Understanding Suicide and Help-seeking in Urban and Rural Areas in Northern Ireland

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Evidence Brief

Why did we start?

Most people who complete suicide are in contact with their family doctors or other services in the months prior to death. A better understanding of the nature of these contacts and the various pathways experienced by suicidal people should reveal the gaps and barriers to effective service provision. We also need better information about the difficulties experienced by family carers, both prior to the death and afterwards. Of particular interest to policy makers in Northern Ireland was a concern that people from rural areas may be at increasing risk of suicide. We were commissioned by the Health and Social Care R&D Division of the Northern Ireland Public Health Agency to address the gaps in our understanding of suicide in NI.

What did we do?

We undertook a mixed methods study in which we examined the records of 403 people who took their own lives over a two-year period between March 2007 and February 2009. We linked these data to GP records and then examined help-seeking pathways of people and their contacts with services. We did in-depth face-to-face interviews with 72 bereaved relatives and friends who discussed their understanding of the events and circumstances surrounding the death, the experience of seeking help for the family member, the personal impact of the suicide, and use of support services. Additionally, we interviewed 19 General Practitioners about their experiences of managing people who died by suicide.

What answer did we get?

We found no evidence that suicide rates in urban and rural areas differ. However, we noted relatively high rates for people living in large towns and significantly higher levels of contact with primary care services, especially among women in such areas. As in similar studies, we found that mental health problems may have been undetected for many people. Families report the distress of trying to get appropriate help but felt impeded by a combination of stigma and service failures. The burden of care was exacerbated by lack of professional communication. In addition, GPs highlight the problems of limited time for consultations and fragmented care.

What should be done now?

Innovative approaches are needed to tackling the stigma related to mental illness, one of the biggest barriers to early and effective help-seeking. Improving access to mental health services and ensuring that they are responsive to the needs of patients and families must be central to suicide prevention strategies. Thus, we require a better understanding of the needs of families in caring for depressed and suicidal individuals. Interventions are urgently needed to improve communication and decision-making between mental health services and families.

Background

Suicide is a major public health problem. In western societies, the major consistent factors known to influence suicide rates are: mental illness, gender, age, social class, employment, poor physical health, substance misuse and social isolation [1]. Each year approximately one million people die from suicide around the world [2]. Rates of suicide vary extensively across countries, with the greatest burdens in developing and western countries [3 4]. Within Europe, lower rates are reported in southern countries compared to northern countries, with the highest rates shown in Eastern Europe [3 4]. Worldwide the highest rate of suicides are in China, accounting for 30% of all deaths, and with rates three times higher in rural than in urban areas [4]. While suicide rates in the western world have shown consistent patterns over time, in recent years there has been an increase of suicides in the 15-24 year-old group, specifically males [3]. These rises have been particularly noticeable in the United Kingdom (UK), Ireland, the United States (USA), Australia and New Zealand [3]. In the UK there were 6,045 suicides in 2011, an increase of 437 deaths compared to 2010. In Western societies men are more likely to end their lives than women, a ratio that is constant at 4:1. A number of factors are associated with this. First, men tend to use more lethal methods, therefore, reducing opportunities for rescue or resuscitation. Second, males are more prone to impulsivity and violence, as well as substance abuse. Third, the presence of higher co-morbidity of affective and substance abuse disorders in males than females. Fourth, males are less likely than females to seek help. Males also appear less resilient than women to the adverse effects of relationship breakdown and other stresses [3].

Suicide has a strong association with mental health problems [5-7]. It has been argued that 90% of people who die by suicide are likely to have experienced a psychiatric disorder [8]. Depression is the most common psychiatric disorder [9] noted in no less than 60% of cases, which may be also complicated by other disorders, such as alcohol abuse and personality disorders [10]. In the UK, including NI, it has been reported that 15% of inpatient suicides between 2001 and 2011 had a dual diagnosis [11].

Suicide in Northern Ireland

For most of the 20th century, both Northern Ireland and the Republic of Ireland had relatively low suicide rates, generally sitting midway in the suicide tables of Western societies [12 13]. The suicide rate in Northern Ireland in recent years, compared to those of other UK regions, is similar to that of Scotland but higher than rates in England and Wales. According to analysis undertaken by the Samaritans organisation [14], NI has witnessed an increase in the overall rate, with substantial variations and a marked increase around 2005-2007. Thus, the male suicide rate in 2013 (25.5 per 100,000) was approximately double what it was in 1983 (13.3 per 100,000). In 2013, the female suicide rate was the same as it was in 1983 [15].

