Darya Rostam Ahmed

A systematic review of Yazidi children and adolescents reveals high rates of mental and psychiatric disorders after the ISIS invasion in 2014

Department of Clinical Psychology, Faculty of Science and Health, Koya University, Koya KOY45, Kurdistan Region-F.R. Iraq.

*email: darya.rostam@koyauniversity.org

Received: 2022-09-21; Accepted: 2022-09-27
DOI: 10.52095/gpa.2022.5563.1059

Abstract
Background: Yazidi people are a minority group of Kurds that often live in the Sinjar District in Iraq. The Yazidis have been persecuted for centuries. They have most recently been targeted by the Islamic State of Iraq and Syria (ISIS) when they experienced violence, genocide, enslavement, and forced migration – all of which have had a significant impact on their mental health.

Aim: The purpose of this systematic review is to examine mental and psychological health problems among Yazidi children and adolescents following the ISIS invasion of Iraq and Syria in 2014.

Methods: The PRISMA protocol was used to conduct a systematic review of the literature. Using related keywords, 182 publications were identified on PubMed and Google Scholar. Finally, 5 full articles were included for data extraction. Inclusion criteria were English papers that studied Yazidi mental and psychiatric disorders in Yazidi children and adolescents, regardless of date or gender. However, research on Yazidi adult mental health and general physical health was excluded.

Results: The initial search result found 182 articles; 83 were evaluated for eligibility, with 5 studies meeting full eligibility criteria and being included in the current systematic review. According to the results, Yazidi children and adolescents have suffered from a variety of mental and psychological disorders as a result of the recent traumatic events, which mostly occurred after the ISIS invasion in 2014. The most prevalent are posttraumatic stress disorder (PTSD) and depression, anxiety, and other mental and psychiatric problems.

Conclusion: Yazidi children and adolescents experienced serious traumatic events, including war trauma, as well as substantial migration and resettlement-related stress. These exposures increased the risk of developing mental health problems, including depression, PTSD, anxiety, and behavioral and comorbid mental and psychological problems.

Keywords
Yazidi, children, adolescents, persecution, ISIS, war, PTSD, depression, psychiatric disorders, displacement

INTRODUCTION

Yazidi population and persecution

The Yazidis are one of the world’s most persecuted religious minorities. They are a predominantly Kurdish-speaking group that inhabited a wide area stretching across eastern Turkey, northern Syria, northern Iraq, and western Iran. Most come from two areas: Sheikhan, a collection of villages and towns to the northeast of Mosul, and Sinjar, a mountain to the northwest close to the border with Syria (Schneider, 2022). Following the ISIS invasion in 2014, a considerable number of people sought asylum in western nations (Del Re, 2015).

The word ‘Yazidi’ originated from the Kurdish-language term Ėzdi or Êzîdi, which has several common meanings (for example, from the Kurdish ez dam, ‘I was given’ (in other words, created, by God) (Kizilhan, 2017). They practice Yazidism a closed religion dating back to the Sumerian period. Yazidis worship a God, who created the world and sent seven angels to protect it. They have been accused by other religious followers of worshipping the devil and have suffered from genocidal attacks throughout their history (Khalil et al., 2018).
The Yazidi have been persecuted throughout most of their history. According to Yazidi tradition, the minority has been subjected to 73 genocidal campaigns (Ali, 2019). The latest atrocity happened in 2014 when the Yazidis experienced a massacre by ISIS.

On that basis, the ISIS attack on Yazidis would be considered the 74th genocidal campaigns (Khan, 2021). One of the most horrifying atrocities in recent years was ISIS’s persecution of Yazidis. Women and girls were imprisoned for periods and sold as sex slaves to a group of men who repeatedly raped and resold them, males were regularly rounded up and killed (Grossman et al., 2019).

