

# The epidemics of substance misuse and suicide in Syria: casualties of protracted conflict and political instability

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## Research Article

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# Abstract

*Background:* The Syrian conflict has resulted in significant displacement and increase in humanitarian needs within the last decade. Reports of increased prevalence of substance misuse and deliberate self-harm among internally-displaced Syrians are concerning, particularly given barriers to care for these conditions due to cultural stigma and legal repercussions for those reporting them. The aim of this study is to provide an overview of prevalence, risk factors and health services available for substance misuse and deliberate self-harm in Syria as well as share findings from a workshop with Syrian mental health stakeholders exploring current challenges with regards to these conditions.

*Methods:* A scoping review was conducted using key search terms regarding substance misuse and suicide and/or self-harm inside Syria. These findings were supplemented by a discussion among 25 Syrian mental health stakeholders, including psychologists, psychiatrists, public health, and policy professionals to highlight key challenges and identify locally appropriate solutions.

*Results:* Data regarding the prevalence of substance misuse and self-harm inside Syria among internally displaced populations varies greatly quality and accuracy. Substance misuse and deliberate self-harm, including suicide, are considered stigmatised and at times, criminalized, in Syria, leading to massive underreporting of prevalence, as well as underutilization of available treatment, which is also limited. The health system response in Syria, which has been compromised by a decade of conflict, is not prepared to cope with increasing rates of mental health disorders and particularly, substance misuse (i.e. Captagon) and instances of self-harm. Key suggestions from the workshop include the following: a) use of telepsychiatry and telepsychology interventions b) adaptation of WHO interventions c) multi-year investment and prioritisation of MHPSS programs and d) utilizing family skills interventions as a key tool in the

prevention for substance abuse and self-harm, while embedding social and cultural sensitivities into interventions.

*Conclusions:* Though current evidence gaps around substance misuse and deliberate self-harm in Syria remain, with the current socio-political climate in Syria, alongside significant shortfalls in funding for health, there is a present, urgent need to address these neglected MHPSS concerns. Emphasis must be placed on the needs of vulnerable populations including IDPs, war injured, children and teenagers.

## Background

The Syrian conflict has forced more than half the pre-conflict population from their homes including over 6.9 million individuals who are internally displaced and 6.8 million who are refugees. [1] Exposures to extreme violence and persecution throughout the conflict, loss of home or loved ones, as well as the subsequent impacts of displacement to new host country contexts, have resulted in significant mental health consequences for Syrians globally both for those directly and indirectly exposed to the conflict. [2, 3] More recently, the deterioration of national and regional economies has led to a significant decline in

access to basic service, including food, water, and electricity. [4] As a result, nearly 14.6 million Syrians are estimated to need humanitarian assistance – with needs particularly concentrated among internally-displaced persons (IDPs) living in informal settlements throughout the country. [4]

There has been increasing interest in the effects of conflict and forced displacement on the mental health and psychosocial support (MHPSS) of Syrians which has resulted in an array of literature outlining the mental health impacts of conflict and forced displacement on the Syrian population. [2, 5–10] Early in the conflict, this included advocacy around which the impending mental health crisis in Syria, emphasising the need to support subnational health systems across Syria with the resources and capacity required to prevent the short- and long-term impacts of the increase violence and risk posed to Syrian civilians.[10–13] These efforts were supported by calls for regarding the importance of considering culture and context in the development of interventions for Syrian populations. [2, 15] While these efforts have supported the understanding of the mental health and psychosocial support needs of Syrians throughout the decades since the onset of the conflict, there continues to be a fragmented understanding of the key mental health needs of the Syrian population, and particularly, among those who remain inside the country. Furthermore, prevalence studies have emphasised common mental health disorders, including depression, anxiety, and post-traumatic stress disorder (PTSD), with less emphasis on severe mental health presentations, such as psychosis, substance misuse, and self-harm. [2, 6] This is despite recent trends noting a rise in suicide cases across Syria, and in particular, regions in the country where most of the population live in informal settlements or have experienced repeated displacement. [16]

We focus on substance misuse and deliberate self-harm due to their reported rise among Syrian IDPs as well as the associated cultural stigma and neglect surrounding these conditions in Syrian society. The aim of this study is to i) discuss findings from a scoping review of literature focused on the prevalence, risk factors and health services available for substance misuse and deliberate self-harm (including suicide and parasuicide) inside Syria as well as ii) share findings from a workshop held in March 2022 by the Syria Public Health Network (SPHN) and the Research for Health System Strengthening in Northwest Syria (R4HSSS) project at King's College, in which Syrian mental health experts (including psychiatrists and psychologists), representatives of humanitarian organisations, academics and policy makers explored current challenges with regards to substance misuse and deliberate self-harm and suicide inside Syria. [17, 18]

## Methods

### Scoping review

A scoping review of both academic and grey literature was carried out in March 2022 to provide an overview of key evidence from the Syrian context in support of the following workshop objectives:

- To highlight the mental health impact of the conflict in Syria on individuals inside Syria.

