Cognitive behavioral therapy for frequent attenders in primary care

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Funding information
FINSAM, Grant/Award Number: 20000101; Region Gävleborg

Abstract
Aim: The aim of the study is to investigate if cognitive behavioral therapy given in a group setting affects anxiety and depression, stress, pain, coping strategies during daily life, and health-related quality of life (HRQoL), among frequent attenders (FAs) in primary care.

Methods: Cognitive behavioral therapy was offered to 331 FAs between 18 and 65 years of age, of whom 89 accepted and 54 completed all steps in the protocol; patients were assigned to 1 of 3 groups: 0, 6, and 12-month waiting time. The therapy consisted of 12 sessions administered in group format. Outcome measures were Beck’s Anxiety Inventory (BAI), Beck’s Depression Inventory (BDI), Hospital Anxiety and Depression Scale (HADS), Everyday Life Stress (ELS), Coping Strategy Questionnaire, Multidimensional Pain Inventory-Swedish version, and Short Form-36.

Results: Mean age among patients who completed cognitive behavioral therapy was 49.9 years, with a female majority (79.6%). Anxiety and depression scores were reduced after treatment (BAI 16.7 vs 13.6; BDI 16.3 vs 15.7; HADS-Anxiety 8.41 vs 6.05; HADS-Depression 7.09 vs 5.69). Because waiting time itself did not affect symptoms, differences reflect treatment effects. Stress ratings were not affected by treatment. Use of nonadaptive coping strategies like praying and hoping and catastrophizing decreased. Frequent attenders experienced a higher sense of life control. Frequent attenders reported significantly lower HRQoL than general Swedish population norms in all 8 Short Form-36 domains including mental and physical component summary scores (MCS and PCS), and all domains were unaffected by treatment.

Conclusion: Cognitive behavioral therapy exerts some beneficial effects in FAs. Content of treatment addressed musculoskeletal pain, stress, anxiety, and depression. This broad approach resulted in reduced anxiety, depression, and impact of pain because of enhanced life control.

KEYWORDS
applied relaxation, cognitive behavioral therapy, frequent attender, primary care, quality of life, Sweden

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1 | INTRODUCTION

Frequent attenders (FA) in primary care consist of 3% to 5% of the general population and use 15% to 25% of available visits to general practitioners (GPs).\(^1\) They constitute a heterogenous group, which presents both physical and mental complaints.\(^4\) Hence, they require substantial resources by presenting diverse symptoms to the GPs.

The psychological factors associated with frequent attendance in primary care are low life satisfaction, self-efficacy, self-regulation, and self-esteem as well as high perceived stress and negative affect.\(^1\) In an attempt to address diagnostic diversity and multiple complaints among FAs, it has been suggested that illness behavior should be addressed when considering assessment, course, and treatment.\(^2\) Illness behavior is described as the varying ways in which individuals define and react to bodily symptoms, experience internal states, make attributions, take actions, and use different kinds of care.\(^5\) This approach provides a unifying framework when considering otherwise fragmented health-related information, and is helpful in discriminating therapeutic and prognostic response to a specific treatment among patients with the same diagnosis. Variations in illness behavior interact with life stress, anxiety, and depression,\(^2\) suggesting that several modulating or mediating variables might be targeted to alter illness behavior and, consequently, frequent attendance.

A review of interventions in primary care in FAs\(^3\) concluded that a subgroup of depressed patients seem to benefit from a multicomponent depression management programme.\(^6,7\) These patients reported improved health-related quality of life (HRQoL) on the SF-36.\(^7\) Notably, patients consumed more health care resources 1 year after intervention, but the increased cost-effectiveness ratio was about the same as that accepted for other medical treatments.\(^9\) In an individually formulated cognitive behavioral therapy (CBT), FAs improved their mental component score (MCS) according to Short Form-36 (SF-36) at 6 months but reverted at 1 year, while the physical component score (PCS) and measurements of anxiety displayed no change.\(^8\)

It is often not possible to medically account for physical complaints made by FAs. Patients in primary care who suffered from physically unexplained symptoms for more than 2 years were characterized by cognitive deficits, including low attention and slow psychomotor speed, poor verbal skills, and diminished executive function, and they used more nonfunctional passive and avoidant coping strategies than healthy controls.\(^9\) Coping strategies for pain, anxiety, and stress have been shown to influence HRQoL, perceived impact of pain, and different kinds of psychosocial distress.\(^10-13\)

Frequent attenders with their various health problems may benefit from CBT using a multimodal approach of applicable methods from relevant areas. However, this approach requires several outcome measurements to evaluate the multiple treatment aspects. In the present study, CBT was based on interventions addressing musculoskeletal pain and psychosocial distress, 2 of the most common reasons for visits to GPs. The aim was to investigate if group CBT would affect the degree of anxiety, depression, stress in everyday life, perceived impact of pain, use of coping strategies, and HRQoL, among FAs in primary care.

2 | METHODS

2.1 | Setting

Two health care centers, Björksätra and Vallhov, in Region Gävleborg, Sweden, with a catchment area of 14 000 at the time of data collection, participated. In total, 7 general practitioners and 4 residencies managed patients at the primary care centers.