Persecution and mental health in the Yazidi children and adolescents

The persecution and atrocities put Yazidis at risk of physical and mental health (Vale, 2020). In 2014, ISIS massacred approximately 2,400 Yazidis, including over 600 children, and also enslaved, tortured, and raped thousands of women and children. About 3,000 people, mostly women, and girls were rescued after paying a ransom to ISIS fighters during military operations (Jaff, 2018). Children and adolescent girls were either given as gifts or sold to ISIS fighters and they physically searched and prepared them for marriage, rape, or sexual slavery. Male children were used to serving in the ISIS military (Angeles, 2019; Kizilhan & Noll-Hussong, 2018). Traumatised children and adolescents frequently exhibit mental health problems such as PTSD symptoms, recurrent flashbacks of the traumatic experience, and anxiety, which is typical among Yazidi children, particularly young girls (Sadler, 2021). PTSD may affect children just like adults if they have witnessed traumatic events such as abuse, and war. The study found that Yazidi women and girls who survived war and genocide met the criteria for a probable Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5 PTSD) diagnosis and their level of PTSD is high (Ahmed, 2022b). This systematic review aims to investigate the psychological and mental health problems among Yazidi children and adolescents after the ISIS invasion of Iraq and Syria in 2014.

METHOD

The study protocol and registration

The present systematic review focuses on quantitative studies that investigate the mental and psychiatric problems of Yazidi children and adolescents concerning their previous trauma experiences, especially after the ISIS invasion of Iraq and Syria in 2014. For this study, the PRISMA statement for reporting systematic reviews was used (Page et al., 2021).

Information sources and search strategy

Between April and August 2022, the academic database PubMed, Web of Science, ScienceDirect, and Google Scholar were searched for existing studies on mental and psychiatric disorders among Yazidi children and adolescents.

To conduct the literature search, the following English keywords were used: (‘Yezidis’ or ‘Yazidi’ or ‘Ezidi’) and (‘children’ or ‘adolescents’ or ‘mental health’ or ‘psychiatric disorders’ or ‘PTSD’). The literature search was narrowed using two Boolean operators (AND) and (OR), and articles were selected if they met the inclusion criteria. A Boolean operator is a specific word or symbol used to expand or reduce search criteria.

Eligibility criteria

Inclusion criteria were as follows: studies had to (1) include data regarding the mental health problems of Yazidi children and adolescents under the age of 18 years old; (2) contain quantitative data; (3) be published in a peer-reviewed journal; (4) be available as full text in English. Exclusion criteria were commentaries, letters to editors, brief reports, and studies focusing on Yazidi physical health and Yazidis adults’ mental health.

Study selection

The present systematic review contained articles that investigated the mental and psychiatric disorders of Yazidi children and adolescents after the invasion of the so-called ISIS. Full-text publications were retrieved and assessed to ensure they met the inclusion criteria. A data search revealed 182 publications, the first search on PubMed revealed (50) papers, and the second on Google Scholar found (132) papers, no papers were found in Science Direct, and Web of Science, and 60 were immediately eliminated during the initial selection phase due to irrelevant aspects and 39 were deleted due to duplicate content. After assessing the papers, a total of 83 were eligible, with 78 being rejected due to exclusion reasons. A total
of 5 full-text papers were included in this systematic review study. The flow diagrams show the studies that were identified and included (see Figure 1).

Data extraction

The relevant information from the papers included: authors, year of publication and country of the studies, the number of samples, gender, mean age, measures, findings, and limitations – shown in (Table 1).

Risk of assessment

The study adheres to established objectives and precise qualifying criteria to minimise selection bias. All references for each research retrieval were checked for additional studies to reduce the probability of missing relevant articles. Because the study only considers published papers, there is a possibility of publication bias. The Cochrane Bias Risk Assessment tool was used to assess each paper’s bias (Armijo-Olivo et al., 2012).

Figure 1. A literature review process and corresponding the number of included studies according to the PRISMA 2020 flow chart
# RESULTS

## Study identification

The search identified 182 articles, we removed 39 because of duplication, and then 60 articles were directly removed due to eligibility criteria such as participants were not actual Yazidis, assessed physical health, or adult mental health of Yazidi. Eventually, we retrieved 83 full-text articles, 5 of which met the full inclusion criteria. The included studies involved a total of 309 participants (Figure 1).

## Origin and types of studies

Of the 5 studies reviewed, 3 studies were conducted in Turkey and 2 studies were conducted in the Kurdistan region of Iraq. The studies were cross-sectional studies, 4 studies were conducted among boys and girls, and the last study was conducted among boys and girls. The included studies involved a total of 309 participants (Figure 1).

