Annals of Medicine and Medical Research

Editorial
Published: 24 Sep, 2018

Suicides in the World

*Ranil Abeyasinghe[1] and Ayodhya Malalagama[2]**

[1]Department of Psychiatry, University of Peradeniya, Sri Lanka

[2]Department of Psychiatry, Ministry of Health, Sri Lanka

Editorial

An estimated 800,000 committed suicide in 2015 according to WHO and suicide is the third commonest cause of death in adolescent age [1]. Compared to that, conditions such as malaria cause fewer deaths in the world (429,000 in 2015) [2]. In fact deaths due to suicide have increased while deaths due to infections have dropped over the years [2]. Despite such increase, suicide continues to receive less attention as a major cause of death and suffering to the family. The main reason for public apathy is the stigma towards mental illness and suicide.

Added to this is the attitude that the person who commits suicide is responsible for his death [3]. This is based on the Western concept of autonomy, just like the homeless alcoholic is responsible for his dissipation. Szaz even derided psychiatry for making suicide a mental illness [4]. The official definition of suicide itself does not help. Suicide is defined as a death due to a deliberate attempt by the individual, thus contributing to the view that suicide is a choice made by the individual and not an outcome of severe distress. Thus suicide suffers the same isolation as the homeless alcoholic who plans for a dollar but receives the same scornful look from the public. The intolerable stresses, the depression, the substance dependence, the abuse that proceed are almost never highlighted. The media and mental health profession too have failed to address major causes of suicide such as depression and substance abuse. Instead the emphasis has remained on social causes such as unemployment. The finding that treatment of depression with antidepressants is the only intervention that achieves the level 1A in evidence based practice whereas almost all ecological interventions such as public education, including screening of populations for suicide risk, remain at level of 2C shows the need to give priority to treatment of depression in the prevention of suicide. Even the treatment of depression in primary care achieved a level of 1B [5-8].

Returning to the problem of adolescent suicide, Nock reported in a face to face interview with adolescents, that 12% adolescents reported having suicidal ideation and of them 33% had plans [9]. Subsequently 33.9% of those with suicide ideation went on to attempt suicide. Significantly 60.8% of the suicide ideators with plans went on to attempt suicide. Major Depressive Disorder (MDD) and dysthymia figured prominently at all stages: 56.8% suicide ideators had MDD/Dysthymia while 76% of those with plans and 74% of those who attempted had MDD/Dysthymia. The significance of Nock's findings must be considered in the background of findings that National Survey on Drug Use and Health (NSDUH) found that 12.8% of the US adolescents in the age group 12-17, were suffering from depression. Only 40% received treatment [10]. The figures are no better in the rest of the world, with studies in New Zealand and China reporting 11.8% and 13.2% respectively [11,12].

As we have seen above, treatment of depression at the point of suicide attempt is the most effective way to prevent suicide. However we are left with the medical and legal requirement of making an accurate prediction of suicide risk in such attempters. In this task most assessments starting from clinical interviews to well-known suicide risk assessment scales have not been effective. As early as 1991 Goldstein did a stepwise multiple logistic regression to develop a statistical model to predict suicidal behavior in a group of 1906 patients with mood disorders. But the model failed to identify any of the patients who completed suicide. He concluded that it is not possible to predict suicide even in a group of high risk patients [13]. Clinical interview for suicide risk assessment has been shown to be of less reliable. We have looked at 3 meta-analyses that were published recently. Chan et al reported that in their meta-analysis, the four significant features, namely previous attempts, suicide intent, physical health issues and male gender, were too common to be used as predictors [14]. Further Beck Hopelessness Scale, Suicide Intent Scale (SIS) and Scale for Suicide Ideation had a Positive Predictive Value (PPV) of 1.3% to 16.7% for suicide. The next meta-analysis by Large et al., [15] found that those who were categorized as high risk and low risk had 5.5% and 0.9% suicide events after 63 months follow up. However the high risk category showed a publication