- To explore the prevalence, risk factors, and health services available with a focus on two mental health disorders: substance abuse, and self-harm.
- To encourage mental health professionals and practitioners to plan for harmonized and locally appropriate approaches to address these two mental health disorders.

Search terms included “mental health,” “psychosocial support,” “Syria,” “suicide” and “substance abuse/misuse.” Emphasis was placed on articles regarding the MHPSS needs of Syrians inside Syria. As a result, articles that discussed Syrians displaced to contexts outside of Syria (i.e. surrounding host countries) were not extensively considered in this review.

## **Stakeholder workshop**

A stakeholder workshop, titled ‘Mental Health in the Syrian conflict: Substance abuse & Self-Harm among Syrians’ was convened remotely by SPHN and R4HSSS in March 2022. The aim was to bring together local and international experts on mental health who were involved in research and interventions related to mental health care inside Syria or for Syrians in exile. The workshop was structured by four 15-minute presentations from mental health experts of Syrian origin on substance misuse, self-harm, field practices related to these issues in the context of northwest Syria, as well as family interventions which can be used to address substance misuse and self-harm. This was followed by a facilitated discussion with 5 additional experts.

Key areas of discussion included:

1. Key priorities for mental health needs in Syria
2. Health system response to mental health disorders in Syria
3. Coping mechanisms that showed effectiveness among local communities.
4. Coordination among involved health actors

A total of 25 participated in the workshop, including individuals representing the non-governmental organization (NGO) and health sectors in Syria and in Turkey. The workshop served as a starting point for further collaboration exploring priorities for mental health in Syria. In the findings below, we provide an overview of strategies suggested by workshop participants on how to address substance abuse and self-harm in the Syrian context.

## **Results**

### **Mental health priorities in Syria: an overview**

Mental health problems that are largely prevalent in conflict-settings include stress induced by chronic fear, feelings of loss and grief, and trauma. [2, 7] Syria is no different where experiences of severe distress can be traced to the ongoing violence, instances of persecution and discrimination, and arbitrary arrests, torture, and killing of civilians. [2, 5, 11] Data on particular populations, such as women and children, are

also limited to those displaced to surrounding host countries as refugees. [19] While there is no clear consensus on the prevalence of mental health conditions inside Syria (either before or after the onset of conflict), several publications have provided estimates which can be referenced; these are summarized in the Appendix. [5, 6, 20–24] For example, the most recent systematic review of the burden of mental health conditions and access to mental health and psychosocial support services in Syria and among Syrian refugees reports an overall estimated prevalence of PTSD of 16–84%, depression of 11–49% and anxiety of 49–55%. [6] However, only two studies within this review reflect estimates of disease burden among conflict-affected populations inside Syria, highlighting a clear gap in evidence regarding mental health disease burden and service access within the country.

In the workshop, concerns were raised regarding the availability as well as the validity and reliability of reported mental health statistics in Syria. Participants emphasised the importance of not simply presenting data but also of detailed descriptions of data sources, methodology used, populations studied, potential biases and the limitations of these studies when quoting this data. An important contributor to inaccuracies (whether under or overestimates) is the challenge related to diagnosing mental health conditions and stigma surrounding diagnosis and reporting as such, it is inevitable that there are inconsistencies in any reported data from single studies and so it is important that a holistic approach when assessing the scale of the problem and a variety of sources are taken into consideration. Some participants highlighted that some small-scale research carried out by local NGOs described much lower rates of psychiatric conditions such as PTSD and major depression than those cited by international humanitarian organisations; this may relate to differences in definition or diagnosis. However, despite challenges with regards to data or quantifying the scale of the problem, reports from participants stressed that substance misuse, deliberate self-harm and suicide are increasingly reported as problems affecting populations in Syria as well as among refugee populations. Participants stressed the importance of identifying appropriate interventions to address these in ways that were culturally sensitive and appropriate to the local context.