<table>
<thead>
<tr>
<th>Authors/Year</th>
<th>Country</th>
<th>Sample and Gender</th>
<th>Age (M &amp; SD)</th>
<th>Measures</th>
<th>Aim of the study</th>
<th>Result</th>
<th>Limitations of the studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hosseini &amp; Seidl, 2018</td>
<td>Kurdistan region – Iraq</td>
<td>N= 49 (male=19, female=30)</td>
<td>12.18 ± 1.86</td>
<td>PSC-17</td>
<td>Psychological problems in Yazidi children and adolescents</td>
<td>PTSD, depression, and anxieties are prevalent in which 63.3% of participants scored above the cut-off line.</td>
<td>Selection biases, low sample size, no control groups, no pre-post-conflict assessment</td>
</tr>
<tr>
<td>Kizilhan &amp; Nott-Hussong, 2018</td>
<td>Kurdistan region – Iraq</td>
<td>N= 81 (male=81)</td>
<td>12.61 ± 2.61</td>
<td>The Children’s DIPS CPTSD-R: The Children’s Depression Inventory</td>
<td>Prevalence of PTSD, depression and associated risk factors such as disturbed self-esteem among former child soldiers of the so-called Islamic State</td>
<td>Depression: 45.6%; PTSD: 48.3%; Anxiety: 45.8%; Somatic disturbances: 50.6%</td>
<td>The explanatory power of the study and the group size of participants.</td>
</tr>
<tr>
<td>Nasiroglu &amp; Çeri, 2016</td>
<td>Turkey</td>
<td>N= 55 (male=33, female=25)</td>
<td>11 ±3.67</td>
<td>IK-SADS-PLI</td>
<td>Frequency of mental pathologies in Yazidi children and adolescents</td>
<td>Depression: 32.7%; PTSD: 36.4%; Nocturnal enuresis: 10.9%; Anxiety: 7.3%</td>
<td>Low sample size, no control groups, no pre-post-conflict assessment</td>
</tr>
<tr>
<td>Serhat Nasraïl et al., 2018</td>
<td>Turkey</td>
<td>N=139 (male=75, female=63)</td>
<td>11.05 ± 3.11</td>
<td>IK-SADS-PLI</td>
<td>The mental health states of Yazidi children and adolescents</td>
<td>PTSD: 43.4%; Depression: 27.4%; Nocturnal enuresis: 10.3%; Behavioral problems: 9.6%; Anxiety disorders: 5.1%</td>
<td>Study design and data collection, no control groups, no pre-post-conflict assessment</td>
</tr>
<tr>
<td>V. Ceri, et al., 2016</td>
<td>Turkey</td>
<td>N= 38 (male=16, female=22)</td>
<td>12.1 ± 4.5</td>
<td>Psychiatric diagnostic interview</td>
<td>Psychiatric disorders among Yazidi children and adolescents</td>
<td>Depression: 36.8%; PTSD: 10.5%; Conversion disorders: 26.9%; Adjustment disorder: 21.8%</td>
<td>Low sample size and potential biases, no control groups, no pre-post-conflict assessment</td>
</tr>
</tbody>
</table>

---

**Table 1. Description of 5 studies included in the systematic review**
among ISIS militants who were formerly Yazidi male children. Furthermore, all studies were conducted in internally displaced (IDP) camps, with participants' ages ranging from 2 to 18 years old. The total number of participants were 359 of which 222 were boys and 137 were girls, with sample sizes of 38 and 136 in the smallest and largest samples, respectively.

**Diagnostic measurements**

The studies utilised standardised measures of children's mental health, such as the Child PTSD Reaction Index (CPTSD-RI), a 20-item self-report (interview format) questionnaire based on DSM-IV criteria for PTSD, was used in the study to help primary care professionals assess the likelihood of identifying any mental health disorders. The Pediatric Symptom Checklist-17 includes both the PSC-17 and the CPTSD-RI (PSC-17). Additionally, the Coopersmith Self-Esteem Inventory was used. The Reliability and Validity of Schedule for Affective Disorders and Schizophrenia for School-Age Children – Present and Lifetime (K-SADS-PL) and Children's DIPS – also used to diagnose both lifetime and point prevalence of mental disorders – is the children's version of the Diagnostic Interviws for Mental Disorders.