OPEN ACCESS

Correspondence:
Ayodhya Malalagama, Department of Psychiatry, Consultant Psychiatrist, Ministry of Health, 99/3, Araliya Mawatha, Primrose Gardens, Kandy, Sri Lanka, Tel: +94714400627; E-mail: shakunthini@yahoo.com

Received Date: *02 Aug 2018*
Accepted Date: *22 Sep 2018*
Published Date: *24 Sep 2018*

Citation:
Abeyasinghe R, Malalagama A. Suicides in the World. Ann Med Medical Res. 2018; 1: 1011.

bias and they reach the pessimistic conclusion that "A statistically strong and reliable method to usefully distinguish patients with a high-risk of suicide remains elusive" [15].The most recent meta-analysis of 16 studies that used 13 instruments by Bo Runeson et al., [16] reported that none of the instruments reached the bench mark of 80% sensitivity and 50% specificity for both suicide and attempted suicide. The positive predictive value for suicide was low at 1% to 13% while PPV for suicide was attempts were 7% to 40%.

We hypothesize that one of the main reasons for such poor predictive values for subsequent suicide is that both clinical evaluations as well as most existing scales depend on self-reports coming from the patients. Suicide attempters' wish to avoid stigma and compulsory admission affect their answers in these assessments [17]. In the case of adolescents too there is evidence that self-reports are not valid. Brink et al., [18] in their Cochrane analysis showed that as much as 49% of the adolescents refused to fill the questionnaires that were given to them after attempted suicide. Another factor that seems not to apply to adolescents is that of lethality of suicide attempt, which fails to correspond to subsequent suicide. It is likely that adolescents are unwaring of the lethality of the methods when attempting suicide.

We would therefore like to propose that an ideal instrument to assess suicide attempt would have the following features:

1. Detects the extent of distress and suicidality
2. Detects depression and hopelessness
3. Detects substance abuse
4. Notes availability of lethal methods
5. Looks for impulsivity
6. Checks for resilience factors: early childhood, religion, IQ, self-esteem and family support

Adolescent Suicide Assessment Protocol-20 (ASAP-20)

The authors translated and validated ASAP-20 by Fremouw et al., [19] to Sinhalese, the language spoken by the majority in Sri Lanka, where youth suicide is a major challenge. ASAP was selected to be validated due to several qualities. One was that ASAP is based on the model of predicting violence using HCR-20 [20]. HCR-20 developed by Webster et al., [21] used in forensic psychiatry is a good predictor of future violence. It takes into account risk factors in terms of historical, clinical and social domains. It also considers a person's childhood, development, schooling, family and social factors together with protective factors [21]. This type of analysis is of utmost significance when assessing the child and adolescent age group in terms of risks.

The HCR–20 was a good predictor of violent offences, with an Area under the Curve (AUCs) in the 0.70-0.76 range [22]. In practice, AUCs greater than 0.54 are regarded as small effects, those greater than 0.63 are moderate effects and those greater than 0.71 are large effects [23].

As in HCR-20, ASAP-20 also explores historical, clinical, contextual factors that relate to suicide attempts as well as protective factors that contribute to resilience in the adolescent. Historical factors include previous attempts and family suicides or attempts. Historical factors consist of clinical features such as hopelessness, anger and communication of suicide intent. Contextual factors considered are recent losses, access to lethal methods and lack of family support. Protective factors are current treatment and reasons for living [20].

As we have pointed out above as reliance on self-report fails to show adequate PPV, we believe it is the objective assessment of multiple risk factors that relate to suicide attempts that will prove useful in the future. Towards this we have validated ASAP-20 to suit an Asian culture and we propose to carry out a validation study over 60 years.