## **Substance misuse and deliberate self-harm: addressing hidden issues**

Both substance misuse and deliberate self-harm, including suicide, are significantly stigmatised in Syria. This can lead to vast under-reporting, reluctance for patients or their families to access services as well as inadequate services to meet the complex needs of those affected. Information as to the extent is sparse with few studies exploring the prevalence of mental health presentations such as substance misuse and/or deliberate self-harm inside Syria. Assumptions are that these conditions resembled global rates – although this is unlikely to be the case given the stressors which have been experienced by populations who remained in Syria throughout the conflict. [25] Of note, studies on these topics have explored them among Syrians in Europe where there is increased access to alcohol and psychoactive substances compared to Syria, which provide less insight into burdens of disease in the Syrian context. [26, 27]

#### a) Deliberate self-harm

Findings from the literature remain limited but what has been reported by NGOs with MHPSS activities on the ground is concerning. Save the Children reported a significant increase in the number of suicide attempts among children in northwest Syria, an area particularly affected by the protracted conflict. [28] In the last few months of 2020, there were reports of a total of 246 total suicides and 1,748 attempts among children under the age of 20 – with disproportionate numbers among those who have experienced internal displacement. Similar trends were noted by the International Rescue Committee in advance of the expiration of the United Nations (UN) resolution which allows cross-border aid into northwestern and northeastern regions of Syria, where surveys with local populations indicated a reported rise in suicides and suicide attempts inside Syria due to competing mental health issues, domestic violence, financial hardship, and a loss of hope. [29] These trends reflect broader shifts in the mortality rate due to suicide inside Syria, increasing from 1.5 to 2 per 100,000 between 2010 and 2019. [30] Though this is likely an underestimate given the challenges related to reporting and stigma, the rise can be attributed to the protracted conflict, deteriorating economic situation, grief due to loss of friends and family throughout the conflict, social isolation during the pandemic, and unresolved mental health conditions. [2, 4]

The true figure of suicide is likely much higher given the under-reporting related to the severe stigmatization around mental health conditions in general and suicide which is considered 'haram' (forbidden) in predominantly Muslim societies. [2] This is complicated by Syrian law, which deems attempted suicides as a criminal act. [31] Legal reform is necessary to reduce barriers to accessing care as well as reporting of suicide attempts at a national level. In addition, there is no centralised health information system (HIS) in northeast or northwest Syria which has access to all health facilities. The HIS in government-controlled areas is of low quality and remains paper-based, adding additional constraints to monitoring true prevalence rates of attempted acts of self-harm.

Although it is difficult to accurately assess the prevalence of suicide in Syria, there does seem to be an increase in rates of suicide increasing 4 to 5 times amongst men, with most suicides committed by displaced people. According to the International Rescue Committee, most suicide attempts in Syria, approximately 90%, are reportedly caused by deteriorating living conditions. [29] Limited resources and services available to manage underlying psychiatric conditions may also be contributing to the increase in suicide attempts.

#### b) Substance misuse

The breakdown of Syrian society and the trade in psychoactive substances has increased their availability in the post-conflict period. [32, 33] The social determinants of substance misuse in Syria cannot be ignored alongside record-high estimates of individuals living under the poverty line (97% of the current Syrian population. [4] Given insufficient MHPSS services and staff across Syria, some may turn to substance misuse as a means of dealing with their trauma.

The most common substances abused in Syria include cannabis (hashish), heroin, tramadol, methamphetamine and Captagon (Fenethylamine, a codrug of amphetamine and theophylline). [33] While a few recent reports have highlighted a significant increase in Captagon production in Syria which has fuelled use across the Middle East, this is not new to the region. [34–36] The scale of production and the emergency of Syria as a narco-state fuelling its war economy, however, is novel. [34] Captagon is commonly used among fighters as a stimulant and to increase stamina. [34] In 2021, it is estimated that \$6 billion of Syrian-made Captagon was seized abroad (out of an estimated annual trade of \$30 billion) making Syria now the global epicentre of Captagon production.[34] Production and funding had initially been within the remit of opposition groups however the Syrian government and its allies have progressively taken over as the main producers and beneficiaries of Syria's narcotic trade. [35] These trends raise concerns that this multi-billion-dollar industry will perpetuate the conflict, have long lasting effects on the economy and come at a great social cost to Syrians themselves. [36]

Additionally, for those injured during the conflict, tramadol and other opiates have become increasingly important drugs on which they may become dependent, especially given the lack of medical follow-up and treatment available for these patients. Despite the presence of a drug control department in northwest Syria, its ability to control the dispensing of narcotic drugs in pharmacies and hospitals remains limited, and there are large areas where there are no effective drug control departments, such as in Euphrates Shield, Peace Spring, and northeast Syria.

