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**TITLE: PREVENTING SUICIDE, PROMOTING RESILIENCE: IS THIS ACHIEVABLE FROM A GLOBAL PERSPECTIVE?**

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**ABSTRACT**

Suicide continues to be a major health concern globally despite many initiatives to identify risk factors and methods for suicide prevention. We have carried out a detailed narrative review of the literature from 2016-2019 using the headings of Personal resilience (P1); People (P2); Places (P3); Prevention (P4); Promoting collaboration (P5); Promoting research (P6) in order to support an integrated approach to suicide prevention and the promotion of personal and population resilience. We have made ten key recommendations on how this can be moved forward.

**KEY WORDS**

Collaboration, health promotion, suicide, suicide prevention, resilience

## **INTRODUCTION**

Suicide is a major medical and social problem. Over 800,000 people die by suicide annually. Greater than 30% of deaths by suicide are in young people; it is the second leading cause of death among individuals ages 15 through 24 years old and 25 through 34 years in the USA. Although suicide is considered a serious problem in high-income countries, 79% of deaths by suicide occur in medium and low-income countries. Much of the research on suicide is focussed on risk factors that lead to suicide. There is less focus on factors that prevent suicide and promote resilience (Sher 2019). The focus of World Mental Health Day 2019 is suicide prevention and we intend to summarise current opinions and knowledge about suicide prevention and building resilience and suggest areas of focus for future research.

An innovative way of addressing suicide prevention is by using a person-centred care approach. We recognise that there have been many publications about suicide risk and suicide prevention. We intent to provide a narrative of what has been published in peer reviewed journals in the last three years from 2016 to 2019 to provide an opportunity for readers to use a different lens in viewing suicide and to align our vision with this year's World Mental Health Day 2019 theme.

## **METHODOLOGY**

To identify relevant literature for the review, searches were conducted on MEDLINE and PsycINFO databases for publications written within the last three years from 2016 to 2019. A broad search on the topic was carried out with the combination of keywords and using Boolean logic and truncation (AND/OR/NOT/ \*) to narrow down the strategy.

Limits were applied to the search to retrieve publications covering the Human age groups from 13 years to older age groups above 65 (including adolescents, young adults, adults, middle aged or aged).

Exclusion criteria was applied on publications written about assisted suicide or euthanasia. The approach focused globally and included relevant studies published in English language.

The Search Strategy was:

("mental illness" OR "mental health") OR ((psychological OR psychiatric) AND disorder\*) AND (suicide statistics OR prevent\* OR stop\* OR resilien\*)

NOT: ("assisted suicide" OR euthanasia)

Limits: DT 2016-2019] [Human age groups Adolescence 13-17 Yrs OR Adulthood 18 Yrs + Older OR Young Adulthood 18-29 Yrs OR Middle Age 40-64 Yrs OR Aged 65 Yrs + Older] Adolescent OR Young adult OR Adult OR Middle Aged OR Aged] [Languages English]

The combined search results from Medline and PsycINFO gave a total of 970 publications. Further deduplication of the results was conducted. 275 duplicate entries were removed giving a total set of 695 unique results. The 695 remaining articles were first reviewed by two of the authors to provide a narrative to summarise the findings. The articles were then categorised using the agreed headings of Personal resilience (P1); People (P2); Places (P3); Prevention (P4); Promoting collaboration (P5); Promoting research (P6).

The remaining authors were then asked to check if there were any additional, relevant articles published in peer reviewed journals from 2016 to 2019 that should be added and that the information summarised had been allocated to the correct category.

## **SUMMARY OF FINDINGS**

### **Personal resilience (P1)**

There have been decades of research in the field of suicide prevention, and some authors believe that there is a need to focus on aspects other than suicide risk and that resilience should be a key area of focus if suicide rates are to be decreased globally (Sher 2019).

Resilience can be considered a dynamic process that allows an individual to adapt to and overcome stress. It is suggested that building resilience using a biopsychosocial approach should be a basis for all suicide prevention programmes in order to strengthen the whole population.



Promoting positive mental health has been recognised as a key resilience factor in the prevention of suicide. Policy makers should include promotion of well-being and positive mental health as part of any suicide prevention strategy, including screening for and active treatment of any co-morbid mental and physical health conditions as well as substance misuse all of which increase risk of suicide across all age groups (Brailovskaia *et al.* 2019; Gili *et al.* 2019; López-Goñi *et al.* 2019; Siegmann *et al.* 2019). The risk of suicide in the population is also increasing as the use of prescribed and nonprescribed opiates increases so people that present with a pain disorder should be screened for opioid use and provided appropriate strategies to reduce their use of opioids as part of the suicide prevention strategy (Kim-Godwin *et al.* 2019).

