REVIEW

WILEY ASIA-PACIFIC PSYCHIATRY · Official journal of the Pacific Rim College of Psychiatrists

Preventing suicide, promoting resilience: Is this achievable from a global perspective?

Gabriel Ivbijaro MBE[1,2,3,4] | Lucja Kolkiewicz MBBS MRCPsych[1,5] | David Goldberg KBE[6] | Michelle B. Riba MD, MS[7] | Isatou N.S. N'jie BA Hons, DPS, MCLIP, MInstLM[8] | Jeffrey Geller MD, MPH[3,9,10] | Roy Kallivayalil MD, DPM[11,12] | Afzal Javed MBBS, M.Phil, FRCPsych[13,14] | Igor Švab MD, PhD[15] | Paul Summergrad MD[16,17] | Sumaya Laher BAHons, MA, PhD[18] | Yaccub Enum MSc, BSc, RMN[19]

[1] Faculdade de Ciências Médicas, NOVA Medical School Universidade Nova de Lisboa, Campo dos Mártires da Pátria, 130, 1169-056 Lisboa, Portugal

[2] Faculty of Management, Law and Social Sciences, University of Bradford, UK

[3] World Federation for Mental Health

[4] The World Dignity Project

[5] East London NHS Foundation Trust, London, UK

[6] Kings College London, London, UK

[7] Depression Center, Department of Psychiatry, University of Michigan, Ann Arbor, MI, USA

[8] Lewisham and Greenwich NHS Trust, London, UK

[9] American Psychiatric Association, USA

[10] Psychiatry, University of Massachusetts Medical School, USA

[11] World Association of Social Psychiatry

[12] Department of Psychiatry, Pushpagiri Institute of Medical Sciences, Thiruvalla, Kerala, India

[13] World Psychiatric Association

[14] Pakistan Psychiatric Research Centre, Fountain House, Lahore, Pakistan

[15] Department of Family Medicine, Medical Faculty, University of Ljubljana, Slovenia

[16] Department of Psychiatry, Tufts University School of Medicine, USA

[17] Tufts Medical Center, Boston, MA, USA

[18] Department of Psychology, University of the Witwatersrand, South Africa

[19] Luton Borough Council, UK

Correspondence
Gabriel Ivbijaro MBE Professor, Visiting Professor, NOVA University, Lisbon, Portugal; Visiting Fellow Faculty of Management, Law & Social Sciences, University of Bradford, UK; Past President World Federation for Mental Health; President, The World Dignity Project, Postal address: The Wood Street Health Center, 6 Linford Road. London E17 3LA, UK; Telephone number: +44 020 8430 7715.
Email: gabriel.ivbijaro@gmail.com

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 to 2019 using the headings of Personal resilience (P1), People (P2), Places (P3), Prevention (P4), Promoting collaboration (P5), and Promoting research (P6) in order to support an integrated approach to suicide prevention and the promotion of personal and population resilience. We have made 10 key recommendations on how this can be moved forward.

KEYWORDS

collaboration, health promotion, resilience, suicide, suicide prevention

1 | 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 United States. 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 focused 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 summarize 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-centered care approach. We recognize 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 3 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.

2 | METHODOLOGY

To identify relevant literature for the review, searches were conducted on MEDLINE and PsycINFO databases for publications written within the last 3 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 were 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 as follows:

("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. A total of 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 summarize the findings. The articles were then categorized using the agreed headings of Personal resilience (P1), People (P2), Places (P3), Prevention (P4), Promoting collaboration (P5), and 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 summarized had been allocated to the correct category.

3 | SUMMARY OF FINDINGS

3.1 | 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 programs in order to strengthen the whole population.

Promoting positive mental health has been recognized as a key resilience factor in the prevention of suicide. Policymakers 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 comorbid mental and physical health conditions as well as substance misuse, all of which increases risk of suicide across all age groups (Brailovskaia, Forkmann, Glaesmer, et al., 2019; Gili, Castellvi, Vives, et al., 2019; López-Goñi, Fernández-Montalvo, Areaga, & Haro, 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 & Lee, 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 behavior (Stulz, Hepp, Gosoniu, 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, Stubbs, Mugisha, 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 & Peterseil-Yaulet, 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 behavior, 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.