Alcohol was not widely consumed in Syria's predominantly Muslim society (at least not openly) before the onset of the conflict. [2] A World Health Organization (WHO) Global Status Report on Alcohol and Health reporting a prevalence in both men and women as being zero for heavy drinking and 0.3% for former alcohol consumers. [37] Total consumption of alcohol per capita in Syria had dropped from 0.9 to 0.3 litres of alcohol between 2010 and 2016. These rates are similar to those demonstrated by other countries in the Eastern Mediterranean region, including Egypt, Iraq, Pakistan, Saudi Arabia and Yemen. [37] However, given how stigmatized and hidden behaviours such as drinking or drug use are, these are unlikely to reflect true figures. [2] Stigma regarding alcohol and substance misuse leads to barriers to seeking professional support, including fear of stigma. Culture and religion continue to play an important role in reducing substance use, as well as seeking support for these conditions. [26, 40]. We found no evidence relating to Syria on excessive or harmful alcohol intake.

## Discussion

### *Meeting the challenge of substance misuse and deliberate self-harm*

Key challenges identified from the literature and the workshop include structural barriers to accessing mental health care include cultural and religious norms, transportation to specialised services, as well as lack of familial support. Such barriers need to be addressed at a local level through engaging with communities and families to reduce stigma and promote mental health and psychosocial interventions and to facilitate access to mental health care. [2,5] The shortage of mental health professionals across

Syria (which existed before the start of the conflict with fewer than 100 psychiatrists per a population of 22 million) were noted barriers to access care. [9] Scaling up and training mental health professionals of all cadres is urgently required given the significant increase in mental health needs among the population, particularly complex needs. Furthermore, a lack of insurance and/or health coverage of psychiatric or mental health services more broadly can exacerbate barriers to care and must be urgently addressed. [25]

During the workshop, examples of good practice and innovations to meet the needs of patients in Syria were explored:

### 1. The use of telepsychiatry and telepsychology interventions

Researchers have established the utility and acceptance of in addressing the mental health needs of Syrians remotely, which can reduce access barriers as well as human resource shortages inside the country. [13, 14] Some limitations to these interventions, however, include lack of or limited technological literacy, poor internet connection, as well as lack of financial resources to sustain these programs.

### 2. Adoption and adaption of WHO mhGAP (Mental Health Gap Action Programme) interventions

Severe lack of mental health infrastructure to meet growing needs of Syrians should be mitigated by the integration of mental health services in primary care or community-based care settings. [12] Initiatives like these have been spearheaded by WHO in their rollout of mhGAP inside Syria, which has led to at least 30 participants, including psychologists, psychiatrists, and social workers, with training in mhGAP. [41] Within mhGAP, there are comprehensive sessions regarding recognizing and treating symptoms of substance abuse and/or self-harm. Thus, ongoing mhGAP training is recommended. [42]

Workshop discussants concluded that there have been some interventions used internationally with good results, such as mhGAP, that have been and should be utilised more broadly in Syria to address a range of mental health issues including self-harm and suicide. By utilising this programme to train a broader range of healthcare professionals as well as other professionals working in other sectors such as education, it would be possible to screen for and assess the risk of suicide and substance abuse amongst young people at school age who may benefit from treatment the most. Furthermore, there have been some interventions, such as CASP (Contact and Safety Planning) and STARC (Skills-Training of Affect Regulation – A Culture-sensitive Approach) trailed with refugee populations that may also be applicable for patients inside Syria. [43] The WHO has also developed some self-help guides on managing basic mental health conditions available in many languages, including Arabic, that could be provided to patients to support them in their own recovery. However, many of these manuals focus mainly on managing distress than more serious issues such as substance abuse or suicide, including among healthcare workers. [44, 45]

### 3. Multi-year investment and prioritisation of MHPSS programs

Provision of mental health services in Syria is inconsistent and constantly changing; projects are usually short term and donor driven with limited evaluation of impact and cost-effectiveness. In terms of



substance abuse, most of the support is focused on acute management of withdrawal, with some larger hospitals providing detoxification services. There are currently no trained health professionals able to provide long term support for people with addictions. The coordination of service delivery and research exploring MHPSS issues over time is limited and requires prioritization and investment from funders.

