REVIEW ARTICLE

Physical Illness and Suicide

Dr. Pradeep Kumar

Editor in Chief, Journal of Psychosocial Well being & Consultant, Psychiatric Social Work, State Institute of Mental Health, Pt. BDS, UHS,Rohtak, Haryana.

ABSTRACT

Suicide is a complex, multifactorial phenomenon and growing public health problem. Most of the physical health problems are rarely the sole cause for a suicide and are often compounded by other issues. The presence of physical conditions is a risk factor for suicidal behaviour. **Aims**: To explore about how the physical illness/pain precipitate suicide. **Methods**: For this, literature has been looked for manually as well as through electronic resources like PubMed, PsycINFO, EMBASE, Global Health, Google Scholar, IndMED, JSTOR, and Research Gate. The abstracts of relevant papers were independently examined by author. Out of eighty five, there were fifty two papers met the criteria for the analysis. **Conclusion**: There is strong association between physical health like "high blood pressure, heart attack/stroke, chronic headache, chronic pain, migraine, back pain, respiratory conditions, epilepsy, cancer, heart disease or attack, stroke, HIV/AIDS, sleep disorders, insomnia, traumatic brain injury, coronary heart disease, congestive heart failure, neurological conditions, diabetes, osteoporosis, chronic pulmonary disorder, incontinence, renal failure or disease, hearing or vision impairment, congestive heart failure, congestive heart failure, chronic obstructive pulmonary disorder, asthma, cerebral infarction and diabetes, chronic ischaemia, gastrointestinal, sensory impairment, chronic fatigue syndrome/myalgic encephalomyelitis ,ehlers-Danlos syndrome, fibromyalgia, chronic Lyme disease, postural orthostatic tachycardia syndrome, restless leg syndrome, liver disease, male genital disorders, arthritis/arthrosis, malignant diseases, Huntington's disease, stage kidney disease" and suicide. Understanding these associations may help to develop suicide prevention strategies.

Key words: Suicide, Physical Health, Chronic Pain, Mental Health, Activity limitation.

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INTRODUCTION

Suicide is a complex, multifactorial phenomenon and an important cause of death. There are increasing evidence, highlighting the link between physical pain/health problems and suicidal thoughts and behaviours. These physical conditions were especially predictive of suicidality (if they occurred early in life) .The presence of physical conditions is a risk factor for suicidal behaviour (even in the absence of mental disorder). Scott mentioned that high blood pressure, heart attack/stroke, arthritis, chronic headache, other chronic pain, and respiratory conditions were associated with attempts, while epilepsy, cancer, and heart attack/stroke were associated with planned attempts. Scott emphasized that epilepsy was (the physical condition) most strongly associated with the suicidal outcomes (KM Scott · 2010). The number of physical conditions increased, the risk of suicidal outcomes also increased. Regarding income group, these physical conditions were equally predictive of suicidality in higher and lower income countries (Kate et al 2010). Regarding age group, older adults might be differentially affected by suicide associated with physical ill-health relative to younger people (O'Neill *et al*,2018).

Corresponding Author- Dr Pradeep Kumar, Editor in Chief, Journal of Psychosocial Well being & Consultant, Psychiatric Social Work, State Institute of Mental Health, Pt. BDS, UHS, Rohtak, Haryana.

Email id - pradeep.meghu@gmail.com, pradeep.pgims@uhsr.ac.in

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Mental health, physical health and suicide

Mental health problems and physical health cannot be

separated. It's true that mental illness is a known risk factor for suicide mortality, while physical illness and suicide is less clear. It has seen that people with a lot of activity limitation were over three times more likely to die by suicide compared to those with no limitations in this .More suicidal death was found in younger ages (18–34 years) people through activity limitation (Onyeka et al 2020). Chronic health problems can produce financial difficulties, to the extent that they prevent people from working consistently and/or require expensive treatments that are not covered by insurance (Chien et al., 2020). Moreover, to the extent that financial problems cause significant stress, they themselves may be a factor in the subsequent development of chronic physical health problems. Furthermore, diagnosed mental health problems frequently co-occur with physical health issues, highlighting the important intersection between mind and body. While it is easy to imagine how disease can lead to depression and anxiety in patients, research increasingly demonstrates the ways in which such mental health problems can produce physical health problems (Bhat tacharya et al., 2014; Kang et al., 2017; Scott et al., 2007). Many factors contribute to the risk of suicide, including biological, psychological, clinical, social and environmental factors (Turecki et al 2019. Whilst people with psychiatric illness are recognised to be a group with a high suicide risk (Holma et al 2010), less attention has been paid to people diagnosed with severe physical health conditions. The diagnosis of a severe physical health condition can cause psychological distress and lead to severe depression (Pitman et al 2018).In another- words poor physical health is a known risk factor for suicide because of the negative effect it may have on quality of life. People living with physical health problems may suffer from chronic pain, reduced mobility, loneliness, hopelessness, financial instability, and a feeling of burdensomeness, all factors that elevate suicide risk. Research showed that functional limitations produced by chronic illness appear to be an especially strong predictor of suicide (Kaplan et al., 2007). Studies exploring physical health conditions co-occurring with mental health conditions have similarly suggested an increased likelihood of suicidal thoughts and behaviours but not above the independent risk of mental ill-health alone (Kavalidou et al., 2017, 2019).