**Main findings**

Many children and adolescents show resilience and function well, even in the face of substantial adversities. Nevertheless, the effects of the war on children and adolescents are significant and pervasive, with a variety of implications including immediate stress reactions, an increased risk for specific psychological disorders, distress from being separated from their parents, and concern for personal and family safety.

The study by Hosseini & Seidi in IDP camps in the Kurdistan region revealed that emotional and behavioural disorders, including PTSD, depression, and anxiety, are prevalent in Yazidi children, with a frequency of 65.3% (Hosseini & Seidi, 2018).

The study in Turkey indicated that most Yazidi children and adolescents had mental health problems to different degrees. PTSD: 43.4%; depression: 27.9%; nocturnal enuresis (bedwetting): 10.3%; behavioural problems: 9.6%; anxiety disorders 5.1% (Nasiroğlu et al., 2018). A similar study, which involved Yazidi youth in Turkey, revealed that violence, conflict, and war were considered to be significant risk factors for the development of mental and psychological disorders in young Yazidis, with the prevalence of nocturnal enuresis: 10.9%, depression: 32.7%, PTSD: 36.4%, and anxiety: 7.3% (Nasiroğlu & Çeri, 2016).

Meanwhile, another research conducted in Turkey by Ceri and colleagues revealed that Yazidi children and adolescents did not just suffer from depression and PTSD but also several other mental health issues such as adjustment disorder 21.8% and conversion disorders 28.9% (Ceri et al., 2016). Eventually, A study of former Yazidi child ISIS militants conducted in the Kurdistan region also revealed a significant frequency of depression at 45.6%, anxiety at 45.8%, PTSD at 48.3%, and somatic disturbances at 50.6% (Kızılhan & Noll-Hussong, 2018). As noticed, there were no obvious differences between boys and girls who experienced mental and psychiatric disorders, indicating that both genders were similarly affected, and since all the studies were conducted in camps, it is possible that displaced and residing in camps were risk factors for developing disorders.

**DISCUSSION**

The majority of studies relevant to Yazidi youth's mental health were conducted in IDP and refugee camps in both Turkey and the Kurdistan region of Iraq. Four studies involved both boys and girls, with just one study involving just boys. The main goal of this systematic review was to identify and evaluate studies that investigated the mental health problems of Yazidi children and adolescents after the ISIS invasion in 2014. As expected, the results of all the studies revealed that Yazidi young people suffered from mental health problems such as depression, anxiety, PTSD, and other psychiatric disorders.

To the best of our knowledge, this is the first systematic review of the mental health problems of Yazidi children and adolescents in literature. Recent studies conducted among Yazidi people indicated that this minority is a highly burdened group who have significantly suffered from mental and psychological disorders as a result of terrorist operations, war, conflict, loss of parents, and forced migration with especially high trauma-related symptoms (Sount et al., 2018). A recent study conducted among traumatised people in Iraq revealed that the majority of survivors of war or terrorist crimes suffered from major depressive disorder (MDD) and PTSD, with around 43% meeting the DSM-V diagnostic criteria for PTSD, 40% meeting the criteria for MDD, and approximately 26% meeting the criteria for both.
disorders (Ahmed, 2022a).

As observed the high prevalence of mental health disorders among Yazidi children and adolescents were PTSD and depression. The research found that young people who endured extreme trauma, war-related problems, and displacement are more vulnerable to getting PTSD, and depression (Aaltonen et al., 2018).

There were no differences found between studies conducted in IDP camps in the Kurdistan region and studies conducted in refugee camps in Turkey. The Yazidi children and adolescents experienced the same psychological problems and concerns with conflict because of ISIS brutality in 2014.

Meanwhile, no significant gender differences were found in the experience of mental health problems among Yazidi children and adolescents, which means both boys and girls had similar conditions.