3.2 | 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 behavior if they have symptoms of depression, aggression and psychosis. Comorbid Attention Deficit Hyperactivity Disorder (ADHD) in young people appears to increase the risk further (Vuijk et al., 2019; Chen, Mastarone, Ambrosino, 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, Phillip, Ravindran, & Szatmari, 2019; Ortin et al., 2019). Another meta-analysis of suicide in young people also found that mental illness and comorbidity with physical illness and substance misuse are strong predictors of suicide behavior, and an important strategy to decrease suicide rates in this age group is the identification and active management of depressive illness (Gili, Castellvi, Vives, 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, Starace, Black, & Avna, 2019; López-Goñi, Fernández-Montalvo, Areaga, & Haro, 2019, Andriessen 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 behavior. 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, De Bourdeaudhuij, Dumon, & Portzky, 2018). A study in a student population has shown that positive mental health fully mediates the association between cyber bullying and suicidal ideation and behavior, seems to confer resilience, and needs to be taken into account in clinical and preventive programs for student populations (Brailovskaia, Teismann, & Jürgen, 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, West, & Baiden, 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, Ullman, & Canetto, 2019).

A predictor of suicide in young people is a history of incarceration of 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, Shuldiner, Bondy, & Rhodes, 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 behaviors. 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 (Bruffaerts, Mortier, Auerbach, et al., 2019; Lipson, Lattie, & Eisenberg, 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 well-being programs being made available to trainees

(Jovanović, Beezhold, Tateno, et al., 2019). A systematic review and meta-analysis 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, Crawford, Baker, 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, Cook, Peltzer, & Jones, 2017)

Older adults experience loneliness, mental illness, and other psychosocial stress factors associated with aging. 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, Gee, & Dong, 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, Lee-Tauler, LaCroix, et al., 2018).

People with high levels of impulsivity are also at higher risk of suicide compared with 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, Littlefield, Gaulthier, & Bagge, 2019).

P2 – Key message:
It is evident that suicide and suicidal ideation occur across the lifespan and across cultures with different factors contributing to this risk. One of the most important factors is comorbidity with somatic disorders and psychological and social factors.

3.3 | 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 peoples' suicide risk (O'Neill, Graham, & Ennis, 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 (Waalen, Bera, & Bera, 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, Chung, Chen, & Chien, 2018).

Mental health units are supposed to be a place of safety for people with a mental illness, however suicides occurs in mental health in-patient facilities. Contributing factors are poor staffing, poor training, overcrowding, 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 to screen for suicidal ideas (Wan, Ding, Hu, et al., 2018) 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 in 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 et al., 2019; Bryan, Rozek, Butner, & Rudd, 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, Chung, Curtis, 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 behavior so that interventions can be made to prevent suicide in partnership with the older adult (Gleeson, Hafford-Letchfield, Quiafe, Collins, & Flynn, 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 programs 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, Folk, Tangey, Barboza, & Wilson, 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, Padfield, & Gelsthorpe, 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.

3.4 | 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, 2018).

Although the people who provide the gate keeper role have a significant opportunity to recognize mental health symptoms and suicidal ideas early, a review their training showed that it is not standardized 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, Kawashima, Endo, & Yamada, 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, Crawford, Baker, 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 instill 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 program (Pfeiffer, King, Ilgen, 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, Kagee, & Meissner, 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 1 week, 1 month, 6 months, and 12 months following discharge, and although 50% were lost to follow up, there was concordance with aftercare treatment and decrease in suicidal ideation and behavior in those who remained engaged with the study (Normand, Colin, Gaboulaud, Baubet, & Taieb, 2018).

A study evaluating community websites focused 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, Mastarone, Ambrosino, 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), and 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.

3.5 | Promoting collaboration (P5)

Collaboration is an effective way of preventing suicide and promoting good health, and a recent randomized controlled trial of Collaborative Assessment and Management of Suicidality (CAMS) showed that suicidal ideation and mental health distress were reduced more efficiently at 6-month follow up than treatment as usual (TAU) (Ryberg, Zahl, Dipe, Landrø, & Fosse, 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 with 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 with 41.1% who were assessed as positive for suicide risk using item 9 of the PHQ-9 (Na, Yarmala, Kim, 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 organizations 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-Wieler 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 behavior 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 that are commonly premised on dualistic thinking that constructs culture as something distinct from Western biomedicine (Bantjes & Swartz, 2017).

