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When stress is mental illness: A study of anxiety and depression in employees who use occupational stress counselling schemes

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Summary

*A previous study found that 86 per cent of employees (*n = *111) who experience stress in the workplace and sought help from their workplace counselling schemes (Employee Assistance Programmes) had serious mental health problems, but the low participation rate (24 per cent) restricted generalizability and the measure used [General Health Questionnaire (GHQ-12)] did not allow diagnosis. The present study (*n = *58) improved the participation rate to 35 per cent and used a different version of the original measure (GHQ-28) that allowed diagnostic differentiation as well as validation of the original findings. This new study found almost exactly the same high levels of mental health problems existed (86 per cent) in employees who remained at their work and that participants had higher rates of anxiety than depression. This finding is at variance with the usual co-morbid presentation of anxiety and depression found in community based mental health services and suggests that depression may be an important differentiating factor between those who can remain at work and use counselling and those who cannot. There are implications for those who provide mental health services. The results of this study further reinforce the suggestion that workplace stress may be yet another name for common mental health problems that require professional help and treatment. Copyright © 2005 John Wiley & Sons, Ltd.*

Key Words

mental illness; stress; anxiety; depression; clinical

Introduction

A recent study published in *Stress and Health* has shown very high rates (86 per cent) of mental health problems exist in employees who seek help from their employers' workplace stress counselling schemes (Arthur, 2001, 2002) but the response rate was low (24 per cent). Because the implications of this finding are far reaching, both for those concerned about workplace stress and those involved in treating its symptoms, this second study was conducted to verify the original findings. Additionally, the types of mental health problems employees were presenting were also investigated and analysed.

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Overall there has been little research into the mental health of stressed employees who attend workplace counselling schemes, commonly known as Employee Assistance Programmes (EAPs), the types of symptoms they experience, and whether they differ from those who use community-based primary care mental health services. When research is conducted it is typically part of internal effectiveness evaluations and usually derived from *ad hoc* checklists rather than standardized and internationally accepted diagnostic measures of mental health (Macdonald, Lothian, & Wells, 1997; Rogers, McLeod, & Sloboda, 1995; Sloboda, Hopkins, Turner, Rogers, & McLeod, 1993). Nevertheless a review of this evidence suggests that even though it is often methodologically inconsistent, employees are probably experiencing psychological problems of some sort and do benefit from symptom reduction through counselling (Arthur, 2000). But it is unclear whether these employees are experiencing identifiable mental health problems, or what has become known as stress; a term that has so many different meanings that it is confusing, elusive, and heard so often its meaning is frequently distorted and its implications taken for granted (Arthur, 2004; Sharpley & Gardner, 2001). Work-related stress is a relatively recently reported phenomenon and is perhaps a construct that gives a more acceptable name to what are probably mental health problems that manifest as 'depression, burnout, anxiety disorders, conversions reactions and work/family conflicts' resulting from the 'new organizational reality' (Quick, Nelson, & Quick, 2001, p. 21) that cost individuals and employer's dear (Goetzel, Ozminkowski, Sederer, & Mark, 2002).

Present study

The author's original study (Arthur, 2002) on the mental health status of employees who use EAPs found one of the highest psychiatric caseness rates reported in the literature, but the low response rate (24 per cent) did not allow firm conclusions to be reached and the measure employed [General Health Questionnaire (GHQ-12)] did not present psychiatric diagnostic information. In this present follow up study steps were taken to increase the response rate, and an alternative version of the original measure (GHQ-28) was employed to examine both the reliability of the results of the original study and analyse presenting mental health problems. As in the original study additional information about the employee's perception of their difficulties was also sought through a supplementary questionnaire.