Urban and rural suicide

Suicide is often regarded as an urban phenomenon, with rural areas usually exhibiting better mental health and lower suicide mortality [16]. Hirsh [17], in a review of the literature on rural suicide, outlines a general trend of increasing rural suicide when compared to urban areas, sustaining the view of either changing patterns or the more nuanced recognition of the developing problem of rural suicide. For example, an analysis of rural suicide in Australia, [18 19] shows that rural areas in the late 1990s experienced the steepest rises in suicide in young adults since the 1960s/1970s – a phenomenon possibly related to a relatively greater decline in the rural economy and its social sequelae such as family break-up and the impact of migration. An analysis of differences in rural mortality relative to urban mortality in England and (separately) Wales showed small differences in suicide levels: using mortality data from 2003-2004 and after adjustment for deprivation levels, English males living in rural areas recorded a significant 12% higher risk, while in Wales similarly defined females in rural areas recorded a 27% higher risk [20].

A recent study on suicide in NI confirmed the well-known associations with indicators of social isolation and socio-economic disadvantage at both the individual and household levels [21]. However, there is no robust epidemiological evidence to suggest that area deprivation or social fragmentation as stand-alone factors have an impact on suicide rates in NI, when analysed independently of personal and household characteristics. Nonetheless, rural dwellers may have stronger conservative and religious views than urban dwellers, factors generally considered to be protective. However, other contributory factors may include access to the means such as poisoning by pesticides, coupled with greater access to a private setting in which to carry out a suicide. Nevertheless, the evidence for differences in urban-rural suicide rates in Northern Ireland is currently weak [22].

Current suicide prevention policies in the Republic of Ireland, England and Scotland incorporate specific recognition of and provision for tackling suicide and the impact of suicide according to geographic rurality. However, Northern Ireland's *Suicide Prevention Strategy and Action Plan 2006-2011* [23] is somewhat limited in this dimension. Morbidity and mortality statistics on the NI population including general mental health seem favourable towards rural areas [22]. However deaths in younger people are increasing in rural NI, partly because the suicide rate in rural NI has increased by a third since 2001 [24]. This increase warrants further investigation to develop a better understanding of the mechanisms behind such a rise.

Primary care and mental health services

Contact with primary care within the 12 months prior to suicide is common, with Luoma et al, [25] reporting an average of 77% (range=57%-90%) and 45% (20%-76%) within one month of death. Generally, there is an age gradient of contact with primary care, significantly higher in older age. From the same review, approximately one-third of people are in contact with mental health services in the 12-month period. In England, Pearson et al [26] found that 91% of individuals had consulted their GP at least once in the year before death. A recent study of suicides in England over a 10-year period, revealed that risk of suicide was associated with an increasing frequency of GP consultations, particularly within three months prior to suicide; the highest risk was among patients who consulted with their GP more than 24 times in the final year. While approximately one-third of people who end their lives may be in contact with mental health services during the twelve-month period, mental health problems among many others was unrecognized and undiagnosed [27]. More specifically, Hunt et al [28] examined a 4-year cohort of cases in contact with mental health services within 12 months of death. The study reveals a complicated picture in which people with schizophrenia and co-morbid drug dependence showing high levels of disengagement and non-adherence to treatment. Death within three months of discharge was common among patients with a personality disorder and those with drug and alcohol dependency were least likely to be followed up by services.

A recent study of suicide in rural Scotland [29] showed that 52.5% of people who died by suicide had been in contact with at least one health service in the month before their death, including 18.6% with mental health services, and 46% with general practice. While no difference was found in general practice contact rates between rural and urban areas, differences were recorded with regard to contact to mental health services: those from rural areas were less likely to have had contact with mental health services in the year before their death and to have had lower recorded lifetime rates of mental health service contact.

In a Finnish study [30] people who were diagnosed with psychiatric disorders in rural settings were more likely to be treated at the primary care level than those in urban settings. Inversely, urban dwellers were more likely to be in receipt of secondary or tertiary care at the time of suicide. In Wales, recent research highlighted the dearth of mental health service provision for young people in rural areas, particularly out of hours or assertive outreach programs. Instead, they reported a reliance on general practitioners (GPs) for mental health promotion and treatment [31]. Contact with primary care services prior to suicide is common, providing an opportunity for intervention for people recognised as vulnerable.