Interpersonal relationships are also important in supporting people and providing resilience. People who are persistently involved in interpersonal conflict are more prone to suicidal thoughts and behaviour (Stulz *et al.* 2018).

There is emerging evidence that having a leisure activity is a protective factor against suicidal thoughts, and there is an inverse relationship between time spent in leisure activities and suicidal ideation particularly in adolescents (Vancampfort *et al.* 2019). However, there is a need for more studies on this relationship.

Religious belief has been considered as a factor that may increase resilience. The role of religion is complex because the evidence is inconsistent. It has been suggested that people who are less connected to religion may be at increased risk of suicide, particularly in people with substance misuse (Hamdan *et al.* 2019). There is some evidence that religions that show

compassion for people with mental illness and suicidal ideation promote resilience and are protective against suicide. Identifying an individual's spiritual beliefs may be useful in the prevention of suicide because supporting an individual's engagement with their spiritual beliefs may further support resilience (Bazley & Pakenham 2019).

***P1 – Key message:***

***Enabling positive mental health and well-being, particularly using activities to build individual resilience, has a moderate effect in reducing suicide risk, suicidal behaviour and suicide. It is important for the promotion of positive mental health to be part of any suicide prevention strategy in order to promote resilience.***

**People (P2)**

There is extensive evidence accruing about the risk of suicide across the lifespan.

Bullying at school, school avoidance, being victimized in school and school drop-out all predict increased risk of suicide (Sobba 2018). Schools need to work with health, social services and law enforcement in an integrated way to make children feel safer.

Childhood adversity is a known risk factor for suicidal thoughts, particularly sexual and physical abuse, neglect, mental illness in care givers, family violence, family incarceration and living in a violent community. Many of these risk factors are modifiable in a variety of ways (Raleva 2018). An example is the use of educational videos to increase suicide awareness in parents and to support effective parenting (Javier 2018).

There is consistent evidence that children and adolescents receiving mental health treatment are at increased risk of experiencing suicidal thoughts and demonstrating suicidal behaviour if they have symptoms of depression, aggression and psychosis. Co-morbid Attention Deficit Hyperactivity Disorder (ADHD) in young people appears to increase the risk further (Vuijk PJ *et al.* 2019; Chen *et al.* 2019).

The findings of a review of 22 Randomized Controlled Trials (RCT's) conducted in 14 low and middle income countries showed that depression is the strongest predictor of suicide and that early recognition and treatment of depression in adolescents in low and medium income countries is likely to lead to a reduction in suicide in this age group (Davaasambuu *et al.* 2019; Ortin *et al.* 2019). Another meta-analysis of suicide in young people also found that mental illness and co-morbidity with physical illness and substance misuse are strong predictors of suicide behaviour, and an important strategy to decrease suicide rates in this age group is the identification and active management of depressive illness (Gili *et al.* 2019). It is therefore very important to make treatment available for the full range of mental disorder in children with depressive disorder, PTSD, emotional dysregulation, bereavement including bereavement from another's suicide, substance misuse disorder, family difficulties, relationship difficulties and other psychopathologies in order to decrease suicide rates in this age group (Berk *et al.* 2019; López-Goñi *et al.* 2019, Andriessen K *et al.* 2019).

The increasing use of social media, particularly in younger people, has seen a rise in 'cyber bullying' which is known to be associated with increased suicidal thoughts, ideation and behaviour. A study in Flanders showed that healthy lifestyle factors such as increased sleep, physical activity, a healthy diet and not smoking tobacco are associated with lower levels of

suicidal ideation and supporting positive lifestyle factors such as these provides resilience when adolescents are subject to cyberbullying (Rodelli *et al.* 2018). A study in a student population has shown that positive mental health fully mediates the association between cyber bullying and suicidal ideation and behaviour, seems to confer resilience and needs to be taken into account in clinical and preventive programmes for student populations (Brailovskaia *et al.* 2018). It has also been shown that sleep disorder in the elderly appears to be a contributory factor for suicide risk and this requires assertive management in this population (Fuller-Thomson *et al.* 2019).