> **P5 – Key message:**
> Collaborative approaches to suicide prevention require a broad range of stakeholders and may include traditional healers and faith leaders.

3.6 | Promoting research (P6)

The conceptualization 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, Pizzorno, Pompili, Serafini, & Amore, 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, Wassenaar, & Sekhesa, 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. Randomized controlled trials of a mobile phone app in the construction industry (Milner, King, Scovelle, et al., 2019) and the use of SMS text messaging in people who present in hospital with deliberate self-harm (DSH) (Stevens 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, Yang, & Kim, 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-Diaz, González-Castro, Tovilla-Zárate, 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, Chen, Wang, & Zhang, 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 specialties together (Adamou, Antoniou, Greasidou, et al., 2018; Reger, McClure, Ruskin, Carter, & Reger, 2019).

An emerging treatment for suicidal ideation is dialectical behavior therapy (dBT) particularly in young people with high levels of suicidal ideation who have a diagnosis of post-traumatic stress disorder (PTSD). A randomized controlled trial conducted from 2012 to 2014 in four academic centers showed that people who were randomized to a 6-month DBT treatment intervention showed an improvement in all outcomes including number of suicide attempts compared with subjects randomized to the control group. Completion rates in those randomized 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.

4 | CONCLUSIONS AND RECOMMENDATONS

1. The early years of a child's development in promoting the resilience that protects from suicide and family and carer support are 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 recognize 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.

5 | LIMITATIONS

This is not a systematic review but a narrative approach that summarizes 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.

ORCID

Gabriel Ivbijaro https://orcid.org/0000-0002-9857-6192
Paul Summergrad https://orcid.org/0000-0001-9991-6761

REFERENCES

Adamou, M., Antoniou, G., Greasidou, E. et al. (2018) Toward automatic risk assessment to support suicide prevention. *Crisis*. 40, 249-256. Available from: https://doi.org/10.1027/0227-5910/a000561.

Andriessen, K., Krysinska, K., Hill N.T. et al. (2019) Effectiveness of interventions for people bereaved through suicide: A systematic review of controlled studies of grief, psychosocial and suicide-related outcomes. *BMC Psychiatry*. 19, 49. Available from: doi: https://doi.org/10.1186/s12888-019-2020-z

Bachmann, S. (2018) Epidemiology of suicide and the psychiatric perspective. *Int. j. environ. res. public health (Online)*. 15, 1425. Available from: https://doi.org/10.3390/ijerph15071425

Bantjes, J., Kagee, A., Meissner, B. (2017). Young men in post-apartheid South Africa talk about masculinity and suicide prevention. *S. Afr. J. Psychol.*, 46, 1–13. Available from: https://doi.org/10.1177/0081246316665990

Bantjes, J. & Swartz, L. (2017). The cultural turn in critical suicidology: What can we claim and what do we know? *Death stud.* 41 (8), 512-5210. Available from: https://doi.org/10.1080/07481187.2017.1333355

Bazley, R., & Pakenham, K. (2019). Perspectives on suicide and suicide prevention among members of Christian faith-based organizations. *Spirituality in Clinical Practice.*, 6(1), 5–14. Available from:. https://doi.org/10.1037/scp0000179

Berk, M.S., Starace, N.K., Black, V.P. & Avna, C. (2019) Implementation of dialectical behaviour therapy with suicidal and self-harming adolescents in a community clinic. *Arch Suicide Res*. 24, 1-43. Available from: https://doi.org/10.1080/13811118.2018.1509750

Boren, E.A., Folk, J.M., Tangey, J.P., Barboza, S.E. & Wilson, J.S. (2018) The suicidal inmate: A comparison of inmates who attempt versus complete suicide. *Suicide Life Threat Behav* 48(5), 570-579. Available from: https://doi.org/10.1111/sltb.12374

Brailovskaia, J., Forkmann, T., Glaesmer, H. *et al*. (2019) Positive mental health moderates the association between suicide ideation and suicide attempts. *J Affect Disord*. 245, 246-249. Available from: https://doi.org/10.1002/cpp.2118

Brailovskaia, J., Teismann, T. & Jürgen, M. (2018) Cyberbullying, positive mental health and suicide ideation/behaviour. *Psychiatry Res*. 267, 240-242. Available from: https://doi.org/10.1016/j.psychres.2018.05.074