References

1. Cacaci M, Lelli RC. Veterinary Public Health in Italy: From Healthy Animals to Healthy Food, Contribution to Improve Economy in Developing Countries. Adv Exp Med Biol. 2018;1057:63-72.
2. WHO. 10 facts on Malaria. 2016.
3. Ho AO. Suicide: rationality and responsibility for life. Can J Psychiatry. 2014;59(3):141-7.
4. Szasz T. Fatal freedom: the ethics and politics of suicide. Westport (CT): Praeger. 1999.
5. Fergusson D, Doucette S, Glass KC, Shapiro S, Healy D, Hebert P, et al. Association between suicide attempts and selective serotonin reuptake inhibitors: systematic review of randomised controlled trials. BMJ. 2005;330:396.
6. Gunnell D, Saperia J, Ashby D. Selective serotonin reuptake inhibitors (SSRIs) and suicide in adults: meta-analysis of drug company data from placebo controlled, randomized controlled trials submitted to the MHRA's safety review. BMJ. 2005;330(7488):385.
7. Khan A, Detke M, Khan SR, Mallinckrodt C. Placebo response and antidepressant clinical trial outcome. J Nerv Ment Dis. 2003;191(4):211-8.
8. Mann JJ, Apter A, Bertolote J, Beautrais A, Currier D, Haas A, et al. Suicide prevention strategies: a systematic review. JAMA. 2005;294(16):2064-74.
9. Nock MK, Hwang I, Sampson N, Ronald C, Kessler, Matthias Angermeyer, et al. Cross-national analysis of the associations among mental disorders and suicidal behavior: findings from the WHO World Mental Health Surveys. PLoS Med. 2009;6(8):e1000123.
10. National Institute of Mental Health. Major depression.
11. Megan Gattey. Rising depression and anxiety among Kiwi youth.
12. Zgambo M, Kaleombo F, Guoping H, Honghong W. Depression among Chinese children and adolescents: a review of the literature. Int J Child Youth Family Stud. 2012;4(1):442-57.
13. Goldston DB. Assessment of Suicidal Behaviors and Risk among Children and Adolescents. Wake Forest University School of Medicine. 2000.
14. Chan MK, Bhatti H, Meader N, Stockton S, Evans J, O'Connor RC, et al. Predicting suicide following self-harm: systematic review of risk factors and risk scales. Br J Psychiatry. 2016;209(4):277-83.
15. Large M, Kaneson M, Myles N, Myles H, Gunaratne P, Ryan C. Meta-Analysis of Longitudinal Cohort Studies of Suicide Risk Assessment among Psychiatric Patients: Heterogeneity in Results and Lack of Improvement over Time. PLoS One. 2016;11(6):e0156322.
16. Runeson B, Odeberg J, Pettersson A, Edbom T, Jildevik Adamsson I, Waern M. Instruments for the assessment of suicide risk: A systematic review evaluating the certainty of the evidence. PLoS One. 2017;12(7):e0180292.
17. Stallman HM, Ohan JL. The alignment of law, practice and need in suicide prevention. BJ Psych Bull. 2018;42(2):51-3.
18. Cochrane-Brink KA, Phil(Oxon) D, Lofchy JS, Sakinofsky I. Clinical Rating Scales in Suicide Risk Assessment. General Hospital Psychiatry.

2000;22:445-51.

19. Malalagama AS, Tennakoon S, Abeyasnghe DRR. Validation of Adolescent Suicide Assessment Protocol-20 (ASAP-20) to Sri Lankan adolescents. Asian J Psychiatr. 2018;33:11-7.

20. Fremouw WL, Strunk JM, Tyner EA, Musick R. Adolescent Suicide Assessment Protocol. 2009.

21. Douglas KS, Hart S D, Webster CD, Belfrage H. HCR-20V3: Assessing risk of violence - User guide. Burnaby, Canada: Mental Health, Law, and Policy Institute, Simon Fraser University. 2013.

22. Gray NS, Taylor J, Snowden RJ. Predicting violent reconvictions using the HCR-20. Br J Psychiatry. 2008;192(5):384-7.

23. Rice ME, Harris GT. Comparing effect sizes in follow-up studies: ROC Area, Cohen's d, and r. Law Hum Behav. 2005;29(5):615-20.