Sexual assault, especially in young females, has consistently been shown to be a risk factor for suicide. This is thought to be mediated by the victims attributing blame to for the sexual assault to herself even though this is not supported by the facts. This leads to depression and Post Traumatic Stress Disorder (PTSD). We need to improve mental health literacy in the general public and in health professionals so that victims of sexual assault are not made to feel they are blamed for what has happened (Sigurvinsdottir *et al.* 2019).

A predictor of suicide in young people is a history of incarceration of a family members. This is thought to be mediated by factors associated with social exclusion, including a lack of belonging as result of factors such as ethnicity. This suggests a need for children and young people with an incarcerated family member to be better supported in the community to build their resilience (Forster *et al.* 2019). Young people who are exposed to a family member who is experiencing suicidal ideation are also at increased risk, so family support is essential during the early years of a child's development (Goodday *et al.* 2019).

Relocation to university and college can be a stress factor for many young people and this can lead to an increase in suicidal thoughts and suicidal behaviours. The evidence suggests that many students experiencing suicidal thoughts do not have access to treatment. It is therefore important for colleges and universities to provide mental health awareness and to ensure that student health services are trained to identify suicide risk factors and to deliver appropriate interventions. When these are made available students do use them (Lipson *et al.* 2019; Bruffaerts *et al.* 2019)

Medical students, doctors and other health professionals are also at increased risk of suicide. Vulnerability factors for suicide include poor training, ineffective help and a history of depression. It is important for people who train doctors and other health professionals to develop support systems that enable people to come forward to seek confidential help early. Hours of work should be monitored with appropriate wellbeing programs being made available to trainees (Jovanović *et al.* 2019). A systematic review and metanalysis of suicide in doctors showed that there has been an increase in the prevalence of common mental health disorders and suicide in physicians worldwide. These studies concluded that treatment of common mental health disorders works with a good effect size. The data suggest that actively engaging physicians in effective treatment will result in a decreased suicide rate in this group (Petrie *et al.* 2019).

Thirty-nine percent of 673 pregnant women living with HIV in Mpumalanga endorsed suicidal ideation and this was also associated with intimate partner violence and stigma, which interacted to multiplicatively increase the odds of suicidal thoughts. They concluded that given the high rates of reported suicidal ideation identified in this sample, and the potential

harm to mothers and neonates, suicide risk assessment and management protocols for pregnant women living with HIV should be considered for inclusion in the standard of care in rural South Africa. (Rodriguez *et al.* 2017)

Older adults experience loneliness, mental illness and other psychosocial stress factors associated with ageing. These compound physical ill health and bereavement resulting in a rate of suicide in older adults that is higher than in the general population. Studies show that even though older adults consult more with primary care and other health professionals than the general population, suicidal ideas are less likely to be recorded in their case records compared to the general population, either because health professionals are not asking about suicidal ideas or because older adults may find it more difficult to disclose when they are asked. Primary care clinicians should routinely ask about both suicidal ideas in the older population--especially those who are depressed, lonely or have other psychosocial risk factors-- and the impact suicide is likely to have on the people left behind (Vannoy *et al.* 2018). A study of Chinese Americans showed that older adults who reported discrimination had twice the risk of suicidal thoughts compared with older adults from this population who did not and promoting civil rights to reduce discrimination may also contribute to decreasing suicide rates (Li *et al.* 2018).

People with a diagnosis of personality disorder are at increased risk of suicide and suicide prevention should be included in the core treatment strategies offered to in people with dependent, borderline, narcissistic, histrionic and paranoid personality traits (Ghahramanolou-Holloway *et al.* 2018).

People with high levels of impulsivity are also at higher risk of suicide compared to those who are less impulsive and anybody who has attempted suicide and is also impulsive requires a robust plan targeted to decreasing their risk of suicide (Cole *et al.* 2019).

**P2 – Key message:**

***It is evident that suicide and suicidal ideation occurs across the lifespan and across cultures with different factors contributing to this risk. One of the most important factors is comorbidity with somatic disorders, psychological and social factors.***

**Places (P3)**

Suicide can occur in all settings: at home, in the workplace, on a university campus, in a parked car, in a jail cell, in a public park, in the military, in a general or psychiatric hospital and in other institutions. This highlights the need for primary care health services to remain vigilant and skilled in assessing people's suicide risk (O'Neill *et al.* 2019).

There are some locations that have a higher incidence of suicide than other areas. It is very important to identify so called suicide hotspots so that suicide prevention measures can be put in place to decrease the associated suicide risk. Factors that may be important in managing this risk include time of the day, an infamous suicide spot, and ease of access. When considering place as a risk factor, the effectiveness of any reduction strategy put in place needs to be monitored (Waalén *et al.* 2019). Practical interventions for example may include street lighting in dark places and increasing the height of fences on bridges to prevent people from jumping.