Bruffaerts, R., Mortier, P., Auerbach, R.P. *et al*. (2019) Lifetime and 12-month treatment for mental disorders and suicidal thoughts and behaviours among first year college students. *Int J Methods Psychiatr Res*. 28(2), e1764. Available from: https://doi.org/10.1002/mpr.1764

Bryan, C.J., Rozek, D.C., Butner, J. & Rudd, D.M. (2019) Patterns of change in suicidal ideation signal the recurrence of suicide attempts among at risk psychiatric outpatients. *Behav Res Ther*. 120, 103392. Available from: https://doi.org/10.1016/j.brat.2019.04.001

Chen, J.I., Mastarone, G.L., Ambrosino, S.A. *et al*. (2019) Evaluation of the safety and design of community internet resources for veteran suicide prevention. *Crisis*. 40(5), 347-354. Available from: https://doi.org/10.1027/0227-5910/a000590.

Cole, A.B., Littlefield, A.K., Gaulthier, J.M. & Bagge, C.L. (2019) Impulsivity facets and perceived likelihood of future suicide attempt among patients who recently attempted suicide. *J Affect Disord*. 257, 195-199. Available from: https://doi.org/10.1016/j.jad.2019.07.038

Davaasambuu, S., Phillip, H., Ravindran, A. & Szatmari, P. (2019) A scoping review of evidence-based interventions for adolescents with depression and suicide related behaviours in low and middle income countries. *Community Ment Health J*. 55(6), 954–972. Available from: https://doi.org/10.1007/s10597-019-00420-w

Fang, X., Chen, Y., Wang, Y., Zhang C. (2019) Identification of risk factors for suicidal ideation in patients with schizophrenia. *Psychiatry Res*. 271, 195-199. Available from: https://doi.org/10.1016/j.psychres.2018.11.051

Forster, M., Davis, L., Grigsby, T.J., Rogers, C.J., Vetrone, S.F. & Unger, J.B. (2019) The role of familial incarceration and ethnic identity in suicidal ideation and suicide attempt: Findings of a longitudinal study on Latino young adults in California. *Am J Community Psychol*. 9. Available from: https://doi.org/10.1002/ajcp.12332

Fuller-Thomson, E., West, K.J. & Baiden, P. (2019). The tide does turn: Predictors of remission from suicidal ideation and attempt among Canadians who previously attempted suicide. *Psychiatry Res*. 274, 313-321. Available from: https://doi.org/10.1016/j.psychres.2019.02.030

Ghahramanolou-Holloway, M., Lee-Tauler, S.Y., LaCroix, J.M. *et al*. (2018). Dysfunctional personality disorder beliefs and lifetime suicide attempts among psychiatrically hospitalised military personnel. *Compr Psychiatry*. 82, 108-114. Available from: https://doi.org/10.1016/j.comppsych.2018.01.010

Gili, M., Castellvi, P., Vives, M. *et al*. (2019) Mental disorders as risk factors for suicidal behaviour in young people: A meta-analysis and systematic review of longitudinal studies. *J Affect Disord*. 245, 152-162. Available from: https://doi.org/10.1016/j.jad.2018.10.115

Gleeson, H., Hafford-Letchfield, T., Quiafe, M., Collins, D. & Flynn, A. (2018) Preventing and responding to depression, self-harm and suicide in older people living in long term care settings: A systematic review. *Aging Ment Health*. 23(11). 1467-1477. Available from: https://doi.org/10.1080/13607863.2018.1501666

Goodday, S.M., Shuldiner, J., Bondy, S. & Rhodes, A.E. (2019) Exposure to parental psychopathology and offspring's risk of suicide-related thoughts and behaviours: A systematic review. *Epidemiol Psychiatr Sci*. 28(2), 179-190. Available from: https://doi.org/10.1017/S2045796017000397

Hamdan, S. & Peterseil-Yaulet, T. (2019) Exploring the psychiatric and social risk factors contributing to suicidal behaviours in religious young adults. *Psychiatry Res*. Jun, 19, pii: S0165-1781(19)30664-X Available from: https://doi.org/10.1016/j.psychres.2019.06.024

Hernández-Diaz, Y., González-Castro, T.B., Tovilla-Zárate, C.A. *et al*. (2019) Association between *FKBP5* polymorphisma and depressive disorders or suicidal behaviour: A systematic review and meta-analysis study. *Psychiatry Res*. 271, 658-668. Available from: https://doi.org/10.1016/j.psychres.2018.12.066

