected data, peer-reviewed, English-language articles, and articles available in full text in our databases and electronic journal collections, as well as English-language documents. After all database searches had been completed, all results were gathered into one file. A total of 1238 articles were found after searching all databases. Two external reviewers (Ogenyi, A. and Ossai, O.V.) were invited to assist in the extraction process. Using Zotero software, we were able to store, organize and code the data. For thorough data extraction. Furthermore, we removed duplicates and then reviewed the remaining articles, paying close attention to the abstract.

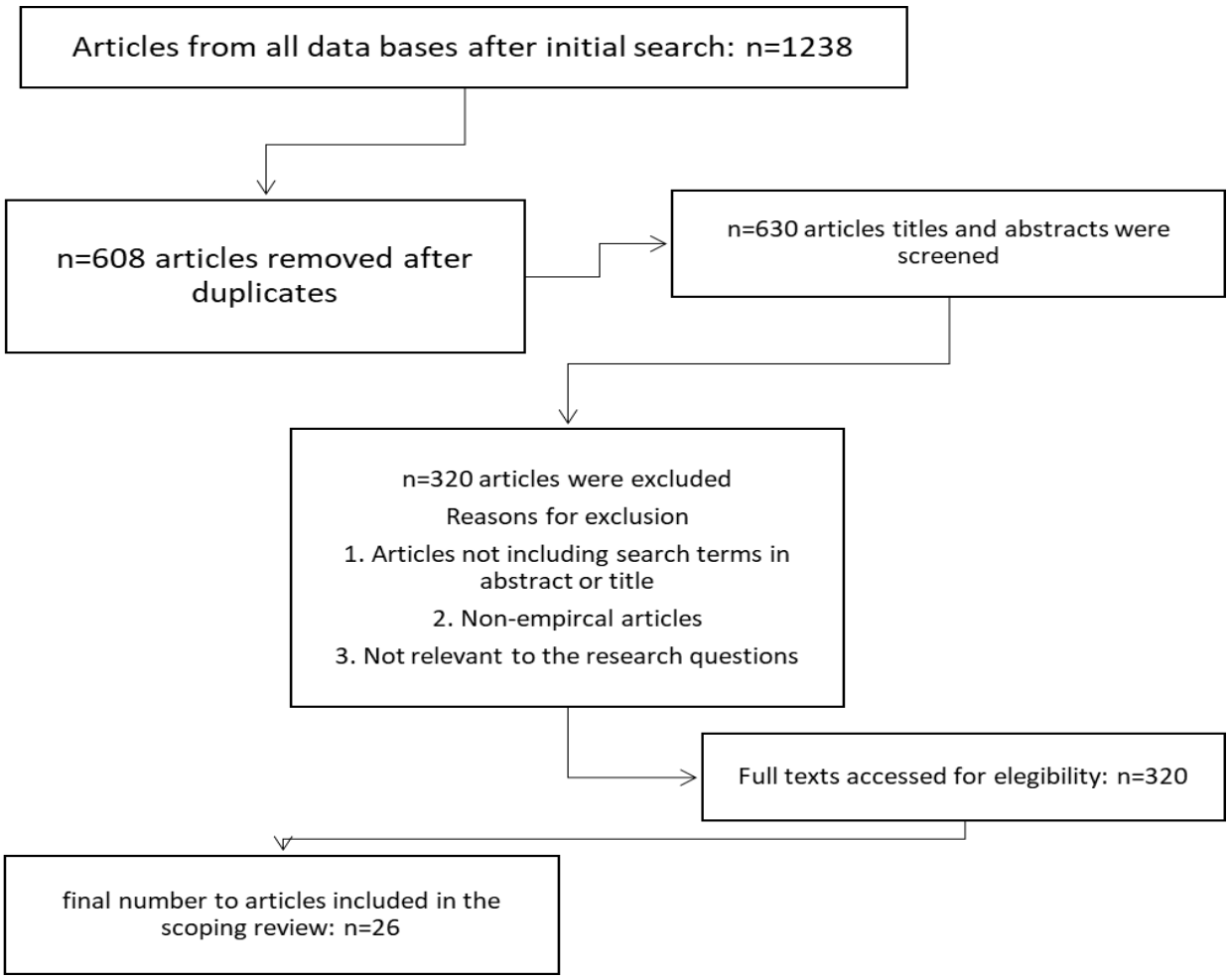

Figure 1: PRISMA diagram of the study selection process

Figure 1 shows the PRISMA flow chart results. All titles and abstracts were screened for inclusion eligibility. Several articles were excluded based on the exclusion and inclusion criteria (remaining n =311). However, in the later stages, we included all articles, and in their titles and/or abstracts, you can find the search terms. In the event of uncertainty as to whether or not an article should be included or excluded, the decision was made after reading the entire article to decipher its usefulness to this research. Gradually, we moved to the next stage, where we read the selected articles to select the final set based on their relevance to the study. Hence, Excel 2016 was used to categorise and code the remaining 26 articles. This analysis summarizes data by publication year, geographical location, article purpose, methods, and key findings on racism in healthcare. Tables 1 and 2 show summaries of all 26 articles selected for this review.

3. Results and Discussion

Because this review covers results from 26 articles, it is impossible to discuss the results of each article individually. Nonetheless, the above table gives concise findings on the aforementioned topic of discourse. In this scoping review, only English-language empirical articles addressing PTSD as a psychological problem that affects poor individuals were considered. In addition, the cost and affordability of psychological treatment were assessed throughout the world. This scoping review considers both qualitative and quantitative design methods. This results section describes the features of the articles selected for this review.

3.1. Descriptive findings: features of articles included in the analysis

In the review, the oldest article was from 2004. Furthermore, the search process for this review yielded no articles published before that date that met the inclusion criteria. Poverty and PTSD have been linked more frequently in published research since 2013. There was a significant increase in articles published in 2021 and 2023. According to Table 1 above, the type of methodology and focus on the nexus between poverty and PTSD, as well as the country where the articles were written, are some of the general characteristics of the reviewed articles. With respect to the nexus between poverty and PTSD, of the 26 articles in this scoping review, 14 examine the relationship between poverty and PTSD. There are 4 correlational studies, 2 mixed-methods studies, 8 descriptive studies, 1 qualitative study, and 13 quantitative studies. Articles with PTSD as their focus and articles with PTSD in the abstract, conclusion, and results sections were included. Most of these articles referenced PTSD as one of the outcomes of trauma that affects the poorest masses more due to a lack of access to medical assistance. These include correlational articles (Basel, 2020; Holmes, 2021; Pabayo, 2017; Ravi, 