Depression is strongly associated with alexithymia in the general population

Kirsi Honkalampi*, Jukka Hintikka, Antti Tanskanen, Johannes Lehtonen,
Heimo Viinamäki

Department of Psychiatry, Research and Development Unit, Kuopio University Hospital, P.O. Box 1777, FIN-70211 Kuopio, Finland
Received 30 April 1999; accepted 14 September 1999

Abstract

Objective: This study examines how alexithymia and depression are related to each other in men and women in a sample of Finnish general population (n = 2018). **Methods:** Alexithymia was screened using the 20-item version of the Toronto Alexithymia Scale. Llevel of depression was assessed using the 21-item Beck Depression Inventory (BDI). Life satisfaction was estimated with a structured scale. **Results:** The prevalence of alexithymia was 12.8% in men and 8.2% in women. However, the prevalence of alexithymia was 32.1% among those having BDI scores of ≥ 9, but only 4.3% among the nondepressed subjects ($p < 0.001$). The BDI scores explained 29.2% of the variation in TAS-20 scores. Alexithymia was associated with several sociodemographic factors if depression was not taken into account. However, after including depression in the logistic regression models, only depression and low life satisfaction were associated with alexithymia, both in men and women. **Conclusion:** These results suggest that alexithymia has a close relationship to depression in the general population. The impact of social factors on alexithymia may be primarily explained by depression. Depression must be taken into account as a confounding factor when studying alexithymia in general populations due to the strong association between alexithymia and depression. © 2000 Elsevier Science Inc. All rights reserved.

Keywords: Alexithymia; Depression; Epidemiology; General population; Prevalence; Sociodemographic variables

Introduction

Alexithymia was originally defined as the inability to recognize and verbalize emotions [1], and has since been characterized as an emptiness of feelings [2], a poverty of imagination or of a fantasy life [3], difficulties in communicating with other people [2], as well as a lack of positive emotions and a high prevalence of negative emotions [4].

Earlier epidemiological studies on alexithymia in the adult general population [5–11] have examined mainly either the prevalence rates of alexithymia or the social factors associated with alexithymia. Prevalence rates have been shown to vary from 13% [11] to 19% [5,8]. The findings from previous studies examining the relationship between alexithymia and social factors have been contradictory, with results both supporting an overlapping association between sociodemographic variables and alexithymia [6,7,10,11] as well as those indicating that alexithymia is related to a limited number of social factors [5].

Several studies, based on both clinical samples [12–18] and on healthy college student populations, have reported a connection between depressive mood and alexithymia, but no studies have yet focused on this association within the general population.

Study aim

We have previously shown that patients with depressive disorders are prone to experiencing alexithymic features [18]. However, it is not known whether depression is also associated with alexithymia among the general population. Thus, we sought to identify how alexithymia and depression are related to each other in men and women in a sample of Finnish general population. We were especially interested in answering the following questions: (a) What proportion of the general population is simultaneously both alexithymic and depressed? (b) To what extent can depression explain the

* Corresponding author. Tel.: +358-17-172920; fax: +358-17-173549.

E-mail address: kirsi.honkalampi@kuh.fi (K. Honkalampi)

variance of alexithymia within the general population? (c) Do gender differences exist in the associations between alexithymia, depression, and social factors?

Subjects and methods

Subjects

Our total sample included 3004 subjects between the ages of 25 and 64 years, who were randomly selected from the National Population Register, and were living in the District of Kuopio. Study questionnaires were mailed for the first time in April 1998, and again to the nonrespondents in May 1998. A total of 2050 questionnaires were returned resulting in a response rate of 68.2%. A total of 572 (38.7%) men and 382 (25.0%) women did not return the questionnaire ($\chi^2 = 64.7$, $df = 1$, $p < 0.001$) and, due to incomplete questionnaires, 32 (1.1%) subjects were discarded from the analysis. The final sample (n=2018) included 891 (44.2%) men and 1127 (55.8%) women. The nonresponding men were slightly younger than the responding men (42.3 years vs. 44.8 years, $t = -4.4$, $df = 1476$, $p < 0.001$); no difference was found among nonresponding and responding women (43.1 years vs. 43.9 years, $p = $ NS).

