

## Physical Illness and Suicide in the Elderly

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Seniors who commit suicide often consult their doctors a short time before they take their lives, but few communicate their suicide intent. Rather, they may focus on somatic complaints. This paper reviews the literature on the connection between physical illness and suicide. Recent research shows that over half of those who commit suicide late in life suffer from serious physical illness or impairment. The association between physical illness and suicide may be stronger in men than in women. Since most physically ill persons who commit suicide suffer from depression, depression should be treated aggressively in seniors with concomitant physical disorders.

**Key words:** suicide, suicide attempts, physical illness, depression, elderly.

### Introduction

Of all the age groups, seniors aged 75 and older have the highest rates of suicide in most industrialized countries. Due to the aging of the world's populations, suicide is predicted to become the tenth leading cause of death by the year 2020.<sup>1</sup> Seniors who commit suicide often consult their doctors a short time before they take their lives,<sup>2,3</sup> but few communicate their suicide intent. Rather, suicidal seniors may focus on somatic complaints.

How are physical illness and suicide connected? While the associations between depression and suicidal feelings,<sup>4</sup> attempts<sup>5</sup> and completed suicide<sup>6-9</sup> are well established, our understanding of the link between physical illness and suicidality is more limited. Snowdon and Baume analysed coroners' data, and noted that physical ill-health or disability was a major precipitant in one-third of all senior suicides.<sup>10</sup> Yet physical illness also is widespread among older people who do not commit suicide. Can physical illness be considered an independent predictor of suicide? This paper will review what is known about the connection between physical illness and suicide, with special focus on the elderly.

### Attempted Suicide

Some form of physical illness or disability is seen in perhaps half of all seniors who attempt suicide.<sup>5</sup> But does such a finding imply that physical illness is a

risk factor for attempted suicide? In a study of depressed elderly patients, physical illness did not distinguish attempters from non-attempters, whereas differences in socioeconomic status and rates of remission of depression were

found between these groups.<sup>11</sup> Among physically ill suicide attempters who participated in the large WHO-EURO parasuicide study, only 22% considered their somatic problem to be a major precipitant of the suicide attempt.<sup>12</sup> Studies comparing physical illness in elderly suicide attempters and appropriate control groups are lacking.

### Completed Suicide

Barracough demonstrated that physical disorders were more common in elderly suicide victims than in age- and sex-matched accidental death controls.<sup>13</sup> This early work was more recently replicated by Grabbe *et al.*,<sup>14</sup> while other studies have not found this association.<sup>15</sup> However, the use of accidental death victims as controls has its drawbacks; certain

### Signs of Increased Suicide Risk

#### Particular symptoms that may signal increased risk in depressed patients:

- Guilt feelings, hopelessness
- Somatic delusions
- Agitation, especially a change from retardation to agitation
- Untreated anxiety/insomnia
- Chronic pain
- Substance use problems

#### Indirect suicidal communication:

- Talk about being reunited with a deceased loved one
- Giving away belongings, putting affairs in order

#### Direct communication of suicidal feelings:

- Weary of life
- Wish for death
- Suicidal thoughts
- Suicidal plans
- Suicide attempt

*Important note: Even an attempt in the remote past should alert the clinician of an increased suicide risk in the present.*

#### Also important for the clinician to consider:

- Is there a family history of suicide?
- Does the patient have access to suicide methods (a gun, psychoactive drugs, analgesics)?

chronic conditions may be over-represented among accident victims. Prospective population studies may overcome this problem, but such studies are rare, costly and time consuming. One recent community study that followed 14,456 elderly subjects over a period of 10 years found that perceived poor health predicted suicide, while number and type of medical illnesses did not.<sup>16</sup> These researchers noted that their lack of association may be due to the small number of suicide cases. Retrospective studies, therefore, are often employed in suicide research because this approach can yield a larger number of cases. Data on suicide victims are thus often based on interviews with close informants. Two recent studies used this approach to compare elderly suicides with living controls.<sup>17,18</sup> The proportions of suicide victims with serious physical illness or impairment were almost identical in the two studies (56% in the U.S. study and 55% in the Swedish study), and both demonstrated an association between serious physical illness/impairment and suicide. In the Swedish study,<sup>18</sup> serious physical illness remained an independent predictor of suicide even after adjustment for sociodemographic variables and history of depression (OR 6.4, 95% CI 2.0–20.0).

### Is There a Gender Difference?

Physical illness appears to play a stronger role in men than in women in both younger<sup>19</sup> and older<sup>5</sup> suicide attempters. Focusing on completed suicide, Heikkinen *et al.* observed that somatic illness was more prevalent in elderly men who committed suicide than in their female counterparts (55% vs. 32%).<sup>20</sup> A gender difference also was demonstrated in a recent Canadian study, in which physical illness as a precipitant stressor of suicide was significantly more frequent among males (40.3%) than females (29.9%).<sup>21</sup> In our case-control study, we showed that serious physical illness was associated with a four-fold increase of suicide risk in men (OR 4.2, 95% CI 1.8–9.5),<sup>18</sup> whereas physical illness did not emerge as a risk factor in women. As we employed the Cumulative Illness Rating Scale-Geri-

### A Briefing on Managing Depression in the Elderly

Detection of depressive symptoms in physically impaired seniors is important because physical conditions improve with the treatment of depression.<sup>34</sup> Seniors with major depression respond as well to treatment as younger patients,<sup>35</sup> but the time to response may be longer. The selective serotonin re-uptake inhibitors constitute first-line treatment for late-life depression because they are relatively well tolerated by the elderly and have a general response rate of around 65%.<sup>36</sup> Research suggests that elderly patients with suicidal ideation are more likely to relapse during continuation treatment, and are more likely to require augmentation pharmacotherapy.<sup>37</sup> Electroconvulsive therapy is an effective treatment that should be considered when psychotic symptoms are present.