2023), and mixed methods (Chen, 2007; Knowles, 2018), qualitative design (Strum, 2002 & Kessler, 2017), quantitative (Lenart, 2021), descriptive (Ashiabi 2007; Davis, 2013; Ikizer, 2020; Murphy, 2019; Perreira, 2013; Pollack 2016). Different national contexts are represented, including the USA (Chen, 2007; Davis, 2013; Holmes 2021; Kessler, 2017; Knowles, 2018; Lenart, 2021; Murphy, 2019; Pabayo, 2017; Perreira, 2013). Other articles are from the United Kingdom (Basel 2020), Georgia (Ravi 2023), Turkey (Ikizer, 2020), and Vietnam (Pollack, 2016).

Table 1: Studies selected for Nexus between Poverty and PTSD

Author and year of publication	Study design	Country	Patients (PTSD)	Primary outcome	Results
Holmes (2021)	Correlational design	USA, New York, and Canada	227	The experience of poverty may lead to higher levels of trauma exposure; those in poverty may have less access to protective resources, such as social support; the experience of poverty itself may be traumatic.	Poverty may pose a traumatic stressor for those who live in it.
El-Khodary et al., (2020)	Correlational design	United Kingdom	1,029	PTSD was significantly more likely to be diagnosed in children who experienced trauma, have been traumatized themselves, or have been physically harmed, even after demographics and socioeconomic factors had been taken into account.	For people suffering from PTSD, the strongest source of trauma comes from personal trauma, followed by witnessing trauma, low income and finally seeing property being demolished after the war.
Knowles (2018)	Mixed Methods Design	United States of America		Post-traumatic stress disorder is common among people living in poverty due to the numerous adversities they face.	Trauma caused by chronic poverty contributes to post-traumatic stress disorder.
Chen (2007)	Mixed Methods Design	United States	113	People in vulnerable populations are more susceptible to negative health outcomes after catastrophic events like Katrina.	According to the findings, financial strain was the strongest risk factor for post-traumatic stress disorder (PTSD) symptoms, as well as physical and mental health after a disaster.
Pabayo (2017)	Correlational design	Nevada, Canada, USA	34,653	In the aftermath of a traumatic event, the characteristics of the social and economic environment may increase the probability of developing PTSD.	Individuals exposed to traumatic events are more likely to develop PTSD if income inequality is high in their state of residence.
Lenart (2021)	Quantitative design	USA	153	Patients with PTSD experience worse functional outcomes and social disintegration, which results in substantial healthcare, economic, and personal costs.	PTSD impedes the quality of life for patients, preventing them from holding jobs and maintaining social relationships.
Ravi (2023)	Correlational design	Georgia	300	Posttraumatic stress disorder (PTSD) is disproportionately prevalent among Black Americans who live in urban environments, which is a result of racial discrimination as well as neighbourhood poverty.	Despite neighbourhood poverty rates, people who have experienced more instances of racial discrimination suffer from high levels of PTSD symptoms.
Ikizer (2020)	Descriptive correlational design	Turkey	685	Experiencing financial loss during the pandemic, using social media more frequently, and spending more time at home during the pandemic were linked to higher post-traumatic stress.	The study demonstrates the detrimental impact of financial challenges on people's lives. This is particularly true for those living in poverty and other disadvantaged groups who might be affected by post-traumatic stress.