Physical Health and Suicide

There are some health conditions that are particularly painful and/or have a significant impact on one's life (e.g. cancer, brain injury, HIV/AIDS, sleep disorders) tend to have the strongest effects on the likelihood of suicide (Petrosky et al., 2018, Ahmedani et al 2017). Type and number of physical health conditions have been suggested to be associated with an increased risk of suicidal ideation and suicide attempts (Scott et al., 2010; Thompson et al., 2014). Namkee et al found that 'physical health problems' were also positively associated with firearm and poisoning use, but negatively associated with hanging/suffocation. The predicted rates of firearm and poisoning use significantly increased among those aged 55–64 with than without physical health problems (Namkee et al 2023).Individual conditions like, traumatic brain injury and having multiple physical health conditions were responsible for increased suicide risk (Ahmedani etval 2017). Nafilyan mentioned that individuals diagnosed with a severe physical health condition were significantly more likely to commit suicide at 6 months and at 1 year later. There is link between increased risk for suicide and a range of health conditions, including cancer, coronary heart disease, neurological conditions, diabetes, and osteoporosis (Nafilyan,2023). It was notice that physical illness increases risk for suicide late in life. Conditions that confer risk include cancer, some neurological disorders (including seizure and possibly cognitive impairment, but not Parkinson's disease or stroke), chronic pulmonary disorder, incontinence, renal failure, hearing or vision impairment, insomnia, and congestive heart failure (Fiske et al 2008).

Ahmedani et al., found the relationship between physical health and death by suicide is mixed. A USA based large multi-state study suggested that a range of physical health conditions such as; back pain, traumatic brain injury, cancer, congestive heart failure, chronic obstructive pulmonary disorder (COPD), HIV/AIDS, migraine, renal disease and sleep disorders, are associated with an increased risk of suicide and multi morbidity was associated with a 2-fold increased risk of death by suicide (Ahmedani et al., 2017).Chronic pain, heart disease, chronic obstructive pulmonary disease, stroke, cancer, congestive heart failure, and asthma have all been associated with increased risk for suicide (Webb et al 2012, Robson et al 2010, Ilgen et al 2013). Juurlink et al also suggested that having multiple physical health conditions may be linked with even greater risk for suicide (Juurlink et al 2004).

Table- Physical Illness and Risk of Suicide

Authors	year	Findings
Ueda & Koinuma	2025	Cerebral infarction and diabetes were strongly associated with suicide.
Nafilyan et al	2022	Physical health such as low-survival cancers, COPD, chronic ischaemia, or degenerative neurological diseases is at elevated risk of death by suicide.
Majgi et al	2021	Arthritis was the most common physical impairment among self-harm survivors followed by gastrointestinal, sensory impairment and difficulty with mobilization. Nearly 10% of participants had some degree of functional impairment, with 38% experiencing severe physical pain in the week prior to self-harm
Maiji et al	2021	Indian self-harm survivors indicated complex relationships between physical health, disability and suicidal intent.
Erlangsen et al	2020	A Denmark study showing slightly elevated risk of suicide in patients diagnosed with neurological diseases
Cathy L Pederson	2020	Suicidal ideation is common in people who have been diagnosed with a variety of chronic invisible illnesses like chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME), Ehlers-Danlos syndrome, fibromyalgia, chronic Lyme disease, and postural orthostatic tachycardia syndrome (POTS).
Jacob et al	2020	Physical health conditions, such as coronary heart disease, cancer, neurological conditions, diabetes, stroke, chronic obstructive pulmonary disease, and osteoporosis are linked to a higher risk of suicide.
Zhuang et al.,	2019	There is an association between restless leg syndrome and the risk of suicide or self-harm.
Cheung G	2017	older people with terminal cancer who died by suicide were less likely to have a diagnosis of depression or previous contact with mental health services than those without terminal cancer.
Elsevier	2017	17 physical health conditions, ailments such as back pain, diabetes, and heart disease, were associated with an increased risk of suicide. Two of the conditions -- sleep disorders and HIV/AIDS -- represented a greater than twofold increase, while traumatic brain injury made individuals nine times more likely to die by suicide
Ahmedani B, Peterson E,	2017	Conditions, such as back pain, sleep disorders, and traumatic brain injury were all associated with suicide risk and are commonly diagnosed, making patients with these conditions primary targets for suicide prevention
Fässberg et al	2016	suicidal behaviour is associated with functional disability and numerous specific conditions including malignant diseases, neurological disorders, pain, Chronic obstructive pulmonary disease (COPD), liver disease, male genital disorders, and arthritis/arthrosis.