Barriers to treatment and intervention

GP training

There is strong international evidence for the effectiveness of suicide prevention policies that implement additional GP training in the recognition and treatment of depression [32]. However, the evidence suggests that the barriers to recognition of suicidality and effective management are considerable. GPs acknowledge that their training in the identification and treatment of mental health may be lacking [33]. At a very elementary level suicide is a rare event while the risk factors associated with it are common and thus lack any degree of sensitivity. Moreover, many people, who would benefit from treatment for depression and other conditions, simply fail to seek help. Thus, a significant proportion of young people are unlikely to contact their family doctor for mental health problems and do not recognise the GP as having this role [34-36].

Stigma

The stigma associated with mental illness is one of the greatest deterrents to seeking help and although various agencies in the UK and elsewhere have campaigned to change attitudes and discriminatory practices, there is little evidence about their ability to do so [37]. The social rejection of people with mental illness appears to be strongly embedded within many cultures, influencing individuals to conceal their difficulties [38-40]. Moreover, stigma negatively impacts on engagement with treatment and satisfaction with services; it is also associated with poor clinical and social outcomes [41]. Converting emotional and psychological problems into a somatic presentation at GP surgeries appears to be one form of resolving the shame associated with mental illness problems, resulting in misrecognition of underlying affective disorders by GPs [42 43].

Fragmentation of service provision

Although well-coordinated health and care of people is crucial to the effective treatment and management of mental health disorders, there is an increasing propensity in the design and structure of health services towards professional specialisms, departmental targets and discrete budget responsibility. While necessary for injecting a degree of discipline and accountability, there is a tendency to compartmentalise within health care [44 45]. For example, in the UK, the transition between Child and Adolescent Services and Adult Mental Health Services is commonly experienced as difficult [46].

Impact of suicide on relatives and friends

On average, a single suicide directly affects at least six members of the nuclear family [47 48]. However, it is estimated that each suicide affects intimately 60 people, including nuclear and extended family, friends, colleagues and classmates [49]. The death of a close relationship is one of the major stressors in life generally characterised by 'normal' grief reactions [50] that fade with the passing of time [51]. For some, the suicide of someone close can lead to a deep and long-term grieving process [50 52]. Some individuals may require medication or psychological treatment due to complicated grief, or may develop depression [52]. For many, suicide may impact on people's physical, emotional, mental, social and spiritual domains [53 54].

Some relatives experience 'suicide-specific' problems in coping with grief, such as difficulty finding meaning, strong feelings of guilt, higher levels of abandonment, shame and separation anxiety [48]. In some cases, relatives assume that they may be blamed for the death. As a result, they may prefer to seek support from sources such as established support groups and specialist services, rather than their existing network of family and friends [48]. It is assumed that access to health care services may be relatively limited in rural settings, and that there is lower utilisation of services in rural compared to urban settings [55]. Support may be more informally provided through networks of family and friends, rather than social services, possibly due to increased fear of stigma in smaller communities [56].

There is a need to obtain a better understanding of the helpseeking behavior of people who died by suicide and how best to prevent these deaths. In this summary, we report briefly on the aims, method and findings. We also provide recommendations for the improvement of services and support.

Aims

1. To undertake a systematic detailed examination of help-seeking by people in Northern Ireland who have died by suicide over a two year period.
2. To examine help-seeking and coping strategies employed by suicidal people from the perspective of family and friends.
3. To assess the impact of suicide on people bereaved by suicide by exploring coping strategies and the provision (and uptake) of support services for the bereaved.
4. To explore the experiences and needs of GPs in caring for people who have died by suicide.

Methods

The study was undertaken using a mixed methods approach and undertaken in three stages. [The data collection process is provided in Figure 1]

1. **Coroner and general practice data**: Analysis of socio-demographic and situational data related to suicide, self-harm and contact with health and social care services. The data were obtained from records held by Coroner Service for Northern Ireland (CSNI) of the individuals who died by suicide between March 2007 and February 2009 (n=403) linked to records held by GPs (n=360).
2. **The perspectives of people bereaved by suicide**: a qualitative study of suicide attributions, the impact of suicide on families and friends, help-seeking and use of services. The interview data were obtained from the next of kin of those who died by suicide (n=72); and
3. **General practitioners' experience of suicide**: a qualitative study of suicidal patients and suicide in primary care. The interview data was obtained from GPs attending to a person who died by suicide (n=19)