Kessler et al., (2017)	Qualitative design	USA	3689	There was a significant increase in major depression, PTSD, and conduct disorder among boys in the low-poverty voucher group. Traditional voucher group boys had higher rates of PTSD than control group boys. Conduct disorders were less prevalent in girls in the traditional voucher group than in the control group	Children living in high-poverty neighborhoods are more likely to suffer from depression, PTSD, and conduct disorders than those in less deprived neighborhoods.
Davis (2013)	Quantitative design	Los Angeles, USA, United States	413	The poorer African Americans who suffered sexual assault are more likely to suffer negative mental health outcomes.	It was found that poverty was positively related to depression, post-traumatic stress disorder, and illicit drug use after adjusting for childhood sexual abuse.
Murphy (2019)	Prospective longitudinal design	United States of America	500	It has been shown that financial toxicity is associated with depression and post-traumatic stress disorder.	Depression and post-traumatic stress disorder were more prevalent in patients with financial toxicity (out-of-pocket expenses, percentage of income spent on medical care, job loss/reduced income).
Perreira (2013)	Stratified-random, cluster sample design	United States	281	PTSD symptoms were more likely to develop in people who had been poor before migration and then entered the US clandestinely.	Mexicans and other Central Americans who live in extreme poverty have a higher likelihood of developing PTSD, generalized anxiety disorder, and depression.
Pollack (2016)	Cross-sectional study design.	Vietnam	1,000	Psychological problems, such as PTSD, are most strongly associated with financial stress.	A high rate of PTSD, somatic syndrome, functional impairment, and poor self-perceived physical health is observed in individuals living in central coastal Vietnam, especially those suffering from financial stress.

With respect to psychological treatments for PTSD, 13 studies were selected. Of these 13 studies, three are decision analytical models (Gospodarevskaya, 2012; Mavranezouli, 2020; Sullivan, 2004), two are randomised controlled trials (Le, 2014; Shearer, 2018), cost-utility analysis (Mihalopoulos, 2013), descriptive (Bothe 2020; Bryant 2019; Ingalls 2015; Marseille 2020), two are qualitative (Neuner 2009; Curtis 2012), and one is a case control study (Biag 2019). These studies were conducted in different countries: the United States of America (Biag, 2019; Ingalls 2015; Le, 2014; Marseille 2020; Sullivan, 2004), Australia (Bryant, 2019; Curtis, 2012; Gospodarevskaya, 2012; Mihalopoulos, 2013), the United Kingdom (Mavranezouli, 2020; Shearer, 2018), and Germany (Bothe, 2020; Onyut, 2009). On the affordability of psychological treatments, 6 articles were selected. Among these 6 articles, there is a randomised control trial studies (Shearer, 2018; Le, 2014), cost utility analysis study (Mihalopoulos, 2013), decision analytical model (Sullivan, 2004), descriptive study (Bothe, 2020), and qualitative study (Curtis, 2012). These studies were conducted in Australia (Curtis 2012; Mihalopoulos 2013), Germany (Bothe, 2020), the United States (Le, 2014; Sullivan, 2004), and the United Kingdom (Shearer, 2018).