Methods

Measures

The General Health Questionnaire (GHQ) (Goldberg & Williams, 1991) is a self-administered screening questionnaire used extensively to measure the presence of mental health disorder in community and non-psychiatric clinical settings and has been found comparable to the clinical interview for case identification or 'caseness' (Goldberg et al., 1997; Swallow, Lindow, Masson, & Hay, 2003; Werneke, Goldberg, Yalcin, & Ustun, 2000). The GHQ is available in 12, 20, 28, 30 and the full 60 item version. The 12 item short version (GHQ-12) was used in the original study and the 28 item, or scaled version (GHQ-28), in the present one. The GHQ-28 has four sub-scales derived by factor analysis: somatic symptoms, anxiety, and insomnia, social dysfunction and severe depression and is recommended when an investigator requires more information than a single severity or caseness score (Werneke et al., 2000). Two main methods of scoring the GHQ exist and produce similar results (Goldberg & Williams, 1991). Both were employed in this study. To calculate overall caseness the GHQ method where question responses are scored either 0-0-1-1 was used, and for the subscales the recommend Likert method where response are scored 0-1-2-3 (Goldberg & Williams, 1991) was applied. The recommended and commonly used 'best' threshold of 5/6 was chosen to determine caseness for this study (Goldberg et al., 1997; Swallow et al., 2003; Vazquez Barquero et al., 1997).

Data collection and participants

Thirty-three organizations that allowed their employees to participate in the original study agreed to continue participation in this investigation, 17 (51.5 per cent) were public sector and 16 (48.5 per cent) private; however, the proportion of private sector organizations reduced during the study because some private sector organizations discontinued their use of the EAP.

At the first interview counsellors explained to employees via an information and consent form

the purpose of the study was to investigate the extent of psychological disturbance in employees who came to their EAP for counselling, that participation was entirely voluntary, confidential, and anonymous, and that refusal would not affect their entitlement to counselling.

When counsellors received referrals they were sent a research pack for the employee containing explanatory and consent information, the GHQ-28, the supplementary questionnaire, and a stamped addressed envelope to return the documents. In the original study no check was made on whether counsellors gave out research packs to all their clients, which presented a problem in trying to determine the participation rate. Therefore it was assumed all questionnaires had been distributed, and consequently the 24 per cent participation rate may have been an underestimate. To increase response rates this time counsellors were sent letters explaining the importance of handing out all questionnaire packs or notifying us if they decided not to. Further, employees were encouraged to return their questionnaire by the promise of a donation of £1 to a mental health charity for each questionnaire received. In the event 170 questionnaire packs were sent out, counsellors returned three packs not given to clients, resulting in a pass out of 167 questionnaires. Fifty-eight completed questionnaires were received improving the response rate to 35 per cent. Gender and age distribution were very similar to the original study. Sixty-seven per cent (39 of 58) of respondents were female and 33 per cent (19 of 58) male compared to 68.5 per cent (76 of 111) female and 31 per cent (35 of 111) male in the original study; the mean age of 42.74 years (standard deviation, SD = 9.49, range 21–59 years) compares well to the mean age of 41.31 (SD = 10.27, range 20–62 years) found in the original study.

Results

Overall scores from the GHQ-28 are presented in Table I (frequencies) and Table II (descriptives), and subscale scores in Table III. Results for the supplementary employee questionnaire are in Table IV with comparison results from the previous 2001 study given.

Results from the GHQ-28 (Table I) show 86.2 per cent (51 of 58) employees scored at or above the GHQ cut off of $\geqslant 5$; in the original study 86.6 per cent (95 of 111) scored at or above the GHQ-12 threshold score of $\geqslant 4$. An independent samples *t*-test was conducted to evaluate the impact of gender differences on mean GHQ scores. No significant gender differences were found (female mean, $M = 14.85$, SD = 8.03; male $M = 16.16$, SD = 7.366; $t = (56) -0.6$, $p = 0.55$).