Yazidi young people have been exposed to violence and trauma from conflict, which increases their risk of developing mental health problems. The studies confirmed that children who have been exposed to violence and have survived the war are more likely to develop PTSD, depression, and other mental health problems (El-Khodary & Samara, 2020). Although the same result indicated that Syrian children faced the same issues in Syria after the ISIS invasion in 2014, the study of 96 Syrian children in German found that 33% had PTSD (Javanbakht et al., 2018).

However, two studies (Nasıroğlu & Çeri, 2016;纳斯iroglu et al., 2018) in Turkey revealed that despite PTSD and depression, as well as other health problems such as behavioural, adjustment disorders, and nocturnal enuresis being among the problems facing Yazidi children and adolescents, the causes and risk factors of these problems were primarily due to witnessing violence and/or death. As well as family characteristics such as being a girl, having older and disabled parents, being the elder child, and having multiple siblings.

Being internally displaced or a refugee is the risk factor for suffering mental and psychological disorders in children and adolescents. This is due to loss of social support systems, poor living conditions, barriers to accessing services, distress at the separation from parents as well as concerns for their safety (Karadag et al., 2021). All the studies that examined the mental health problems among Yazidi children and adolescents were conducted in IDP and refugee camps and these contexts have played a major role in the development of mental health and psychological disorders (Bürgin et al., 2022; Ahmed, 2022b).

Moreover, the development of mental health consequences as a result of persecution and conflict depends on the stage of exposure, the length of the conflict, and contextual factors. The post-conflict phase is referred to as the transmission of mental health consequences and resilience processes (Piñeros-Ortiz et al., 2021). After the conflict and displacement, studies among Yazidi children and adolescents were conducted, but they did not provide specific diagnoses or assessments such as post-conflict observations and follow-up, as a result, the severity of psychological disorders may decrease over time, whereas PTSD in the most exposed may show higher continuity (Hodes & Vostanis, 2019).

However, when compared to persecuted children and adolescents from another ethnicity and nations that have suffered the same difficulties, Yazidi children are affected in the same way as other children who have experienced conflict and war. Studies on children and adolescents from Syria and Ukraine also reveal that trauma exposure and war have a substantial impact on mental and psychological problems such as depression, anxiety, and PTSD (Eruyar et al., 2018; Cénat et al., 2022).

RECOMMENDATIONS

Children’s needs vary and must be adapted to the trauma loads they have experienced and be integrated into the wider community work. Based on the findings of the present systematic review we assume that mental health and psychosocial support (MHPSS) for Yazidi children and adolescents are critical to support their social, emotional, cognitive, and physical development, and regaining both a sense of external safety and inner security (MacMillan et al., 2015; Bürgin et al., 2022). Supportive interventions should include comprehensive mental health and psychosocial rehabilitation and psychosocial counselling in order to boost resilience and mental well-being.

LIMITATIONS AND STRENGTHS

The strength of this study is that it’s the first
systematic review of research on Yazidi children and adolescents and mental health problems that indicate the impact of trauma, war, loss, and displacement, and that recommends ongoing mental health and psychosocial interventions over the short- and long-term. However, the review has limitations because the studies that were included involved a low sample size and the studies were done in IDPs and refugee camps right after evacuation from ISIS territories. This means that the reliability of the results may have been influenced by the location, duration, and intensity of the suffering, family loss, and war-related trauma. The studies had no control groups, no post-conflict evaluation, and follow-up was lacking.

CONCLUSIONS

The findings of this systematic review provide evidence that the ISIS invasion, loss, war-related trauma, loss of parents, and displacements had a significant mental and psychological impact on Yazidi children and adolescents. Mental and psychiatric disorders are common among them including PTSD, depression, anxiety, and other mental health problems. Future studies could provide more representative samples, control groups, and pre-post assessments. Therefore, it is critical to developing targeted mental health and psychosocial interventions aimed at promoting good mental health in Yazidi children and adolescents and helping them process the horrific things that have happened to them.

DECLARATIONS

Acknowledgement: None.

Conflicts of interests: The author declared no conflicts of interest.

Ethical approval: Not applicable

Informed consent: Not applicable

Funding: None.

REFERENCES