Table 2: Studies selected for Psychological Treatment of PTSD and Affordability

Author and Year of publication	Study design	Country	Patients (PTSD)	Primary outcome	Results
Gospodarevskaya (2012)	Decision analytic model,	Australia		The combination of Trauma-Focused Cognitive-Behavioral Therapy with Selective Serotonin Reuptake Inhibitors is more cost-effective than Trauma-Focused Cognitive-Behavioral Therapy alone.	The results of the modelled economic evaluation demonstrated that all psychotherapy treatments for PTSD had a positive incremental cost-effectiveness ratio in comparison to no treatment at all.
Mavranezouli (2020)	Decision-analytic model design.	England		There are a number of cost-effective treatments for adults suffering from PTSD, namely, EMDR, SSRIs, TF-CBT, self-help without support, non-TF-CBT, and TF-CBT & SSRIs combined and counselling.	Among all the treatments that are available for treatment of PTSD, Eye movement desensitisation and reprocessing appears to be the most cost-effective treatment for adults with the condition.
Shearer (2018)	A randomized waitlist controlled trial design.	England	29	It has been shown that cognitive therapy is cost-effective and potentially effective as an early intervention for children and adolescents with PTSD.	According to the incremental cost-effectiveness ratio at 3 years, CT-PTSD was cost-effective in 60%–69% of the cases, compared with usual care in the UK, where the decision threshold is between £20,000 and £30,000 per QALY.
Mihalopoulos (2013)	Cost-utility analysis	Australia		These are the most cost-effective interventions to treat PTSD in Australia, namely trauma-focused cognitive behavioral therapy (TF-CBT) and selective serotonin reuptake inhibitors (SSRIs) for adults and TF-CBT for children.	Trauma-focused cognitive behavioural therapy (TF-CBT) is highly cost-effective compared to current practice in Australia, at $19,000/QALY, $16,000/DALY for adults and $8900/QALY, $8000/DALY for children.
Sullivan (2004)	Decision analytic model	USA		From least to most expensive, the expected direct costs and cost-effectiveness of treatment were as follows: escitalopram (USD 3891; 0.341), citalopram (USD 3938; 0.340), generic fluoxetine (USD 4034; 0.335), venlafaxine XR (USD 4226; 0.336), sertraline (USD 4250; 0.335), generic paroxetine (USD 4385; 0.332), paroxetine CR (USD 4440; 0.332), venlafaxine (USD 4613; 0.326).).	Among the seven types of SRIs tested, escitalopram was the most cost-effective (77%), followed by citalopram (22%), generic fluoxetine (0.3%), and all others (0%).
Le et al., (2014)	Doubly randomized preference trial.	United States	200	A 93.2% probability of being cost-effective was found for prolonged exposure therapy compared to pharmacotherapy with sertraline. A choice of treatment also resulted in lower costs and more QALYs over no choice, with an 87.0% probability of cost-effectiveness at $100,000/QALY.	Treatment options for PTSD patients appear to be cost-effective. The use of prolonged exposure therapy may be a more cost-effective alternative to sertraline pharmacotherapy when there is no option for treatment.

Ingalls 2015	Descriptive design	United States		More often than none, Psychotherapy for Adults with Post-Traumatic Stress Disorder appears to be cost-effective, but quarter of the patients fails to return for subsequent treatment after first treatment.	The study finds that these treatments are cost-effective treatments for PTSD patients, biomedical treatments, peer-to-peer support groups, individual, family, group and a mixed therapy modality.
Bothe 2020	Descriptive design	Germany	8.4 million	A person with PTSD appears to experience greater impairments in their general health and incur many more costs than the average insurant.	PTSD costs approximately 43,000 EUR per individual, three times more than non-exposed controls. Two years after an incident diagnosis of PTSD, costs return to their initial levels.
Marseille 2020	Descriptive design	United States of America	1,000	The medical literature indicates that MDMA-assisted psychotherapy can successfully alleviate PTSD symptoms in a significant portion of patients with treatment-resistant forms of the condition.	The use of methylenedioxymethamphetamine-assisted psychotherapy (MAP) by patients with severe or extreme chronic posttraumatic stress disorder is both cost-effective and clinically effective.
Baig et al., (2019)	Case Control study	United States		A number of factors contribute to veterans' lack of access to mental health services, including difficulty-getting time off work or school to attend appointments, travel distance, lack of knowledge about effective treatment options, disagreement on treatment rationale and readiness for treatment, and systemic issues.	Although there is access to psychological treatment, the study shows that one year after treatment, 58% of UC (usual care) patients and 18% of IC (Integrated care) patients dropped out.
Onyut 2009	Qualitative design	Germany	32	Participants in Narrative Exposure Therapy showed significant reductions in posttraumatic stress symptoms six months after treatment, while the group receiving Treatment as Usual did not.	NET appears to be a promising approach for treating PTSD in asylum-seekers living in unstable conditions, despite moderate gains.
Bryant 2019	Descriptive study design	Australia		Evidence based treatments have proven to be highly effective but many patients are unable to access it, due to financial constraints.	Trauma-focused cognitive behaviour therapy is the best-validated treatment for PTSD. Low- and middle-income countries are much more likely to lack access to effective treatment for PTSD.
Curtis et al., (2012)	Qualitative design	Australia	206	Injuries caused by assault accounted for the highest median cost per patient, followed by injuries caused by pedal cyclists, pedestrians, and motor vehicle collisions.	During the three-month study period, trauma patients incurred a total direct cost of $3 020 741. In subgroup analysis, road injuries had the highest overall cost, while assault injuries, MVC passengers, and falls had the highest individual median costs.