Huisman, A., & van Bergen, D. D. (2018). Peer specialists in suicide prevention: Possibilities and pitfalls. *Psychological Services*, 16(3), 372–380. Available from:. https://doi.org/10.1037/ser0000255

Javier, J. R. (2018). The use of an educational video to increase suicide awareness and enrolment in parenting interventions among Filipinos. *Asian American Journal of Psychology*, 9(4), 327–333. Available from:. https://doi.org/10.1037/aap0000144

Jovanović, N., Beezhold, J., Tateno, M. *et al*. (2019) Depression and suicidality among psychiatric residents—Results from a multi-country study. *J Affect Disord*. 249, 192-198. Available from: https://doi.org/10.1016/j.jad.2019.02.023

Kim-Godwin, Y.S. & Lee, M.H. (2019) Suicidal ideation, plan, and attempts and nonmedical prescription opiate use among US adults. *Arch Psychiatr Nurs*. Apr, 27. Available from: https://doi.org/10.1016/j.apnu.2019.04.009

Lazarides, A., Wassenaar, D., & Sekhesa, T. (2019). A thematic content analysis of suicide notes from South Africa. *South Africa Journal of Psychology*, 49(1), 148–159. Available from. https://doi.org/10.1177/0081246318780144

Li, L.W., Gee, G.C. & Dong, X. (2018) Association of self-reported discrimination and suicidal ideation in older Chinese Americans. *Am J Geriatr Psychiatry*. 26(1), 42-51. Available from: https://doi.org/10.1016/j.jagp.2017.08.006

Lin, C-E., Chung, C-H., Chen, L-F. & Chien, W-C. (2018) Does compulsory admission prevent inpatient suicide among patients with schizophrenia? A nationwide cohort study in Taiwan. *Suicide Life Threat Behav*. 49 (4), 966-979. Available from: https://doi.org/10.1111/sltb.12497

Lipson, S.K., Lattie, E.G. & Eisenberg, D. (2019) Increased rates of mental health service utilization by U.S. college students: Ten-year population-level trends (2007-2017). *Psychiatr Serv*. 70(1), 60-63. Available from: https://doi.org/10.1176/appi.ps.201800332

López-Goñi, J.J., Fernández-Montalvo, J., Areaga, A. & Haro, B. (2019) Suicidal attempts among patients with substance use disorders who present with suicidal ideation. *Addict Behav*. 89, 5-9. Available from: https://doi.org/10.1016/j.addbeh.2018.09.006

McCauley, E., Berk, M.S., Asarnow, J. R. *et al*. (2018) Efficacy of dialectical behaviour therapy for adolescents at high risk for suicide: A randomised clinical trial. *JAMA Psychiatry*. 75(8), 777-785. Available from: doi: https://doi.org/10.1001/jamapsychiatry.2018.1109

Michaud, L., Steifel, F., Moreau, D., Dorogi, Y., Morier-Geroud, A. & Bourquin, C. (2019) Completed suicides in psychiatric patients: Identifying health care related factors through clinical practice reviews. *Arch Suicide Res*. 11, 1-15. Available from: https://doi.org/10.1080/13811118.2019.1586606

Milner, A., King, T.L., Scovelle, A.J. *et al*. (2019) A blended face-to-face and smartphone intervention for suicide prevention in the construction industry: Protocol for a randomised control trial with MATES in

Construction. *BMC Psychiatry*. 19, 146. Available from: https://doi.org/10.1186/s12888-019-2142-3

Na, P.J., Yarmala, S.R., Kim, J.A. *et al*. (2018) The PHQ9 Item 9 based screening for suicide risk: a validation study of the Patient Health Questionnaire (PHQ)-9 Item 9 with the Colombia Suicide Severity Rating Scale (C-SSRS). *J Affect Disord*. 232, 34-40. Available from: doi.org/https://doi.org/10.1016/j.jad.2018.02.045.