When a person at increased risk of suicide is seen in a hospital setting, whether in an emergency department or in a general hospital or psychiatric in-patient ward, it is important to identify his/her suicide risk factors early, offer appropriate monitoring, support and treatment to reduce risk. All medical and allied health professionals and other people working in health care settings have a role to play.

People who have a mental illness and suicidal ideas are sometimes admitted to hospital under mental health legislation and against their wishes. This can be a frightening experience for the individual and can lead to feelings of increased mental health stigma and discrimination. However, a detailed, national survey conducted in Taiwan of patients with a diagnosis of schizophrenia presenting from 2007 to 2013 found that patients under compulsory admission did not have a rate of suicide different from people with schizophrenia who had a voluntary admission. The risk of suicide in this population was highest in the first week of admission regardless of detention status (Lin *et al.* 2018).

Mental health in-patient facilities should be a place of safety for people with a mental illness, however suicides occur in mental health in-patient facilities. Contributing factors are poor staffing, poor training, over-crowding and environmental hazards.

A study of general hospital in-patients in China showed that suicide risk was highest in people who were aged over 60 and in their cohort suggested that assertive efforts should be made to identify this group early in order to screen for suicidal ideas (Wan *et al.* 2019) especially as there is research that shows that physicians are less likely to screen for and record suicide risk in older adults (Raue 2019).



People admitted to mental health in-patient facilities should have routine well documented assessments of suicidality on admission and regularly thereafter and if suicide risk is identified as elevated, a specific care plan to address this must be put in place to effectively manage the risk and reduce negative outcomes.(Michaud L *et al.* 2019; Bryan *et al.* 2019).

A meta-analysis has shown that people with suicidal thoughts discharged from non-psychiatric hospital settings continue to have an increased risk of suicide for one year after discharge (Wang *et al.* 2019) and this risk continues (Swaraj *et al.* 2019), so it is very important to provide follow up services that are attentive to suicide risk after discharge from hospital.

As people are living longer increasing numbers of older adults are living in residential homes, especially in medium and high income countries. A systematic review showed that there are increasing rates of deliberate self-harm and suicide in the residential care setting and recommended that residential care staff should be trained in the recognition of mental illness, particularly depression, the identification of suicidal ideas and behaviour so that interventions can be made to prevent suicide in partnership with the older adult (Gleeson *et al.* 2018).

There are high rates of suicide in prisons and other correctional facilities, partly because there are higher rates of mental illness and substance misuse in prison populations compared to the general public, and some prisoners are very vulnerable. Prisons and correctional facilities require screening programmes to identify those at risk and intervene early. A recent study of people who committed suicide in an inmate population showed that they tended to be older, male, better educated, married or previously in a relationship and had often committed a

more violent crime and most completed suicides took place in the night or early hours of the morning (Boren *et al.* 2018).

People who are under the criminal justice system in community settings also have a higher rate of suicidal ideas, thoughts and suicide when compared to the general population, particularly those aged between 30 to 59 years old. Suicide rates peak within two weeks, and remain high for up to six weeks, after of receiving a community order (Phillips *et al.* 2018). The population who are under the criminal justice system in all settings are a high risk populations requiring special attention in suicide prevention strategies.

***P3 – Key message:***

***Suicide hotspots can be identified, and suicide is especially common in hospitals, correctional facilities and homes for the elderly.***

**Prevention (P4)**

It is argued that suicides can be prevented by restricting access to means of suicide, by training primary care physicians and health workers to identify people at risk as well as to assess and manage respective crises, provide adequate follow-up care and address the way this is reported by the media (Bachmann *et al.* 2018).

Although the people who provide the gate keeper role have a significant opportunity to recognise mental health symptoms and suicidal ideas early, a review their training showed that it is not standardised globally, especially as some gatekeeper training is delivered face to face and some by e-learning. This makes it difficult to draw conclusions about the ingredients

of the intervention that make the gatekeeper role effective in preventing suicide (Yonemoto *et al.* 2019).

Mental health services are very important resources in suicide prevention. A systematic review and meta-analysis of research published in 2019 examined contact with mental health services prior to suicide found that 3.7% of people who completed suicide were in-patients at the time of death, 18.3% had been mental health in-patients in the year before death, 26% were in contact with mental health out-patient services and 25.7% had received mental health in-patient and community mental health service follow-up (Petrie *et al.* 2019).