Nevertheless, the purpose of this review does not include examining the methodology of the articles. As the purpose of this scoping review is to provide a summary of the research conducted on PTSD as a poor university student's ailments, the data were categorized based on the key findings of the studies that were reviewed.

3.2. The Nexus between Poverty and Post-Traumatic Stress Disorder

The correlational design article found that encountering poverty predisposes individuals to higher levels of trauma, and individuals living in poverty have limited access to protective resources like social supports. Hence, the likelihood of developing PTSD is high among these individuals (Holmes, 2021). Poverty has been conceptualised as the major source of traumatic stressors that result in PTSD (Chen, 2007; Knowles, 2018; Pabayo, 2017; Pollack, 2016; Ravi, 2023). On the other hand, a mixed-methods article observed that people living in poverty often suffer from post-traumatic stress disorder due to adversity (Knowles 2018). Quantitative research has reported that PTSD impedes the quality of life for patients, preventing them from holding jobs and maintaining social relationships (Lenart, 2021). This review disclosed that the nexus between poverty and PTSD, the accessibility of PTSD treatment, and the affordability of psychological treatment among individuals. There is consensus in the literature that there is a nexus between poverty and posttraumatic stress disorder (PTSD). This review disclosed that poverty contributes significantly to individuals' experiences of PTSD. This shows that it is a significant factor that impacts individuals' inability to recover after encountering traumatic events, which predisposes them to developing PTSD at a later stage. Higher symptoms of PTSD among patients have been associated with individuals experiencing financial loss during the pandemic (Davis, 2013; Ikizer, 2020; Perreira, 2013) as well as individuals residing in a rural neighbourhood (Kessler, 2017). This means that PTSD is positively related to poverty, indicating that low-income earners are predisposed to PTSD after encountering traumatic events. However, this does not mean that individuals with high incomes do not suffer from PTSD. This finding emphasises that PTSD is more prevalent among low-income earners compared to high-income earners.

3.3. Psychological treatment for PTSD

This review revealed that available psychological treatments for PTSD include trauma-focused cognitive-behavioural therapy (TF-CBT), TF-CBT with selective serotonin reuptake, cognitive behavioural therapy for PTSD, MDMA-assisted psychotherapy, eye movement desensitisation and reprocessing, and narrative exposure therapy. These psychological therapies have been considered effective in treating the symptoms of PTSD among individuals with PTSD. Literature indicates that TF-CBT is the most popular psychological treatment used by therapists (Mavranezouli, 2020; Gospodarevskaya, 2012). Therapists choose these psychological treatments based on the PTSD symptoms individuals encounter. This indicates that these psychological treatments are designed based on the kinds of symptoms PTSD individuals' experience. This scoping review found that psychological treatment for PTSD includes trauma-focused cognitive-behavioral therapy (TF-CBT), TF-CBT with selective serotonin reuptake, cognitive behavioural therapy for PTSD (CT-PTSD), MDMA-assisted psychotherapy, eye movement desensitisation and reprocessing, and narrative exposure therapy. These psychological treatments are developed to treat symptoms of PTSD among patients. Literature has shown that these psychological treatments have different procedures aimed at enhancing the mental health of individuals with PTSD. Most of these psychological factors can be infused into a normal care programme while the therapist implements others. Among the many validated treatments for PTSD, trauma-focused cognitive behaviour therapy is one of the most effective. However, its popularity has fallen over the last few decades, and only two-thirds of those who receive this treatment respond to it

(Bryant, 2019). Other psychological treatments like narrative exposure have been found promising (Neuner, 2009), and the utilisation of methylenedioxymethamphetamine-assisted psychotherapy (MAP) is also clinically effective and cost-effective (Marseille 2020). In addition, CT-PTSD is cost-effective compared to normal treatment (Shearer, 2018).