Pompili et al	2016	Some medical conditions are considered to be suicide risk factors, including epilepsy, Huntington's disease, HIV, end stage kidney disease, diabetes mellitus, and stroke. Moreover, these medical conditions are often characterised by higher rates of suicide as compared to the general population.
Wasserman D	2016	Any physical illness with chronicity, severity, comorbidity, or disability is associated with elevated suicide risk. Typical examples are cancer, coronary heart disease, and neurological diseases or injuries.
Singhal et al	2014	Study in England found an association between some physical illnesses such as epilepsy and asthma and risk of suicide.
Chikezie et al	2012	34.7 percent of HIV/AIDS people expressed suicidal ideation in the preceding month, with 9.3 percent attempting suicide in the six months prior to the study.[In Nigeria]
Webb et al	2012	Among all patients, coronary heart disease, stroke, chronic obstructive pulmonary disease, and osteoporosis were linked with elevated suicide risk
Scott et al	2010	High blood pressure, heart attack/stroke, arthritis, chronic headache, other chronic pain and respiratory conditions were associated with attempts in the total sample; epilepsy, cancer and heart attack/stroke were associated with planned attempts. Epilepsy was the physical condition most strongly associated with the suicidal outcomes.
Srivastava et al	2004	Factors identified to be significantly associated with increased risk of suicide attempt were 3.12 for suffering from physical disorders and 6.78 for suffering from idiopathic pain.

Chronic pain and suicide

International suicide prevention guidelines recognize chronic pain as a risk factor for suicide(Sall, et al,2019). Chronic pain is a risk factor for suicide, with rates of suicidal ideation ranging from 18% to 50% among patients with chronic pain (Campbell, et al,2015). People experiencing physical pain were significantly more likely to have suicide-related outcomes. Self-harm was notably higher among those with pain, while adults showed a higher risk of lifetime suicide attempts and suicide death (among adolescents). Suicidal ideation and suicide attempts were more strongly linked to pain. Females had higher odds of suicidal ideation compared to males. In older adults, specific painful conditions, like fibromyalgia, abdominal pain, and migraines, were also linked to increased suicide risk (Torino et al, 2025). Androulakis et al also highlighted that living with chronic headaches including migraines and chronic tension-type headaches increases suicide risk (Androulakis et al, 2021). A U.S. based study indicated that 8.8% of the suicide deaths involved chronic pain. Over half of those individuals noted pain as a factor in their suicide notes (Petrosky et al,2018). Suicidal thoughts are twice as common among people facing chronic pain (Stephanie Watson, 2023).

There has been a notable increase in attention paid to the physical pain experienced by individuals and its association with suicidal thoughts and behaviors (Calati et al., 2015; Fishbain et al., 2014).

Cancer and suicide

Cancer diagnosis is associated with increased suicide (Calati et al,2021). cancer patients who live in rural and poorer counties have a significantly higher risk of suicide mortality than those in urban and wealthier counties (Suk et al,2021). A study from South Korea also found elevated risk of suicide amongst cancer patients (Choi &Park,2020).

It is not true that physical illness often execrate suicidal ideation and attempts. Kaplan et al explain in different way, which is indicated that the number of physical conditions is no longer associated with suicide risk after adjustment for the effect that they have on activities of daily living are in agreement. (Kaplan et al., 2007). But in the same time Scott has different opinion about this suicidal ideation, attempts and deaths among patients with medical illnesses are higher than that of the general population. Scott has found that most physical conditions were associated

with suicidal ideation even in the absence of mental disorder (Scott,2010).

Conclusion

There are so many physical health issue, which are responsible for suicidal ideation, thoughts and attempts: high blood pressure, heart attack/stroke, chronic headache, chronic pain, migraine, back pain, respiratory conditions, epilepsy, cancer, heart disease or attack, stroke, HIV/AIDS, sleep disorders, insomnia, traumatic brain injury, coronary heart disease, congestive heart failure, neurological conditions, diabetes, osteoporosis, chronic pulmonary disorder, incontinence, renal failure or disease, hearing or vision impairment, congestive heart failure, chronic obstructive pulmonary disorder (COPD),asthma, cerebral infarction and diabetes, chronic ischaemia, gastrointestinal, sensory impairment, chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME),ehlers-danlos syndrome, fibromyalgia, chronic lyme disease, postural orthostatic tachycardia syndrome (POTS), restless leg syndrome, liver disease, male genital disorders, arthritis/arthrosis, malignant diseases, Huntington's disease, stage kidney disease etc. There is urgent need for integrating a comprehensive approach of physical health assessment in self- harm survivors.

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