Findings

Coroners and General Practitioner Records

- Males comprised 81% of the cohort, with suicide peaking among the 25-34 age group in men (n=80, 24.8% of deaths)
- Suicide in females peaked later in the 35-44 age groups (n=22, 28.2% of deaths)
- There were no significant differences for the incidence of suicide between urban-rural areas.
- Forty-one per cent of suicides had no prior mental health diagnosis
- Common mental disorders were recorded in GP records for 33% of suicides, serious mental illness in 12% and substance misuse in 14% of the cohort
- Attendance at the GP was recorded for 87% in the previous 12 months, 57% in the previous 3 months and 29% in the previous month
- 19% of the cohort had 10 or more visits in the 12 months before death.
- Living alone, professional status, no paid work, town locations and psychiatric diagnoses were particularly associated with increased attendance at the GP
- There were no significant differences in access to primary care services across locale, with the exception of elevated attendance for women living in towns
- 41% had contact with accident and emergency services in the previous 12 months, with 58%

of these relating to a mental health crisis.

- 18% had contact with a social worker over the previous 12 months, with 92% of these contacts for mental health support
- 35% of the cohort had seen a psychiatrist in the previous 12 months and 29% had been supported by Community Mental Health Teams (CMHTs)
- Within the cohort, 76% died by hanging (78% of male suicides and 65% of female), 6% died by overdose (4% male and 15% of female) and 6% died by drowning (5% and 9% to males and females respectively).
- Previous suicide attempts were recorded for 39.7% (n=159) of the cohort
- Over a quarter of the cohort (27%, n=109) were in receipt of more than four prescription medications, with 38.5% (n=155) in receipt of a prescription for antidepressant medications (9.2% of these had no mental health diagnosis)

In-depth Family and GP Interviews

Explanatory models and suicide attribution: How individual family members make sense of suicide may have an impact on their psychological wellbeing. Thus, we explored the participants' explanatory models of suicide. Perhaps predictably, many of the deaths are understood as related to mental illness. In some cases, these are related to people with severe and enduring mental illness such as psychosis and for whom the explanation is contained within the diagnosis. However, for many others the mental illness, generally described as an affective disorder, is strongly associated by the participants as arising from recent life events and/or circumstances such as marital breakdown or a financial crisis. More distant life events such as childhood abuse were seen as contributing to a lifetime of problems. Suicide among older people is described as a resolution to pain and disability. Across many deaths, alcohol, helplessness and impulsivity were regarded as contributing factors.

Barriers to suicide prevention

Stigma: The stigma of mental illness remains a major barrier to the disclosure of psychological problems, commonly featuring within participant narratives in relation to avoidance, late access and poor engagement with primary care and mental health services. This is compounded by particularly negative perceptions of psychiatric services.

Alcohol: Alcohol appears to both mask and exacerbate long-standing problems. Substantial lifetime use of alcohol and/or recent and problematic increase in alcohol consumption was regarded as critical in the understanding of individual suicide cases and the inability to get appropriate and timely help.

GP training, recognition and management: We found widespread acknowledgement that GPs are ill-prepared for the management of mental illness. Too often, the pressure of patient waiting rooms and waiting lists compounds this. Manifested in the ‘ten-minute’ rule for consultation, high levels of demand ensures that people with complex psycho-social needs are afforded only the most superficial articulation of their problems. Additionally, GPs suggest that formulaic approaches to suicide risk assessment act as a barrier to patient trust and engagement.

Information sharing, confidentiality and decision-making: Families described their distress at being left with the responsibility of looking after a suicidal family member but lacking the skills and knowledge to do so effectively. They report being excluded from the decision-making process, a process that was frequently perceived to lack ‘expert’ input from people who really understood the patient and his or her context.

Anti-depressant use and treatment options: The issue of antidepressants is relatively neglected within the context of suicide prevention. Many relatives highlighted their dissatisfaction with medication. The following factors are highlighted: (a) perceived lack of assessment and consultation with family and patient; (b) inappropriate prescription; (c) failure to offer alternatives to medication; (d) fear of addiction; (e) side-effects; (f) the failure of clinicians to review; and (g) the perceived or felt ineffectiveness of medication.