3.4. Affordability of Psychological Treatments

This study revealed that the treatment costs of PTSD patients are not affordable to low-income earners across the globe. PTSD costs approximately 43,000 EUR per person (Bothe, 2020). In addition, a study revealed that TF-CBT costs $19,000/QALY, $16,000/DALY for adults, and $8900/QALY and $8000/DALY for children (Mihalopoulos, 2013). The cost of SRIs ranges from $3891 to $4613 (Sullivan 2004). Finally, the quality-adjusted life years of PTSD patients cost $100,000/QALY (Le, 2014). In Europe, the cost of treating PTSD cost 43,000 EUR per individual. In a nutshell, the cost of treatment for PTSD is capital-intensive among medium- and low-income earners across the globe. This study revealed that the treatment costs of PTSD patients are not affordable to low-income earners across the globe. This means that treatment for PTSD is capital-intensive due to the calibre of personnel and material resources required for programme implementation. The capital-intensive nature of PTSD treatment could be attributed to the long period of treatment some programmes require. Some of these PTSD treatment programmes, like TF-CBT, which has 12–18 treatment sessions, can last between three to six months, depending on the cognitive level of the selected patients. Patients that are characterised by slow learning or low intelligent quotients require a longer period of implementation and follow-up compared to patients with higher intelligent quotients. Furthermore, it requires huge resources because it involves professionals, facilities, and a friendly environment for effective implementation. Some of the professionals who are either psychologists or therapists are sometimes scarce; hence, recruiting them for programme implementation is capital-intensive. Therefore, low- and middle-income countries are much more likely than high-income countries to lack access to effective psychological treatment for PTSD due to affordability (Bryant, 2019).

3.5. Knowledge Gaps and Limitations

The major knowledge gap identified in the literature is that none of these studies were conducted within school settings or used students' populations only; therefore, there is a dearth of empirical research on the nexus between PTSD and poverty within educational settings. Furthermore, due to the lack of articles examining the nexus between PTSD and poverty conducted in African countries, the studies were highly based on European contexts. The articles reviewed here are dominated by research from the USA, followed by the UK, Canada, Germany, and Australia. In the USA, documented events of PTSD have been documented, which could explain the dominance of data from the country. In most articles, the cost of the treatment was not mentioned, while the rest focused on the accessibility of PTSD and the relationship between poverty and PTSD, thus excluding the initial target audience (students).

It is possible that not all articles were included in the review, even though it followed a structured method. A further limitation was that articles were only included if search terms were present in the abstract or title. Therefore, articles that discussed PTSD without naming it in the title or abstract were not considered. Furthermore, articles that generalised PTSD under the category of mental disorders were rarely considered. In this review, empirical research reports not in English are excluded from consideration. This excludes articles in languages other than English that discuss PTSD as a poor student's ailment. Consequently, most of the articles originate from English-speaking countries. Despite the limitations of this review, it is the first of its kind that focuses on finding the relationship

between PTSD and poverty, with special attention to the cost of psychological treatments and affordability among patients. This review utilised a global lens to examine the empirical literature within this research scope to establish state-of-the-art empirical findings concerning the nexus between PTSD and poverty, the cost of psychological treatment, and affordability.

4. Conclusion

Researchers have been conducting more research on PTSD since 2009. Conversely, the research is largely quantitative, correlational, mixed method, descriptive, qualitative, and systematic review. Literature has shown that encountering poverty predisposes individuals to a higher level of trauma and makes them more likely to develop PTSD due to their low income and limited access to protective social supports. In addition, this review revealed psychological treatments that are effective for treating PTSD. However, these psychological treatments are capital-intensive and were found to be too expensive for low-income earners. This review found that there is a lacuna in the literature concerning the nexus between poverty and PTSD among students around the world. It would be beneficial for society and the academic sector at large to conduct research on PTSD among students in tertiary institutions. Additionally, implementing PTSD treatment with care as usual (CAU) for individuals with PTSD yields better health and less PTSD at lower costs. Other geopolitical contexts should be considered when conducting future research since USA dominated the current research.

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Conflict of Interest

The author declare no conflict of interest.

Author Contributions

The major activities regarding this study were carried out by ANA.

Data Availability Statement

The dataset used for this study is available on request from the author.

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