

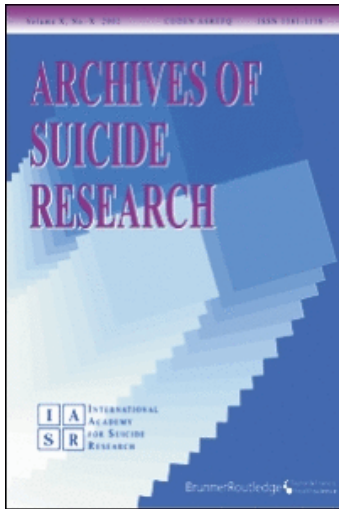
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Suicidal Thoughts Among Medical Residents with Burnout

Frank van der Heijden, Gea Dillingh, Arnold Bakker, and Jelle Prins

Objectives: Recent research showed that medical residents have a high risk for developing burnout. The present study investigates the prevalence of burnout and its relationship with suicidal thoughts among medical residents.

Methods: All Dutch medical residents ($n = 5126$) received a self-report questionnaire. Burnout was measured with the Maslach Burnout Inventory. Residents were asked about the frequency of suicidal thoughts.

Results: Response rate was 41.3% ($n = 2115$). 432 Residents (20.6%) were classified as burnout. 12% reported having suicidal thoughts at least 1 time during their residency, and 1% many times. Suicidal thoughts were substantially more prevalent in the group with burnout in comparison to non-burnout (20.5% vs. 7.6%; $\chi^2 = 182.9$, $p < .001$).

Conclusion: Knowledge about the relationship between burnout and suicidal thoughts among these young medical professionals could be important for suicide prevention.

Keywords burnout, depression, medical residents, suicidal thoughts, suicide

INTRODUCTION

Burnout in medical residents has become a subject of growing interest. Recent research showed that medical residents have a high risk for developing burnout (Thomas, 2004), since they are confronted with high job and educational demands, and few resources, such as limited control and lack of social support and autonomy. Burnout may mediate the association between job and educational demands and depression (Bakker, Schaufeli, Demerouti et al., 2000).

Some studies have shown that the level of suicidal thoughts among medical

students and young physicians is very high (Tyssen, Vaglum, Gronvold et al., 2001). Moreover, other overviews indicate an increased suicide rate in physicians and medical students. The estimated relative risk varied from 1.1 to 3.4 in male, and from 2.5 to 5.7 in female doctors, as compared to the general population (Lindeman, Laara, Hakko et al., 1996). Depressive disorders are often accompanied by suicidal thoughts, which are recognized as a risk factor for attempted suicide (Kessler, Borges, Walters et al., 1999).

The present nationwide study investigates the prevalence of burnout and its relationship with suicidal thoughts among

medical residents in The Netherlands. We hypothesize that burnout is a risk factor for suicidal thoughts among medical residents.

METHODS

All Dutch medical residents ($n = 5126$; 52% is female) who were in training on October 1, 2005 received a self-report questionnaire. Burnout was measured with the Dutch version of the Maslach Burnout Inventory (MBI)—Human Services Survey (Maslach, Jackson, & Leiter, 1996). This survey includes three subscales: Emotional Exhaustion (EE), Depersonalization (DP), and Reduced Personal accomplishment (PA). The provided cut-off scores for moderate burn-out were used (a score >19.92 on EE and >7.95 (women) or >8.95 (men) on DP; or scores >19.92 on EE and <25.97 on PA). The validity of the three-factor structure of the MBI has been confirmed (Schaufeli, Bakker, Hoogduin et al., 2001).

Residents were asked about the frequency of suicidal thoughts with the question: "Did you experience suicidal thoughts during your residency period?" with four possible answers: 1 = *never*, 2 = *at least one time*, 3 = *sometimes* and 4 = *often*. Chi-square, Kruskal-Wallis test and Spearman's rank correlation were applied to analyze relationships between the variables (significance level $p < .01$).

RESULTS

The response rate was 41.3% ($n = 2115$). Non-responders ($n = 125$) reported "lack of time" (22.5%), "length of questionnaire" (22%), and "lack of energy" (11%) as main reasons for non participation. Mean age of the respondents was 31.5 (SD = 3.5; range 23–58) and females

were somewhat overrepresented (61%). The mean time to be in training was 3.0 years (SD = 1.5). Of the respondents 77% was married or cohabiting and 31% had children.

On the basis of the Dutch norm scores, 432 residents (20.6%) were classified as burnout. 12% of all the participants reported having suicidal thoughts *at least 1 time* during their residency ($n = 240$), and 1% *many times* ($n = 22$). Suicidal thoughts were substantially more prevalent in the group with burnout in comparison to non-burnout (20.5% vs. 7.6%; $\chi^2 = 182.9$, $p < .001$). There was a significant correlation between the burnout subscales EE, DP and PA on the one hand and suicidal thoughts on the other (EE: $r = .25$, $p < .001$; DP: $r = .17$, $p < .001$; PA: $r = -.07$, $p < .01$). No significant correlations of suicidal thoughts with age or sex were established. Finally, in comparison with all other medical specialties, psychiatry residents most frequently reported suicidal thoughts (21.6%; $\chi^2 = 35.86$, $p < .001$).

DISCUSSION

There is a high prevalence (12%) of suicidal thoughts among residents during their residency period. The percentage among residents with burnout in our study was 20.5%. In a Dutch general population sample (age 25–34) 3.9% reported having suicidal thoughts during the last 12 months, and 12.6% lifetime (ten Have, de Graaf, van Dorsslaer et al., 2007). This study furthermore shows that the prevalence of suicidal thoughts is particularly high in psychiatry residents.

The high prevalence of suicidal thoughts and burnout among these young medical professionals should warrant serious attention, because the individual well-being and educational development is affected in a group who is responsible for the medical care of many patients.

Increased knowledge about the relationship between burnout and suicidal thoughts could be important for suicide prevention.

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