A paired samples *t*-test was conducted to evaluate the differences between the four GHQ subscales (Table III). Statistically significant differences were found between all four subscales in their six possible combinations. To allow these results to be compared the effect sizes (d) of these differences were calculated using the measure suggested by Cohen (1988) where the difference in means between each pair is divided by the standard deviation and a d of 0.2 represents a small effect, 0.5 constitutes a medium effect and 0.8 would be a large effect. The effect size statistics indicate that the largest effect size was between anxiety and depression ($d = 1.262$).

Table I. Frequencies for GHQ scores.

GHQ score	Number of employees	Per cent	Cumulative percentage
0	2	3.4	3.4
1	1	1.7	5.2
2	1	1.7	6.9
3	1	1.7	8.6
4	2	3.4	12.1
5	1	1.7	13.8
6	2	3.4	17.2
7	0	0	17.2
8	2	3.4	20.7
9	0	0	20.7
10	4	6.9	27.6
11	5	8.6	36.2
12	1	1.7	37.9
13	3	5.2	43.1
14	1	1.7	44.8
15	2	3.4	48.3
16	2	3.4	51.7
17	2	3.4	55.2
18	3	5.2	60.3
19	3	5.2	65.5
20	3	5.2	70.7
21	1	1.7	72.4
22	4	6.9	79.3
23	2	3.4	82.8
24	3	5.2	87.9
25	2	3.4	91.4
26	2	3.4	94.8
27	1	1.7	96.6
28	2	3.4	100
Totals	58	100.0	100

Table II. GHQ-28 descriptive statistics for subscales (Likert scoring) and total scores for both GHQ and Likert scoring methods ($n = 58$).

	Subscale scores				Total GHQ scores	
	Somatic symptoms	Anxiety & insomnia	Social dysfunction	Severe depression	Likert method	GHQ method
Mean	10.28	13.93	12.14	6.91	43.79	15.28
SD	5.07	5.19	4.54	5.92	17.53	7.78

Table III. Paired sample *t*-test results for the four GHQ subscales with effect sizes (Likert scoring).

GHQ pairs	Mean	SD	*t*	Sig	*d* (Effect size)
Pair 1					
Somatic symptoms	10.28	5.067	–6.39	0.001	0.712
Anxiety & insomnia	13.93	5.191			
Pair 2					
Somatic symptoms	10.28	5.067	–3.53	0.001	0.386
Social dysfunction	12.14	4.544			
Pair 3					
Somatic symptoms	10.28	5.067	4.12	0.001	0.613
Severe depression	6.91	5.924			
Pair 4					
Anxiety & insomnia	13.93	5.191	3.51	0.001	0.322
Social dysfunction	12.14	4.544			
Pair 5					
Anxiety & insomnia	13.93	5.191	10.94	0.001	1.262
Severe depression	6.91	5.924			
Pair 6					
Social dysfunction	12.14	4.544	8.80	0.001	1.000
Severe depression	6.91	5.924			

Responses to the supplementary questionnaire (Table IV) show marked similarity to the previous study. Most employees experienced their problems for several months or longer (Q1) (88 per cent versus 86 per cent in the 2001 study), indeed over one-third (40 per cent versus 36 per cent in 2001) for several years or more. A very high percentage (93 per cent versus 92 per cent in 2001) indicated their problem was moderate to serious (Q2), over three quarters (78 per cent versus 71 per cent in 2001) thought their problem primarily personal (Q5) and over half (57 per cent versus 66 per cent in 2001) would have taken time off if counselling were not available (Q4). More employees in the present study were from the public sector (Q7) (85 per cent versus 72 per cent in 2001) and less from the service sector (3 per cent versus 17 per cent in 2001); this probably reflects the discontinuance of some private sector organizations from using the EAP service as noted earlier. However, this did not appear to significantly affect the balance of participants' organizational positions (Q6) compared with the previous study with the exception of less support staff (4 per cent versus 12 per cent in 2001) and slightly more middle management (19 per cent versus 14 per cent in 2001). Over half the participants indicated they had sought help before (57 per cent) and for one-third (34 per cent) this had been twice or more times (Q8); this question was not asked in the previous study.

