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Research report

Life-time and current suicide-ideation in Australian secondary school students: Socio-demographic, health and psychological predictors

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ABSTRACT

Background: This study involved a multi-level analysis of factors related to self-reported suicidality (both current and life-time) in adolescents
Methods: A sample of 2552 students aged 14–16 years answered questions relating to demographics, social and familial functioning, psychological well-being and suicidality.
Results: Suicidality, defined as being at least some element of reported suicide ideation, Behaviourally, suicidality was also more likely if students smoked, drank alcohol without adult supervision or if they took illicit drugs was more likely in girls, and in those with poorer social, family and psychological functioning. Behaviourally, suicidality was also more likely if students smoked, drank alcohol or took illicit drugs. Multi-level modelling showed that negative affect, substance use and the presence of romantic relationships were most strongly associated with suicidality. Both current and life-time measures of suicidality showed similar results. Both models suggested that the presence of substance use in teenagers is a potentially useful indicator of elevated suicide risk and that many of the social problems commonly associated with suicidality are likely to be mediated by negative affective states.
Limitations: The study had several limitations. First, it was cross-sectional so it was not possible to examine how variables measured at one time predicted subsequent suicidality. Second, the present analyses were based on a single measure of suicidality that did not differentiate between ideation and attempts. Thus, the analyses did not indicate the severity of the suicidality: whether it involved ideation or actual attempts.
Conclusions: Adolescent girls and adolescents with poor social and family functioning and those who engage in substance use are at risk of suicidal ideation (a known precursor of suicide attempts). School counsellors and teachers need to be aware of the risks.

1. Introduction

According to the World Health Organisation (2009), over one million people die as a result of suicide each year. Although rates vary significantly across different countries (.1 to 38.6 individuals per 100,000 population), a consistent finding is that young people are disproportionately over-represented in these statistics (ABS, 2012; Bursztein and Apter, 2008; Community Affairs Reference Committee, 2010). Suicide remains the third cause of death in US adolescents (aged 15–24 years; Prinstein, 2008) and in Australia about a quarter of deaths for both males and females aged 15–24 are due to suicides (ABS, 2012). Nonfatal suicide attempts are estimated to occur at a rate of 25 per completed suicide and this places a significant burden on emergency care systems (Prinstein, 2008; Prinstein et al., 2008).

Research into the nature of adolescent suicide is known to be fraught with many challenges (O'Connor and Sheehy, 2000). Completed suicide is a relatively rare event and is, therefore, usually only studied from a forensic or physiological perspective. This has led to a focus on other forms of suicidal behaviour such as unsuccessful suicide attempts, and persistent or even occasional thoughts about suicide. This range of different behaviours has often been referred to using the more generic term 'suicidality', with 'suicide ideation' often being used to denote activities (usually psychological) that are distinct from the act of attempting to commit suicide. Although a well-established concept in the suicide literature, the exact definition of suicidality and how it measured has varied across studies, countries and disciplines. Moreover, given that the research focus is more directed towards thoughts and behaviours than objective outcomes, methodologies based largely on self-report introduce greater subjectivity. For example, one cannot always assume that statements of suicide intent necessarily imply the same severity in each individual or across groups (e.g., younger vs. older adolescents, Shaffer et al., 1996).

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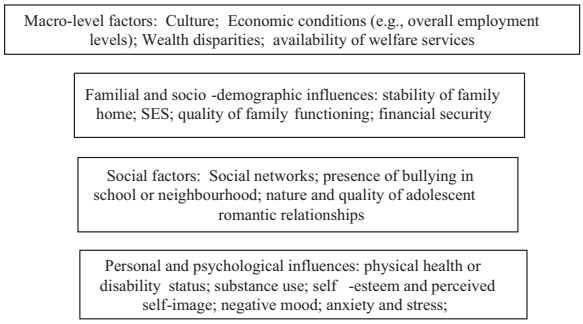

Fig. 1. Factors associated with suicidality.

Nor is it always easy to ascertain which attempts were genuine, rather than forms of self-harm based on other motivations (Nada-Raja et al., 2004). Despite this, there is good evidence to suggest that suicidal ideation (whether based on occasional or persistent thoughts) is a reliable predictor of subsequent suicide attempts (Joiner, 2002) and that those who engage in self-harming behaviour are more likely to report feelings of suicidality (Nada-Raja et al., 2004).