Normand, D., Colin, S., Gaboulaud, V., Baubet, T. & Taieb, O. (2018). How to stay in touch with adolescents and young adults after a suicide attempt? Implementation of a four phonecalls procedure over one year after discharge from hospital, in a Parisian suburb. *Encephale*. 44(4), 301-307. Available from: Doi: https://doi.org/10.1016/j.encep.2017.10.011

O'Neill, S., Graham, B. & Ennis, E. (2019) Emergency department and hospital care prior to suicide: A population based case control study. *J Affect Disord*. 249, 366-370. Available from: https://doi.org/10.1016/j.jad.2019.02.052

Ortin, A., Elkington, K.S., Eisenberg, R. et al. (2019) Suicide attempts and course of suicidal ideation among Puerto Rican early adolescents. *J Abnorm Child Psychol*. 47, (10) 1723–1734. Available from: DOI: https://doi.org/10.1007/s10802-019-00554-1

Park, W.S., Yang, K.L.K. & Kim, H. (2019) Insufficient sleep and suicidal ideation: A survey of 12,046 female adolescents. *Sleep Medicine*. 53, 65-69. Available from: https://doi.org/10.1016/j.sleep.2018.08.025

Petrie, K., Crawford, J., Baker, S.T.E. *et al*. (2019) Interventions to reduce symptoms of common mental disorders and suicidal ideation in physicians: A systematic review and meta-analysis. *Lancet Psychiatry*. 6(3), 225-234. Available from: https://doi.org/10.1016/S2215-0366(18)30509-1

Pfeiffer, P. N., King, C., Ilgen, M., Ganoczy, D., Clive, R., Garlick, J., ... Valenstein, M. (2019). Development and pilot study of a suicide prevention intervention delivered by peer support specialists. *Psychological Services*, 16(3), 360–371. Available from:. https://doi.org/10.1037/ser0000257

Phillips, J., Padfield, N. & Gelsthorpe, L. (2018) Suicide and community justice. *Health and Justice*. 6, 14. Available from: doi: https://doi.org/10.1186/s40352-018-0072-7.

Raleva, M. (2018). Early life stress: A key link between childhood adversity and risk of attempting suicide. *Psychiatria Danubina*, 30(Suppl. 6), 341–347.

Raue, P.J. (2019) Physicians are less likely to assess and manage suicide risk among older adults: Broader implications for suicide prevention within primary care. *Am J Geriatr Psychiatry*. 27(6), 609-610. Available from: https://doi.org/10.1016/j.jagp.2019.02.001

Reger, G.M., McClure, M.L., Ruskin, D., Carter, S.P. & Reger, M.A.(2019) Integrating predictive modelling into mental health care: An example in suicide prevention. *Psychiatr Serv*. 70(1), 71-74. Available from: https://doi.org/10.1176/appi.ps.201800242

Rodelli, M., De Bourdeaudhuij, I., Dumon, E., Portzky, G. & DeSmet, A. (2018) Which healthy lifestyle factors are associated with a lower risk of suicidal ideation among adolescents faced with cyberbullying? *Prev Med*. 113, 33- Available from: https://doi.org/10.1016/j.ypmed.2018.05.002

Rodriguez, V. J., Cook, R. R., Peltzer, K., & Jones, D. L. (2017). Prevalence and psychosocial correlates of suicidal ideation among pregnant women living with HIV in Mpumalanga Province, South Africa. *AIDS care*, 29(5), 593–597. Available from: doi:https://doi.org/10.1080/09540121.2016.1238442

Ryberg, W., Zahl, P.-H., Dipe, L.M., Landrø, N.I. & Fosse, R. (2019) Managing suicidality within specialized care: A randomized controlled trial. *J Affect Disord*. 249, 112-120. Available from: https://doi.org/10.1016/j.jad.2019.02.022

Sher, L. (2019) Resilience as a focus of suicide research and prevention. *Acta Psychiatr Scand*. 140 (1), 3-4. Available from: https://doi.org/10.1111/acps.13059

Siegmann, P., Willutzki, U., Fritsch, N., Nyhuis, P., Wolter, M. & Teismann, T. (2019) Positive mental health as a moderator of the association between risk factors and suicide ideation/behaviour in psychiatric patients. *Psychiatry Res*. 273, 678-684. Available from: https://doi.org/10.1016/j.psychres.2019.01.091

Sigurvinsdottir, R., Ullman, S.E. & Canetto, S.S. (2019) Self-blame, psychological distress, and suicidality among African American female sexual assault survivors. *Traumatology*. Available from: https://doi.org/10.1037/trm0000195