The role of peers has also been researched with mixed findings. Peers are people with a previous history of suicidal thoughts, ideas or acts of deliberate self-harm and some of the challenges to using this approach are lack of professional distance, poorly defined boundaries, where each individual peer is on their personal recovery journey and their past experience of mental health services (Huisman & van Bergen. 2018). If peers are being used as part of a suicide prevention strategy they should receive mentoring and support individually or in a group, they should be fully integrated into the wider clinical team and their previous experiences in their own recovery journey should be taken when allocating people for them to support. The recent PREVAIL US pilot study that examined the role of peer support for people who are suicidal showed that peers can instil hope to allow people to know that recovery is possible. All peer support workers who took part in this pilot received training in motivational interviewing, how to listen, how to advise and how to provide psychosocial support and the intervention was feasible, acceptable to patients and effective with a recommendation that there should be fidelity to the peer training programme (Pfeiffer *et al.* 2019).

Some suicide prevention interventions are technology based using media channels, the telephone and internet. These are either targeted at increasing population knowledge by providing information about promoting health and well-being, peer support or the provision of treatment.

A sample of young South African men indicated that suicide prevention should be aimed at fostering connectedness, relationship building, and disrupting the gender regime. The young men expressed that they found the gender regime to be less rigid in cyberspace and therefore they felt more liberated online to express distress and access support. This has implications for suicide prevention interventions (Bantjes *et al.* 2017).

Telephone follow up for young people who have self-harmed has shown to be effective. Young people discharged from hospital were contacted by telephone at one week, one month, six months and twelve months following discharge and, although 50% were lost to follow up there was concordance with aftercare treatment and decrease in suicidal ideation and behaviour in those who remained engaged with the study (Normand *et al.* 2018).

A study evaluating community websites focussed on suicide prevention in US veterans found that they tended to provide help-seeking information, safe messaging and community activities. It was suggested that the content of websites need to be improved to make them more useful (Chen *et al.* 2019).

**P4 – Key message:**

*There is an array of different interventions for the prevention of suicide including public health measures, interventions in primary care (including screening for depression), prevention at the level of psychiatric institutions. Recently, there has been evidence that new technologies may be used in suicide prevention, but can also be a risk factor.*

#### **Promoting collaboration (P5)**

Collaboration is an effective way of preventing suicide and promoting good health and a recent randomised controlled trial of Collaborative Assessment and Management of Suicidality (CAMS) showed that suicidal ideation and mental health distress were reduced more efficiently at six month follow up than Treatment As Usual (TAU)(Ryberg *et al.* 2019).

Questionnaires are often used in collaborative care pathways and settings and the Patient Health Questionnaire (PHQ) is commonly applied to assess depression. Item 9 of this self-assessment questionnaire directly asks about suicidal thoughts. The score on item 9 in 841 patients was compared to the Columbia Suicide Severity Rating Scale (C-SSRS) considered a gold standard in the field. Of these 841 patients 13.4% were assessed as positive for suicide risk using the C-SSRS compared to 41.1% who were assessed as positive for suicide risk using item 9 of the PHQ-9 (Na *et al.* 2018). When the PHQ 9 is being used as a screening tool for mood disorder and suicidality, a positive score on Item 9 requires further exploration and assessment in order to decrease the risk of false positive results which may lead to inefficient deployment of resources.

Family difficulties can sometimes lead to state intervention and children being taken into state care. Many different teams and organisations can be involved in this process including law

enforcement teams, social services teams, housing teams, staff in schools and health care workers. The process is collaborative across teams and it is important to understand the effect on the family so that appropriate interventions can be put in place. A Canadian study showed that mothers who have had their children taken into state care by child protection services have a significantly rate of suicidal thoughts and completed suicide than their sisters who have not had their children removed from their care by the state and mothers receiving services, even when other social factors predicting suicide have been adjusted for. The authors suggest that emerging mental health problems could be identified and suicide prevented if they are provided with psychosocial support during the child protection process and after (Wall-Weiler *et al.* 2018).

Traditional healers are frequently consulted by suicidal individuals and they are confident about their ability to help people in a suicidal crisis. Findings suggest that traditional healers understand suicidal behaviour as a symptom of social disconnection and cultural discontinuity. Traditional healers report that suicidal individuals can be helped by re-establishing interpersonal connections, reconnecting to family and ancestors, and renewing their cultural identities through rituals. These findings suggest that there is some congruence between the way traditional healers understand suicide and the Western scientific and biomedical literature. This raises important questions about cultural approaches to suicide research which are commonly premised on dualistic thinking that constructs culture as something distinct from Western biomedicine (Bantjes and Schwartz. 2017).