Service Fragmentation: GPs highlight the problems of long waiting lists for referral, delays to hospital admission and a general disconnection between primary care and psychiatric services. Where a ‘functional split’ model has been adopted in mental health services, consultant psychiatrists are no longer responsible for patients across the range of treatment settings. For many GPs this lack of a central contact obstructs GP care of people with mental illness, on a range of levels and issues. In other instances, some patients were described as being at increased risk because of transitional boundaries. For example, young people who having been seen in Child and Adolescent Mental Health Services (CAMHS) but were not transferred into adult care. When connections and relationships dissolved in these structures, so too did the continuity of care.

The impact of suicide on the family:

Families are often deeply scarred by suicide. Participants reported intense feelings of mental anguish related to guilt, rejection and betrayal. In general, participants, especially women with young children, used medication (e.g. sleeping tablets or antidepressants) to get through the early stages of bereavement. Other participants, reported longer-term depression and anxiety requiring treatment. In a few cases, hospitalisation for psychiatric treatment was necessary. The response and provision of care by GPs and community-based organisations are highly variable with much criticism about the type and availability of care for families.

Recommendations

Public Health: tackling stigma

Culturally entrenched attitudes to mental illness should be challenged as early in the lifespan as possible, ideally in schools. Tackling the stigma of mental illness and providing educational programmes on mental health literacy, defined as " knowledge and beliefs about mental disorders which aid their recognition, management or prevention"[57] should be adopted by schools within the Personal, Social, Health & Economic (PSHE) framework.

Stigmatising attitudes and behaviour towards people with mental illness, those who attempt suicide and those with alcohol problems are sometimes casually propagated within our health and social care services, and may have devastating consequences for the recipients and their families. Training should be considered for all staff such as paramedics and those working in A&E.

There is a need to challenge the highly negative and commonly held beliefs about psychiatric services. The Royal College of Psychiatry in Northern Ireland and the Health & Social Care Trusts should be engaged in an understanding of, and resolution to this problem.

Primary Care: improving competencies in mental health and suicide prevention

Mental health resources within Primary Care should be strengthened. We understand that the RCGP in England is currently exploring new ways of working with other statutory and voluntary sector bodies such as the Royal College of Paediatrics and Child Health, the Royal College of Psychiatrists, and Young Minds. This may allow GPs and other specialists to train together and to work more effectively, particularly when caring for young people with mental health problems.

Primary care might benefit from the presence of mental health professionals – community psychiatric nurses and social workers, working within general practice. Extended community liaison roles (with voluntary sector providers) for trained counsellors working directly alongside

GPs. The additional knowledge and experience offered by these roles may assist in achieving a better understanding of patient treatment preferences and a stronger therapeutic engagement.

The Voluntary Sector: integration and regulation

Among families and GPs alike, there is a notable lack of clarity about the role, function and effectiveness of community and voluntary sector organisations. While the under-resourcing of mental health provision in primary care is a significant problem and can only be addressed at the macro-political level, there is much room for better-integrated care. It seems likely that the voluntary sector will increasingly assume the provision of psychological therapies. There is a need, therefore, for clear monitoring of patient outcomes and consistent reporting and feedback into primary care.

Improved outcomes-based reporting, from the variety of counselling and support services provided within the voluntary sector, would help to build the required level of trust and respect that GPs need to refer individuals for support. This would also assist commissioners in allocating funding appropriately. It is possible that with the permission of voluntary sector clients, the GP should be notified and kept appraised of an individual's mental health problems, progress and outcomes.

Mental Health Services: primary care liaison

The reported disjunction between primary care and mental health services requires attention. Effective, knowledgeable and most importantly, reachable key liaison contacts for GPs within mental health services are urgently required. In areas where the functional split model of mental health service provision exists, difficulties in GP-psychiatry relationships are likely to persist. Again, improved integrated care will depend on building closer personal relationships between mental health professionals and general practitioners. There is a need for some degree of standardisation across NI Health and Social Care Trusts on the most efficient way to deliver integrated services, particularly in areas of contentious responsibility e.g. age determined mental health services.