Methods

The subjects were questioned about their sociodemographic background. In addition, one question was used to assess each of the following factors: subjective economic status, rated on a four-point scale (1–2: good; 3–4: poor); subjects' own evaluation of their health, rated on a four-point scale (1–2: healthy; 3–4: unhealthy); and subjects' own evaluation of their working ability, rated on a four-point scale (1–2: good working ability; 3–4: decreased work ability).

The prevalence of alexithymia was screened using the Finnish version [11] of the 20-item version of the Toronto Alexithymia Scale (TAS-20) [21], which has been well validated [22,23]. Each TAS-20 item was rated on a five-point Likert scale, with total scores ranging from 20 to 100. The scores indicating alexithymia (≥ 61) were categorized according to the recommendations of Taylor and coworkers [24]. Cronbach's α was 0.86.

The level of depression was assessed using the 21-item Beck Depression Inventory (BDI). Scores were regarded as a continuous variable or divided into four groups: 0–9—normal mood; 10–18—mood ranging from mild to moderate depression; 19–29—mood ranging from moderate to severe depression; and 30–63—severe depression [25]. Cronbach's α was 0.89.

Life satisfaction was estimated by means of a structured scale [26]. The scale included four questions designed to assess each subject's view of how interesting and easy their life was, and their perceived loneliness and happiness. The total score was used to classify the

Table 1
The statistics of the TAS-20 in the whole study population and by gender

TAS-20	All subjects (n = 2018)	Men (n = 890)	Women (n = 1128)
Mean (SD)	44.1 (11.8)	46.5 (11.5)	42.2 (11.6)
Median	43.0	46.0	40.0
Mode	40.0	46.0	40.0
Range	63.0	63.0	59.0
Minimum value	20	20	20
Maximum value	83	83	79
Percentiles			
10%	30.0	32.0	29.0
20%	33.8	36.0	32.0
25%	35.0	38.0	34.0
30%	37.0	40.0	35.0
40%	40.0	43.0	38.0
50%	43.0	46.0	40.0
60%	46.0	48.0	43.4
70%	50.0	52.0	47.0
75%	52.0	54.0	50.0
80%	55.0	57.0	53.0
90%	61.0	62.0	59.0

subjects as either satisfied (score 4–11) or dissatisfied (score 12–20) with their life [27].

Statistical methods

Subjects with a TAS-20 score of ≥ 61 were compared with the others (TAS-20 score ≤ 60). The statistical methods used included Pearson's chi-square test with the Yates continuity correction for categorical variables, independent-samples t-test, linear regression and Pearson's two-tailed correlation analyses for continuous variables, and multivariate logistic regression analysis to identify factors independently associated with alexithymia (TAS-20 score ≥ 61). Logistic regression analyses were performed separately for both genders. $p < 0.05$ was considered statistically significant in all analyses.

Results

A total of 207 (10.3%) subjects in our sample were alexithymic. Men (n = 114) showed a significantly greater frequency of alexithymia than women (n = 93) (12.8% vs. 8.2%, $\chi^2 = 10.8$, $df = 1$, $p < 0.01$), and an intergender difference was also found in the mean TAS-20 score ($t = -8.3$, $df = 2016$, $p < 0.001$) (Table 1).

Alexithymic subjects were significantly older (48.1 ± 9.8 years vs. 43.9 ± 10.7 years, $t = -5.5$, $df = 2016$, $p < 0.001$) and less educated (10.7 ± 3.4 years vs. 12.6 ± 3.7 years, $t = 6.9$, $df = 2016$, $p < 0.001$) than the others (n = 1811). Alexithymic men and women were also more often blue-collar workers, had lower economic status, reported low life satisfaction, and considered themselves more often unhealthy, and their subjective