**P5 – Key message:**

***Collaborative approaches to suicide prevention require a broad range of stakeholders and may include traditional healers and faith leaders.***

### **Promoting research (P6)**

The conceptualisation of suicide has changed with time and may also relate to the socioeconomic cycle. A mini review noted that societal attitudes to suicide change over time, are complex and have a relationship with social and economic factors (Solano *et al.* 2017). It is important for researchers in the field to be aware of the evolving social constructs in relation to the cycle of suicidal ideation to be able to spot trends early so that interventions can be timely and culturally specific and some researchers advocate for the study on suicide using a standard coding scheme (Lazarides *et al.* 2019).

An important area of focus in suicide prevention is supporting people who are in employment and there is evidence that IT can be used to support and connect with people who may be having suicidal thoughts at work in order to improve their resilience. Randomised Controlled Trials of a mobile phone app in the construction industry (Milner *et al.* 2019) and a of the use of SMS text messaging in people who present in hospital with Deliberate Self Harm (DSH)(Stevens G *et al.* 2019) are currently being carried out.

Research into biological factors and how they relate to suicide is emerging especially sleep deprivation. A Korean study of over 12,000 females showed a direct association between sleep deprivation and suicide and there is a need for more research into the relationship (Park *et al.* 2019). The role of genetics has also been studied, particularly the association with

polymorphism FK506 and other genetic mutations with the emergence of suicidal thoughts and ideas (Hernández-Díaz *et al.* 2019) but the sample sizes are not large enough to draw definitive conclusions so more research is required.

There is an increased risk of suicide in people who have a diagnosis of schizophrenia and researchers have been trying to identify biological markers in those people with schizophrenia who become suicidal. There is emerging evidence that increased prolactin levels and fasting triglycerides are associated with increasing thoughts of suicide in people with schizophrenia (Fang *et al.* 2019), this needs to be explored in more detail.

Science and statistics have a role in suicide prevention. It is important to collect good quality data that can be used to model recovery, reduction in suicide and prediction of suicide. This will require an integrated approach bringing people from many specialities together (Reger *et al.* 2019; Adamou *et al.* 2018).

An emerging treatment for suicidal ideation is Dialectical Behaviour Therapy (DBT) particularly in young people with high levels of suicidal ideation who have a diagnosis of Post-Traumatic Stress Disorder (PTSD). A randomised controlled trial conducted from 2012 to 2014 in four academic centres showed that people who were randomised to a six month DBT treatment intervention showed an improvement in all outcomes including number of suicide attempts compared to subjects randomised to the control group. Completion rates in those randomised to DBT were also high. This is an area that requires more research across different cultures and economies (McCauley *et al.* 2018).

**P6 – Key message:**



*Research about suicide is likely to provide new solutions to this health problem at all levels of science, from basic science to research in prevention.*

#### **CONCLUSIONS AND RECOMMENDATIONS**

1. The early years of a child's development in promoting the resilience that protects from suicide and family and carer support is essential.
2. Evidence based treatment for the full range of mental disorder should be made available to the whole population to decrease suicide rates.
3. There should be collaboration between schools, health services, social services and law enforcement to provide health promotion and suicide prevention strategies in children and young people.
4. Mental health literacy should be improved in the general public so that they are better equipped to recognise people in psychological distress and signpost them to appropriate services reducing stigma and ensuring that people can have access to early intervention.
5. Primary care clinicians should be skilled and trained in how to screen for suicidal ideas in at risk populations.

6. Suicide hotspots should be routinely identified so that suicide prevention measures can be put in place and their effectiveness monitored.
7. People in general hospitals are at increased risk of suicide. All staff working in these settings should receive suicide prevention training as part of mandatory training.
8. People admitted to mental health in-patient facilities should have routine well documented assessment of suicidality on admission and regularly thereafter and appropriate care plans put in place to better manage risk
9. People in residential care homes are at increased risk of suicide. All staff working in these settings should receive suicide prevention training as part of mandatory training.
10. Individual cultural factors and spiritual beliefs can be a protective factor against suicide and if this is identified it should be supported.

#### **LIMITATIONS**

This is not a systematic review but a narrative approach that's summarises the evidence to bring it together. We have brought together the latest evidence published between 2016 and 2019 to enrich what we already know and to highlight some areas for future research and intervention.

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