Hidden suicide support needs: families first

It is time to rethink how services can better engage with the 'insider' knowledge of families and usefully assimilate the views of families into the decision-making process. The suicide prevention strategy in England emphasises the need to improve information and support to families concerned about a relative who may be at risk of suicide. There is an acknowledgement also that clinicians may too readily invoke the duty of confidentiality without consideration of the concerns and needs of family members. However, a recent consensus statement from the Department of Health and relevant partner organisations indicated that there are times when "practitioners may need to consider informing family and friends about aspects of risk and may need to create a channel of communication for both giving and receiving information that will keep the person safe" [58]. The statement suggests that, "*If a person is deemed to be at imminent risk of suicide there may well be sufficient doubts about their mental capacity at that time*". Further, "*if the purpose of disclosure is to prevent a person who lacks capacity from serious harm, there is an expectation that practitioners will disclose relevant confidential information, if it is considered to be in the person's best interest to do so*".

The impact that suicide may have on other people should be taken into account. Ultimately, while determining the immediacy of suicide risk and the timing and level of disclosure is a matter of professional judgement in each individual case, practitioners are nevertheless free to offer non-person specific information on crisis and other services.

Dealing with the impact of suicide on families

There seems to be no coherent strategy for looking after the needs of family survivors. While some people bereaved by suicide resolutely resist professional support and advice, others simply lack an understanding about what to expect, who to turn to, or have no awareness of useful coping strategies. This is especially striking in families with young children. While each suicide and every family's circumstances are unique, there are many shared aspects of suicide within the family, and these should be acknowledged and made available through information and educational material. Research involving families and friends bereaved through suicide is needed on the scope, content and dissemination of such materials.

The Coroner's Office was universally regarded as respectful and sensitive in dealing with the concerns and needs of families. Additional advisory and signposting resources located with personnel in the coroner's office, could be made available to families at this earliest point of connection. Such additional investment in the services provided by Coroners Liaison Officers could improve awareness of the support landscape for many families.

Dealing with the impact of suicide on service professionals

Hidden suicide support needs also apply to service providers dealing with suicide. Patient suicide is distressing for GPs and appears to exact a heavy toll on their personal wellbeing and professional confidence. The Royal College of General Practitioners (RCGP) should consider mechanisms for better psychological and professional support for doctors who have experienced a suicide in practice.

Senior managers need to be mindful of the pressures that can complicate the aftermath of a suicide within teams of mental health professionals, such as the process of a Serious Incident Report investigation. Importantly, staff who are well supported through an efficient process are in a better position to engage with such processes and to meaningfully support service user and family involvement.