It is generally accepted that the causes of suicidality are complex and often result from the complex interplay of different variables operating at different levels (e.g., Cantor and Neulinger, 2000; Dubow et al., 1989; George and van den Berg, 2012; Goldney, 2002, 2008; Williams, 1996). Consistent with Bronfenbrenner's (1979) ecological model, these variables can range from macro-level and external factors such as broader cultural and economic climates (Durkheim, 1951) to micro-level family and personal influences (see Fig. 1). Important family influences are thought to include: the socio-economic or financial status of households; the availability of employment; and, the quality of family functioning. Unstable, unhappy, or less nurturing family environments are thought to either cause or compound existing personal problems that increase suicide risk. Such personal problems can include poor self-esteem or self-image (e.g., body image), negative mood or depression, feelings of anxiety and malaise, poorer physical health or the capacity to form close personal relationships. This list is by no means exhaustive, but captures what appear to be the principal factors that, based on existing research, appear to lead some individuals to consider that their lives are not worth living. Although studies and researchers differ in relation to the factors afforded prominence in the investigations, it now generally accepted that research is, wherever possible, best informed by a multivariate approach that takes these inter-dependencies between variables into account and which studies personal/psychological variables in the context of family factors that may be antecedent to these problems. In this research, the principal focus was on familial, social, and personal/psychological factors rather than broader macro-level factors.

1.1. Family and socio-demographic risk factors

It is generally well established that youth suicide risk is higher in less stable, abusive, or violent household environments (e.g., Bursztein and Apter, 2008; Hetrick et al., 2012; King and Merchant, 2008; Nrugham et al., 2010; Scherrer et al., 2012). Such family environments contribute to stress, anger and fear, feelings of self-blame and lowered self-worth. Family environments can also be risk factors if young people experience deprivation resulting from financial hardship and unemployment (Beautrais et al., 1998; Dubow et al., 1989; Fergusson and Lynskey, 1995). Apart from the fact that such circumstances have limit personal choices, influence social relationships or educational opportunities, financial hardship and unemployment may also often be a risk factor for other family problems including substance abuse and domestic violence (see Winefield et al., 1993 for a review).

1.2. Social risk factors

Research suggests that social or peer relationships can also be influential in increasing or decreasing suicide risk. The availability of a social network has usually been found to reduce suicide risk. Although social relationships of any kind may reflect better psychological functioning *per se*, having close friends or a supportive peer group may also assist young people in dealing with difficult circumstances, serve to detect those who are at risk of self-harm and provide the necessary emotional and practical support to avert suicide attempts or feelings of despair that lead to suicide (De Man et al., 1992; Johnson et al., 2002; Schinka et al., 2012). At the same time, there is also evidence to suggest that the effect of peer relationships is not always consistent. As both Bearman and Moody (2004) as well as Winterrowd et al. (2011) have pointed out, if peer influences are unhealthy in the sense that young people socialise with others who have suicidal tendencies, engage in high-risk behaviours or inhabit sub-cultures where suicide and death are frequently referenced, peer influences may serve to increase suicide risk. In support of this view, there is strong evidence to support an association between suicidality and other high risk behaviours including substance abuse and/or smoking (Cantor and Neulinger, 2000; Garrison et al., 1993; Gould et al., 2003; Kandel et al., 1991; Windle and Windle, 1997; Scherrer et al., 2012; Shaffer, 1988; Wu et al., 2004). While this association is likely to be also associated with the physiological and neurological effects of drugs and alcohol, socialisation with peers who are also high frequency substance users is also likely to reinforce less positive attitudes towards self-preservation.

Other important social relationships relevant to adolescence also appear to influence suicidality. For example, it has been found that young people who are bullied, or bullies themselves, are more likely to score higher on measures of suicidality (Kolmek et al., 2010; Peter et al., 2008; Turner et al., 2013; Winsper et al., 2012). Once again, it is likely that being bullied reflects the influence of other related factors (e.g., lower self-esteem, social isolation), but it is also likely to contribute to negative affect and reduce self-esteem which, as discussed presently, are positively related to suicidality. The presence of romantic relationships in adolescence has also been investigated (George and van den Berg, 2012). Although having a close friend of this nature would, at first instance, appear to be a protective factor, there is evidence to suggest that problems with these relationships during adolescence particularly among girls can be highly distressing and lead to increased suicide risk (e.g., Brown et al., 2009; Engelbrecht and van Vuuren, 2000; Louw and Louw, 2007).

1.3. Personal and psychological risk factors

Poorer physical and psychological health both appear to elevate suicide risk. Those who have persistent or serious physical conditions, substance abuse problems (see above) or who have physical disabilities can experience a reduced quality of life and, sometimes to the point, when they consider suicide (e.g., Fairweather et al., 2006; Goldney, 2002; Pirkis et al., 2000; Russell et al., 2009). In a similar vein, perceiving oneself as physically unattractive or overweight can also be associated with increased suicidality, particularly amongst adolescent girls (Dave and Rashed, 2009; Eaton et al., 2005). Being over-weight may also be related to poorer physical health and fitness, social acceptance and self-esteem.

Research into psychological factors has clearly suggested a relationship between clinical level-depression or mood disorders and suicide risk (Blair-West et al., 1997; Brent et al., 1993; Chabrol