Regardless of the specific strategies chosen for the treatment of an elderly suicidal patient, the next-of-kin should be involved in the treatment plan. A promising intervention for seniors lacking social networks is the Telehelp-Telecheck service,<sup>38</sup> whereby isolated, elderly patients are contacted regularly by a telephone helpline. This service has not yet been implemented in Canada.

*For further diagnostic and treatment information of depression in the elderly, please refer to Geriatrics & Aging, October 2002;5(8).*

atrics,<sup>22</sup> we also were able to estimate the total physical illness burden. Again, we found a gender difference: high overall illness burden was associated with an almost three-fold increase in suicide risk in men,<sup>18</sup> while it did not predict suicide risk in women.<sup>18</sup> Although larger replication studies are needed, together these findings suggest a stronger link between physical illness and suicide among men.

### Suicide Risk in Specific Disorders

Harris and Barraclough scrutinized the literature and found 63 medical disorders purported to affect suicide risk.<sup>23</sup> Results of their meta-analysis showed an increased suicide risk in people with HIV/AIDS, malignant neoplasms, head and neck cancers, Huntington's chorea, multiple sclerosis, peptic ulcer, renal disease, spinal cord injury and systemic lupus erythematosus. Details regarding some specific disorders are highlighted here.

#### Cancer

Record linkage studies show that the risk of suicide in cancer patients of all ages is twice that of the normal population.<sup>24</sup> However, cancer suicides are uncommon in the absence of a psychiatric disorder. In a retrospective Finnish study, depres-

sive disorders were equally common among cancer suicides (80%) and the age- and sex-matched control suicides (82%).<sup>25</sup> We sought to determine whether cancer was an independent predictor of suicide risk. Malignant illness was found to be associated with a three-fold increase in suicide risk in our case-control study,<sup>18</sup> and remained a significant predictor of suicide even after depression was controlled. These findings are in line with the work of Conwell and colleagues.<sup>17</sup>

#### Neurological Disorders

For details of studies on a number of neurological disorders, readers are referred to the informative review by Stenager and Stenager.<sup>26</sup> In general, the suicide risk associated with neurological disorder appears to be higher among younger persons. However, neurological morbidity has been shown to be a risk factor even in the elderly.<sup>17,18</sup> Neurological disorder remained an independent predictor of suicide in our case-control study even after adjustment for major depression and other sociodemographic variables (OR 9.0, 95% CI 2.0–40.1).<sup>18</sup>

While the association between stroke and depression is well-documented,



studies examining a possible relationship between stroke and suicide have produced mixed results. A Danish register study reported an association between stroke and suicide, but after age 60 years the increased risk of suicide was confined to women.<sup>27</sup> Several other studies have failed to show an association.<sup>14-21</sup>

Clinical dementia is uncommon in seniors who commit suicide. In fact, clinical dementia predicted a decreased suicide risk in one recent study.<sup>7</sup> A new avenue of exploration is now focusing on a possible link between Alzheimer disease pathology and suicide. Severe Alzheimer disease pathology has been found to be more common among elderly suicide victims than in age-matched natural death controls.<sup>28</sup>

### Ears and Eyes

Tinnitus may be associated with suicide.<sup>29</sup> However, it is unclear whether tinnitus constitutes an independent risk factor, as this disorder is associated with increased psychiatric morbidity, and methodologically sound studies are lacking. An association between visual impairment and suicidal ideation has been reported previously.<sup>30</sup> Visual disability also was an independent risk factor for suicide in our case-control study.<sup>18</sup>

### Cardiovascular Disorders

There is substantial evidence for a link between cardiovascular disorders and depression; furthermore, a relationship with suicide has been shown.<sup>17</sup> Other studies, however, have not found any association between cardiovascular disease and suicide risk.<sup>18,31</sup> Low cholesterol has been linked to both depression and suicide. According to a recent meta-analysis, however, medically-induced cholesterol reduction did not lead to a significant increase in suicide rate.<sup>32</sup>

### Renal and Urogenital Disorders

An association between renal failure and suicide has been demonstrated in a number of reports.<sup>29</sup> Findings from a Swiss study suggested that suicide risk in dialysis patients was 25 times that of the normal population. Other urogenital disorders also have been suggested to increase suicide risk. A recent Canadian register study showed that men with prostate disorder (cancer excluded) were more likely to die by suicide than men without this disorder.<sup>31</sup> Replication studies are needed to clarify any relationship between these disorders and suicide risk.

### Somatic Preoccupation

Most physically ill persons who attempt

or commit suicide suffer from depression. Somatic preoccupations are common in depressed seniors. An individual's fear of the consequences of a physical disease—real or imagined—may have a greater impact on the decision to commit suicide than the actual limitations caused by the physical disease itself. In particular, seniors with brittle thinking may be at greater risk as it is more difficult for them to perceive alternatives to suicide.<sup>33</sup>

### Conclusion

There is substantial evidence that physical illness increases suicide risk. While causal mechanisms remain to be elucidated, it is clear that most physically ill seniors who commit suicide suffer from affective illness. With aggressive depression treatment, physically impaired suicidal seniors may regain the will to live. ♦

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## Physical Illness and Suicide

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