#### 4. Prevention through family skills training

During the roundtable, examples of good practice and innovations to meet the mental health and psychosocial needs of Syrians were noted. For example, the key role that parents or primary caregivers play in protecting children from the stresses of conflict was highlighted. Primary caregivers experiencing high levels of stress are less likely to provide children with the various positive interactions that promote healthy psychosocial and physical development. [46,47] Instead, children are more likely to experience harsh parenting, which increases children's risk of a variety of enduring emotional and behavioural problems. This global trend of compromised caregiving through conflict has been highlighted too with research on conflict affected families in Syria, as well as contexts hosting Syrian refugees and in countries such as Ukraine.[46-48] Family skills resources and interventions aimed at caregivers in conflict contexts have been found to be effective in encouraging safe and nurturing relationships between parents (or primary caregivers) and children in their early years and, as such, preventing many problem behaviours and mental health challenges, including violence and substance misuse. [46, 48] Such resources have been trialed successfully with Syrian families affected by the current conflict, indicating significant improvements in child and caregiver wellbeing.[48] The development of the United Nations Office on Drugs and Crime (UNODC) multi-level family skills pyramid of open access resources, that includes a range of resources from light touch psychoeducational materials to more specialized forms of trauma-informed interventions, was presented as a means of both screening and provision of appropriate levels of assistance. [47] Furthermore, open-access family skills resources available at every level of this model were shared in English and Arabic. [49]

It is important that all interventions are context specific and culturally adapted and so it may be useful to engage with local community leaders and local religious leaders when implementing psychiatric interventions, especially considering the impact that social stigmatization may have on this specific cohort of patients. These individuals can support in increasing awareness, highlighting issues and signposting to available services or ongoing interventions where appropriate. However, it is also important to consider the limitations in working with religious and community leaders that may have opposing opinions to those being taught and so it is necessary to take a balanced and considerate approach when trying to engage with these individuals. To address the issues of substance abuse and suicide effectively, a systems-based approach that tackles the social determinants of these conditions as well as the management of the cases themselves is essential. [50]

You can add here a reference to the work I did with colleagues:

Almshosh N, Jefe-Bahloul H, Abdallah W, Barkil-Oteo A (2020) Use of store-and-forward tele-mental health for displaced Syrians. *Intervention* Volume 18, Number 1,Page: 66-70

## Conclusions

Though current evidence gaps around substance misuse and deliberate self-harm in Syria remain, with the current socio-political climate in Syria, alongside significant shortfalls in funding for health, there is a present, urgent need to address these neglected MHPSS concerns. Emphasis must be placed on the needs of vulnerable populations including IDPs, war injured, children and teenagers.

As a first step, establishing a routine monitoring and reporting HIS for severe mental health conditions among Syrians, overseen by the current humanitarian systems is needed across Syria; this can be with a basic level of data to understand the scale of morbidity. Other urgent actions relate to addressing the stigmatisation of seeking MHPSS care (especially for substance misuse and deliberate self-harm,) community based and led interventions (including improving health literacy around these conditions) and improving the availability of socioculturally appropriate MHPSS services. Such interventions require clear prioritisation and leadership from all relevant actors including policy makers, local and international humanitarian actors, MHPSS experts and those driving evidence generation (particularly around effective interventions.) Lastly, public health interventions around prevention are essential to reduce the growing numbers affected.

### Key Recommendations

1. Develop better reporting systems to ensure a more accurate representation of the prevalence of mental health conditions including suicide and deliberate self-harm inside Syria.
2. Provide essential training for all healthcare staff and schoolteachers to ensure that suicide and self-harm risk can be identified and assessed early.
3. Focused research on effective interventions to identify and manage deliberate self-harm and substance misuse with a particular focus on community-based interventions utilizing the full range of professionals of the multidisciplinary care team.
4. Activating drug control departments in north-eastern and north-western Syria.
5. An urgent need to address the social determinants (including those directly and indirectly related to the conflict) and other risk factors for deliberate self-harm and substance misuse
6. Implement existing evidence-based interventions that have been found to work in similar contexts or that can be tailored to the local setting such as STARC, CASP and family skills interventions such as the UNODC Strong Families program. [51] Programs like mhGAP are effective and must be expanded in Syria to be used in combination with other interventions.

## Abbreviations

CASP: Contact and Safety Planning

HIS: Health information Systems

IDPs: Internally-displaced Persons

mhGAP: Mental Health Gap Action Programme

MHPSS: Mental Health and Psychosocial Support

NGO: Non-governmental Organization

PTSD: Post Traumatic Stress Disorder

R4HSSS: Research for Health System Strengthening in Northwest Syria

SPHN: Syria Public Health Network

STARC: Skills-Training of Affect Regulation – A Culture-sensitive Approach

UN: United Nations

UNODC: United Nations Office on Drugs and Crime

WHO: World Health Organization

## **Declarations**

*Ethics approval and consent to participate*

Not applicable.

*Consent for publication*

Not applicable.

*Availability of data and materials*

Not applicable.

*Competing interests*

The authors declare that they have no competing interests.

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*Authors' contributions*

D.R. and A.A. wrote the main manuscript, with contributions from N.A., A.A., M.K. and S.B. F.F., and M.A.H. provided input during the workshop. All authors reviewed the manuscript.

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