Discussion

This study found the presence of almost exactly the same very high rate of mental health problems in employees who self-refer for counselling (86.2

Table IV. Responses to employee questionnaire from both studies*.

Question	First study (2001) $N = 111$	Present study $N = 58$
Q1. How long have you experienced this problem?		
Over the past few weeks	14% (15)	12% (7)
For several months	38% (42)	39% (22)
One year	13% (14)	9% (5)
For several years	29% (32)	30% (17)
Most of my life	6% (7)	11% (6)
Q2. How serious would you rate your problem?		
Mild	8% (9)	7% (4)
Moderate	57% (61)	64% (37)
Serious	35% (38)	29% (17)
Q3. Has the problem affected your performance at work?		
Yes	77% (85)	72% (42)
No	23% (26)	26% (15)
Q4. Would you have taken time off work to deal with your concerns if this counselling were not available?		
Yes	66% (72)	58% (33)
No	35% (38)	38% (22)
Q5. Do you think your problem is primarily personal or work related?		
Personal	71% (72)	78% (45)
Work related	29% (30)	18% (10)
Q6. Which of the following best describes your position in the organization?		
Professional/technical	37% (40)	37% (21)
Sales/marketing	6% (6)	4% (2)
Administrative/clerical/secretarial	13% (14)	12% (7)
Care-support staff	14% (15)	16% (9)
Production/manual	3% (3)	2% (1)
Senior manager/director	1% (1)	7% (4)
Middle/management	14% (15)	19% (11)
Other support staff	12% (13)	4% (2)
Q7. Which type of organization do you work for?		
Public sector	72% (80)	85% (49)
Manufacturing industry	6% (6)	5% (3)
Service company	17% (19)	3% (2)
Retail	5% (5)	7% (4)
Q8. Have you sought help before?		
Never	Not asked	43% (25)
Once		22% (13)
Twice		17% (10)
Three or more times		17% (10)

* There are missing data for some responses.

per cent versus 86.6 per cent in 2001) as found in the original study with its lower response rate. Responses to the supplementary questionnaire also support this finding and show that the majority of participants admitted to longer lasting, moderate to severe problems that they had previously received help for, and most believed their problems were personal but affected their performance at work.

These results strongly suggest that employees who stay working and attend stress counselling probably experience significant mental health problems and if they received an assessment by a psychiatric team would probably be found to suffer from a mental illness (Goldberg & Williams, 1991). To put these GHQ findings in perspective a random population survey ($n = 760$) of an area of inner south London with high levels

of deprivation found 27.5 per cent scored >5 on the GHQ-28 (Bebbington, Marsden, & Brewin, 1997), and a study of 1242 patients attending a primary care clinic with physical and psychological disorders found 39.3 per cent scored >5 (VonKorff et al., 1987).

Although the GHQ-28 is used frequently in studies, very rarely are its subscale data, derived from factor analysis (Goldberg & Williams, 1991), presented or analysed; examples of how subscale analysis and interpretation could proceed have not been found in the literature. The data from this study (Table II) show the subscales anxiety & insomnia and social dysfunction have the highest mean scores, followed by somatic symptoms and severe depression. The effect size calculations and *t* values (Table III) show the largest effect size between the subscale pair anxiety & insomnia and severe depression, followed by the social dysfunction and severe depression. Because the severe depression mean score is much lower; it causes a significant difference when paired up with any of the other three subscales whose means are higher and more alike. Nevertheless, assuming similar diagnostic sensitivity for each subscale, these scores suggest anxiety was the main presenting problem and depression the least.