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References

1. Pitman A, Krysinska K, Osborn D, et al. Suicide in young men. The Lancet 2012;**379**(9834):2383 - 92
2. WHO. Preventing Suicide: a Global imperative. Luxemburg, 2014.
3. Cantor CH. Suicide in the western world. In: Hawton K, van Heeringen K, eds. The international handbook of suicide and attempted suicide. New York: Wiley, 2000:9-28.
4. Hawton K, van Heeringen K. Suicide. The Lancet 2009;**373**(9672):1372-81 doi: http://dx.doi.org/10.1016/S0140-6736(09)60372-X%5Bpublished Online First: Epub Date]|.
5. Beskow J. Suicide and mental disorder in Swedish men. Acta Psychiatrica Scandinavica 1979;**59**(S277):118-26 doi: 10.1111/j.1600-0447.1979.tb02449.x[published Online First: Epub Date]|.
6. Cheng A. Mental illness and suicide. A case-control study in east Taiwan. Archives of General Psychiatry 1995;**52**(7):594-603
7. Foster T, Gillespie K, McClelland R, et al. Risk factors for suicide independent of DSM-III-R Axis I disorder. Case-control psychological autopsy study in Northern Ireland. The British Journal of Psychiatry 1999;**175**(2):175-79 doi: 10.1192/bjp.175.2.175[published Online First: Epub Date]|.
8. Lönnqvist JK. Psychiatric aspects of suicidal behavior: Depression. In: Hawton K, van Heeringen K, eds. The international handbook of suicide and attempted suicide. New York: Wiley, 2000:107-20.
9. Hawton K, Casañas i Comabella C, Haw C, et al. Risk factors for suicide in individuals with depression: A systematic review. Journal of affective disorders 2013;**147**(1-3):17-28 doi: 10.1016/j.jad.2013.01.004; 10.1016/j.jad.2013.01.004[published Online First: Epub Date]|.
10. Centre for Suicide R. Clinical guide: Assessment of suicide risk in people with depression. Oxford: Department of Psychiatry, University of Oxford, 2012.
11. Appleby L, Kapur N, Shaw J, et al. National confidential inquiry into suicide and homicide by people with mental illness. Annual report: England, Northern Ireland, Scotland and Wales. Manchester: The University of Manchester, 2013:170.
12. Murphy OC, Kelleher C, Malone KM. Demographic trends in suicide in the UK and Ireland 1980-2010. Irish Journal of Medical Science 2015;**184**(1):227-35
13. Lester D, Cantor CH, Leenaars AA. Suicide in the United kingdom and Ireland. 1997;**12**(6):300-4
14. Scowcroft E. Suicide statistics report 2015 Including data for 2011-2013. Ewell, Surrey: Samaritans, 2015.
15. Northern Ireland Statistics and Research Agency. Suicide deaths. Key statistics 2011, 2013.
16. Riva M, Curtis S, Gauvin L, et al. Unravelling the extent of inequalities in health across urban and rural areas: Evidence from a national sample in England. Social Science and Medicine 2009;**68**:654-63
17. Hirsch JK. A review of the literature on rural suicide: Risk and protective factors, incidence, and prevention. Crisis: The Journal of Crisis Intervention and Suicide Prevention 2007;**27**(4):189-99
18. Dudley MJ, Kelk N, Florio T, et al. Suicide among young Australians 1964–1993: A comparison with metropolitan trends. Social Psychiatry and Psychiatric Epidemiology 1997;**32**:251-60
19. Dudley MJ, Kelk NJ, Florio TM, et al. Suicide amongyoung Australians, 1964-1993: An interstate comparison of metropolitan and rural trends. Medical Journal of Australia, 1998;**169**: 77-80
20. Office for National Statistics. Differences in mortality between rural and urban areas in England and Wales, 2002–04. UK, 2008.
21. O'Reilly D, Rosato M, Connolly S. Urban and rural variations in morbidity and mortality in Northern Ireland. BMC Public Health 2007;**7**:1-6
22. O'Reilly D, Rosato M, Connolly S, et al. Area factors and suicide: 5-year follow-up of the Northern Ireland population. British Journal of Psychiatry 2008;**192**:106-11
23. DHSSPS. Protect life: a shared vision. The Northern Ireland Suicide Prevention Strategy and Action Plan 2006-2011. Belfast: Department of Health, Social Services and Public Safety 2006.
24. Stewart B, Quigley D, Mayock M. Health and Social Care Inequalities Monitoring System Second Update Bulletin. Belfast The Northern Ireland Statistics and Research Agency (NISRA), 2007.