Sobba, K. (2018) Correlates and buffers of school avoidance: A review of school avoidance literature and applying school capital as a potential safeguard. *International Journal of Adolescence and Youth*. 24 (3), 380-394. Available from: https://doi.org/10.1080/02673843.2018.1524772

Solano, P., Pizzorno, E., Pompili, M., Serafini G. & Amore M. (2017) Conceptualizations of suicide through time and socio-economic factors: A historical mini-review. *Ir J Psychol Med*. 35 (1), 75-86 Available from: https://doi.org/10.1017/ipm.2017.57

Stevens, G.J., Hammond, T.E., Brownhill, S. *et al*. (2019) SMS SOS: A randomized controlled trial to reduce self-harm and suicide attempts using SMS text messaging. *BMC Psychiatry*. 19, (1) 117. Available from: doi:https://doi.org/10.1186/s12888-019-2104-9

Stulz, N., Hepp, U., Gosoniu, D. G., Grize, L., Muheim, F., Weiss, M. G., & Riecher-Rössler, A. (2018). Patient-identified priorities leading to attempted suicide: Life is lived in interpersonal relationships. *Crisis*, 39(1), 37–46. Available from:. https://doi.org/10.1027/0227-5910/a000473

Swaraj, S., Chung, D., Curtis, J. *et al*. (2019). Meta-analysis of natural, unnatural, and cause-specific mortality rates following discharge from inpatient psychiatric facilities. *Acta Psychiatr Scand*. 140 (3) Available from: https://doi.org/10.1111/acps.13073

Vancampfort, D., Stubbs, B., Mugisha, J.K. *et al*. (2019) Leisure time sedentary behaviour and suicide attempt among 126,392 adolescents in 43 countries. *J Affect Disord*. 250, 346-353. Available from: DOI: https://doi.org/10.1016/j.jad.2019.03.053

Vannoy, S., Park, M., Maroney, M. R., Unützer, J., Apesoa-Varano, E. R. C., & Hinton, L. (2018). The perspective of older men with depression on suicide and its prevention in primary care: implications for primary care engagement strategies. *Crisis*, 39(5), 397–405. Available from:. https://doi.org/10.1027/0227-5910/a000511

Vuijk, P.J., Bush, H.H., McGuiness, P.S. *et al*. (2019) Characteristics of child psychiatric outpatients at highest risk of suicidal thoughts and behaviours. *Child Psychiatry Hum Dev*. 50(3), 505-519. Available from: https://doi.org/10.1007/s10578-018-0858-9

Waalen, A., Bera, K. & Bera, R. (2019) Suicide hotspots, interventions, and future areas of work at a Californian University. *Death stud*. Apr., 22 Available from: https://doi.org/10.1080/07481187.2019.1595221

Wall-Wieler, E., Roos, L.L., Brownell, M., Nickel, N., Chateau, D. & Singal, D. (2018) Suicide attempts and completions among mothers whose children were taken into care by child protection services: A cohort study using linkable administrative data. *Can J Psychiatry*. 16(3), 170–177. Available from: https://doi.org/10.1177/0706743717741058.

Wan, Q., Ding, X., Hu, D. *et al*. (2019) A study of the epidemiology and risk factors for attempted suicide and suicide among non-psychiatric in-patients in 48 general hospitals in Hubei Province, China 2015-2017.

Gen Hosp Psychiatry. *8*. S0163-8343(19)30017-9. Available from: https://doi.org/10.1016/j.genhosppsych.2019.06.003

Wang, M., Swaraj, S., Chung, D., Stanton, C., Kapur, N. & Large, M. 2019 Meta-analysis of suicide rates among people discharged from non-psychiatric settings after presentation with suicidal thoughts or behaviours. *Acta Psychiatr Scand. 139 (5)*, 472-483. Available from: https://doi.org/10.1111/acps.13023

Yonemoto, N, Kawashima, Y, Endo, K. & Yamada, M. (2019) Gatekeeper training for suicidal behaviors: a systematic review. *J Affect Disord*.

246, 506-514. Available from: https://doi.org/10.1016/j.jad.2018.12.052

How to cite this article: Ivbijaro G, Kolkiewicz L, Goldberg D, et al. Preventing suicide, promoting resilience: Is this achievable from a global perspective? *Asia-Pacific Psychiatry*. 2019;11: e12371. https://doi.org/10.1111/appy.12371