If participants are indeed experiencing predominantly anxiety symptoms with less depression, then they may be a different clinical group than patients commonly presenting in primary care settings with mixed anxiety and depression; a larger proportion of whom have occupational disruption. The World Health Organization Study of Psychological Problems in General Health Care which aims to establish the form, frequency, and consequences of common psychological problems (Sartorius, Ustun, Lecrubier, & Wittchen, 1996) finds that the overlap between anxiety and depression is substantial. This major international multi-centre study found that the two symptoms usually co-occur together in almost equal numbers at the same time, and that depressive disorders are more likely to co-occur with anxiety than any other psychological or physical disorder. The study concludes that when depression appears with another disorder it produces even more days of disability per month (and days off work) than when it appears alone (Sartorius et al., 1996). Further evidence to support the detrimental effect depression has over anxiety on days off work can be found in a large study of UK public sector health workers (Hardy, Woods, & Wall, 2003). This study found that when the effects of anxiety versus depression were compared on work absence, although both job related anxiety and job related depression were associated with absence, depression emerges as the more important predictor. The authors also refer to similar indirect evidence found in meta-analytic studies of the relationship between these variables and absence (Hardy et al., 2003).

Data from an unpublished UK study of 114 public sector health and government workers who remained at work whilst receiving counselling through their occupational health service for stress related symptoms also found more anxiety than depression (J. Kay, 2004, personal communication). This study used the Hospital Anxiety and Depression Scale (Snaith & Zigmond, 1994) which is a brief 14 item multiple choice questionnaire that measures anxiety and depression in patients from general hospital and out-patient settings, and psychiatric and non-medical populations. The study found similar high levels of clinically significant symptoms (78 per cent; 89 of 114) but also that 94 per cent (84 of 89) had anxiety symptoms and 65 per cent (58 of 89) depression, suggesting these employees also experienced predominantly anxiety symptoms.

The previous research and the pattern of subscale scores found here suggests that employees who continue to work and receive workplace counselling may be different from people who seek help from their general practitioner with the more common presentation of anxiety and depression together, or moderate to severe depression. Depression may affect ability to work more significantly than anxiety because of its symptoms of low mood, poor motivation, inability to concentrate, low self-esteem, and feelings of worthlessness and guilt (APA, 1995). Remaining at work while suffering from psychological distress may of course also reflect the practical difficulties of fitting in a visit to the general practitioner; overall it has been noted that those in full time employment are more reluctant to consult their general practitioner for mental health problems (Bebbington et al., 2003). Nevertheless even though a quarter of people with severe 'neurotic disorders' remain at work and do not seek professional help, they still have 'a considerable amount of unnecessary suffering and disability' (Bebbington et al., 2003, p. 120).

These findings suggest that additional training for counsellors in the treatment and assessment

of depression may be required. As well a review of the way employee counselling interventions are described may be needed; placing more emphasis on the mental health aspects of the service, particularly the understanding and acceptability of coming for the treatment of depression. But it may also be important to recognize that depression is a more complex disorder that requires a multidisciplinary approach involving other mental health professions, the collaboration of human resources and occupational health, and the involvement of community resources.

Finally, this research suggests the difficulties of employees who remain at work and complain of stress should not be taken lightly; they may be suffering from actual clinical anxiety which is distressing and ultimately may compromise the body's immune system (Burns, Drayson, Ring, & Carroll, 2002). They require both psychological evaluation to distinguish between 'normal' stress and psychological disorder, and collaborative professional partnerships to provide effective treatment (Quick & Cooper, 2003).

Conclusions

Findings from this study suggest many employees experience significant mental health problems that the term 'stress' does not accurately reflect and therefore its use needs to be clarified. Indeed the term can appear to make light of the mental health problems that are part of people's working lives. Those involved in treatment and research could assist by preventing mental health issues from being subsumed under the generic 'stress'. Further research is needed to clarify how and when to differentiate stress from mental health problems and the relationship between the two. It is likely there is a spectrum ranging from situation specific work stress responses to profound global disturbance of the individual—the difficulty is both may present the same or be seen according to the dictates of the observer.

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