25. Luoma JB, Martin CE, Pearson JL. Contact With Mental Health and Primary Care Providers Before Suicide: A Review of the Evidence. American Journal of Psychiatry 2002;**159**:909-16
26. Pearson A, Saini, P., Da Cruz, D., Miles, C., While, D., Swinson, N., Williams, A., Shaw, J., Appleby, L., Kapur, N. . Primary care contact prior to suicide in individuals with mental illness. British Journal of General Practice 2009;**59**:825-32
27. Appleby L, Kapur N, Shaw J, et al. Suicide in Primary Care in England: 2002-2011. National Confidential Inquiry into Suicide and Homicide by People with Mental illness. Manchester University of Machester 2013.
28. Hunt IM, Kapur N, Robinson J, et al. Suicide within 12 months of mental health service contact in different age and diagnostic groups: National clinical survey. British Journal of Psychiatry 2006;**188**:135-42
29. Stark CR, Vaughan S, Huc S, et al. Service contacts prior to death in people dying by suicide in the Scottish Highlands. Rural Remote Health 2012;**12**(3):http://www.rrh.org.au
30. Isomesta E, Heikkinen M, Henriksson M, et al. Differences between urban and rural suicides. Acta Psychiatrica Scandanavica 1997;**95**:297-305.
31. Mind Cymru and Big Lottery Fund. More than a number; A study into young people's experience of mental health services in rural Wales. Wales, 2008.
32. Mann J, Apter A, Bertolote J, et al. Suicide Prevention Strategies: A Systematic Review. JAMA 2005;**294**(16):2064-74
33. Saini P, Windfuhr K, Pearson A, et al. Suicide prevention in primary care: General practitioners' views on service availability. BMC Research Notes 2010;**3**:246
34. Leavey G, Rothi D, Paul R. Trust, Autonomy and Relationships: The Help-Seeking Preferences of Young People in Secondary Level Schools in London (UK). Journal of Adolescence 2011;**34**(4):685-93
35. Biddle L, Donovan J, Gunnell D, et al. Young adults' perceptions of GPs as a help source for mental distress: a qualitative study. British Journal of General Practice 2006;**56**:924-31
36. Biddle L, Donovan J, Sharp D, et al. Explaining non-help-seeking amongst young adults with mental distress: a dynamic interpretive model of illness behaviour. Sociology of Health & Illness 2007;**29**(7):983-1002
37. Paykel E, Hart D, Priest R. Changes in public attitudes to depression during the Defeat Depression Campaign. British Journal of Psychiatry 1998;**173**(6):519-22
38. Link B, Phelan J, Bresnahan M, et al. Public conceptions of mental illness: labels, causes, dangerousness, and social distance. Am J Public Health 1999;**89**(9):1328-33
39. Link BG, Cullen FT, Mirotznik J, et al. The consequences of stigma for persons with mental illness: Evidence from the social sciences. In: Fink PJ, Tasman A, eds. Stigma and mental illness. Washington, DC: American Psychiatric Association, 1992:87-96.
40. Corrigan PW, Watson AC. Understanding the impact of stigma on people with mental illness. Journal of World Psychiatry 2002;**1**:6-19
41. Corrigan PW, Bink AB, Schmidt A, et al. What is the impact of self-stigma? Loss of self-respect and the "why try" effect. Journal of Mental Health 2015([Epub ahead of print]):1-6
42. Rosendal M, Oleson F, Fink P. Management of medically unexplained symptoms. British Medical Journal 2005;**330**:4-5
43. Kirmayer LJ, Robbins JM. Patients who somatize in primary care: a longitudinal study of cognitive and social characteristics. Psychological Medicine 1996;**26**:937–51
44. Stange KC. The Problem of Fragmentation and the Need for Integrative Solutions. Annals of Family Medicine 2009;**7**:100-03
45. Plsek PE, Greenhalgh T. Complexity science: the challenge of complexity in health care. British Medical Journal 2001;**323**(7313):625-28
46. Singh SP, Paul M, Ford T, et al. Process, outcome and experience of transition from child to adult mental healthcare: multiperspective study. British Journal of Psychiatry 2010;**197**(4):305-12
47. Shneidman ES. *On the nature of suicide. (Edwin S. Shneidman, editor.)*. San Francisco: Jossey-Bass, 1969.

48. Maple M. Parental bereavement and youth suicide: An assessment of the literature. Australian Social Work 2005;**58**(2):179-87 doi: 10.1111/j.1447-0748.2005.00202.x[published Online First: Epub Date]|.
49. Berman AL. Estimating the population of survivors of suicide: seeking an evidence base. Suicide and Life-Threatening Behavior 2011;**41**(1):110-16 doi: 10.1111/j.1943-278X.2010.00009.x[published Online First: Epub Date]|.
50. Bonanno GA, Kaltman S. The varieties of grief experience. Clinical psychology review 2001;**21**(5):705-34
51. Arnold J, Gemma PB, Cushman LF. Exploring parental grief: Combining quantitative and qualitative measures. Archives of Psychiatric Nursing 2005;**19**(6):245-55 doi: http://dx.doi.org/10.1016/j.apnu.2005.07.008%5Bpublished Online First: Epub Date]|.
52. The Lancet. Living with grief. The Lancet 2012;**379**(9816):589 doi: http://dx.doi.org/10.1016/S0140-6736(12)60248-7%5Bpublished Online First: Epub Date]|.
53. Corr CA. Enhancing the concept of disenfranchised grief. Omega: Journal of Death and Dying 1999;**38**(1):1-20
54. Stroebe M, Schut H, Stroebe W. Health outcomes of bereavement. The Lancet 2007;**370**(9603):1960-73 doi: http://dx.doi.org/10.1016/S0140-6736(07)61816-9%5Bpublished Online First: Epub Date]|.
55. Nicholson LA. Rural Mental Health Advances in Psychiatric Treatment 2008;**14**:302-11
56. Middleton N, Sterne JAC, Gunnell D. The geography of despair among 15-44-year-old men in England and Wales: putting suicide on the map Journal of Epidemiology and Community Health 2006;**60**:1040-47
57. Jorm AF, Korten AE, Jacomb PA, et al. Mental health literacy': a survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. Medical Journal of Australia 1997;**166**:182 -86
58. Department of Health. Information and suicide prevention: consensus statement: Department of Health (Mental Health Equality and Disability Division), 2014.

Figure 1: Data Collection