2.2 | Frequent attenders

Initially, we selected all \(n = 395\) FAs between 18 and 65 years with \(\geq 5\) face-to-face visits to GPs (not other health care providers) during the year 2000. This cutoff value is consistent with previous Swedish studies and mirrors the effect of differences between countries in regard of health care organization and culture.\(^14-16\) A total of 64 FAs were excluded after applying the following criteria: severe mental or somatic disorder, need for an interpreter, ongoing alcohol and/or other drug use disorder, and severe disabilities such as mental retardation. A questionnaire was then sent out to 331 FAs including an offer for CBT treatment. A total of 89 FAs accepted the offer and after being stratified for sex were randomly assigned to 1 of 3 treatment periods (autumn 2001, spring 2002, autumn 2002). A total of 12 treatment sessions were held, and they followed a predefined treatment schedule including questionnaires to be filled out at 4 time points. Questionnaires were sent by regular mail in August (2001 and 2002) and January (2002 and 2003). During CBT, evaluation of current anxiety and depression levels (HADS) was addressed at the beginning of every session.

2.3 | Dropouts

A total of 54 patients completed all of the steps in the treatment (and all analyses were based on these patients). Of those who discontinued, 14 started treatment, while the remaining 21 announced before treatment started that they would not be able to participate. The patients who discontinued the study provided the following reasons: time shortage, improved health status, family reasons, and group composition. Two patients discontinued without giving any reason.

2.4 | Data sources and questionnaires

The number of visits to GPs, medication usage, and number of referrals to specialists were collected from medical records. The health problems of the FAs were classified using health complaint categories from medical records based on the patients’ own reasons for seeking medical consultation. Health complaints were described and noted by GPs. Height and weight, number of children at home, university education, employment, use of naturopathic drugs, and alternative medicine were assessed by a questionnaire.

The outcome instruments used were Beck’s Anxiety Inventory (BAI), Beck’s Depression Inventory (BDI), Everyday Life Stress (ELS), Coping Strategy Questionnaire (CSQ), Multidimensional Pain Inventory-Swedish version (MPI-S), SF-36, and Hospital Anxiety and Depression Scale (HADS), and are described below.
2.5 | Beck's Anxiety Inventory

This instrument was developed to measure symptoms of anxiety that are largely independent from symptoms of depression. This means that the questionnaire mainly evaluates somatic aspects of anxiety rather than general stress-related anxiety symptoms, and a higher score reflects an increased level of anxiety.

2.6 | Beck's Depression Inventory

This questionnaire was developed with the purpose of assessing the severity of depression and changes in severity during treatment. It consists of 21 items addressing symptoms and attitudes related to depression such as guilt, pessimism, self-esteem, social withdrawal, and suicidal thoughts. A higher score suggests a more severe depression.

2.7 | Everyday Life Stress

ELS consists of 20 statements about stress-related behavior, including reactions from other people, where a higher score indicates a higher level of stress. This questionnaire was initially developed for patients with coronary artery disease but has achieved a widespread use.

2.8 | Coping Strategy Questionnaire

Coping Strategy Questionnaire assesses coping strategies among patients suffering from long-lasting pain; 6 cognitive coping strategies ("diverting attention", "reinterpret pain sensations", "coping self-statement", "ignore pain sensations", "praying or hoping", and "catastrophizing") and 2 behavioral coping strategies ("increased activity level", "increased pain behaviors") are addressed. Coping Strategy Questionnaire measures the frequency and success of coping strategies, and has been validated in Swedish spinal pain patients. A higher score indicates frequent use of a specific coping strategy.

2.9 | Multidimensional Pain Inventory-Swedish version

Multidimensional Pain Inventory-Swedish version is primarily used to identify patients with well-functioning or dysfunctional coping strategies developed for Swedish usage based on a modified version of West Haven-Yale Multidimensional Pain Inventory. We used parts 1 and 2 (but excluded part 3) of MPI-S, which measure psychosocial and behavioral consequences of coping strategies among individuals with long-lasting pain. Part 1 subscales are life interference, support, life control, pain severity, and affective distress, while the second part covers distracting, negative, and solicitous responses from significant others. A lower score implies lower self-reported influence of the impact of a specific subscale; a higher score implies a higher impact.

2.10 | Short Form health survey (SF-36) domains and general Swedish population norms

The generic HRQoL instrument SF-36 consists of 36 items and measures 8 domains: physical functioning (PF), role physical (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role emotional (RE), and mental health (MH). A higher score on the 0 to 100 scale indicates better HRQoL. In addition, the PCS score and the MCS score, calculated from the 8 domains, are norm-based with a mean of 50 in the general population.

2.11 | Hospital Anxiety and Depression Scale

This questionnaires' purpose is to gain knowledge of anxiety and depression among patients treated within somatic health care in the absence of psychiatric specialists. It is a screening instrument, not used for diagnostic purposes. Hospital Anxiety and Depression Scale consists of 14 questions addressing anxiety symptoms and symptoms of depression (7 questions each). Anxiety and depression are scored separately, and a high score indicates the presence of anxiety and/or depression.

2.12 | Cognitive behavior therapy

The treatment was performed in a group setting with a maximum of 8 patients per group. The content was based on a review of the medical records reflecting patients' health complaint categories including musculoskeletal pain, infections, psychosocial distress, digestive problems, skin complaints, injuries, headache and tinnitus complaints, genitor urinary complaints, circulatory complaints, and respiratory complaints.

Cognitive behavior therapy was given during 12 sessions in total, including maintenance of learned skills and a booster (follow-up) session. Each 2-hour session began with a mindfulness exercise followed by a lecture on the topic of the session and by a group discussion. The topics were administered in the same order, and included the same content for all groups. Topics included were physical and psychological consequences of pain and stress, health awareness (including information about tobacco, alcohol, and diet), and coping strategies (problem solving, scheduling, distraction techniques, and cognitive restructuring), followed by instruction for maintaining skills and a booster session. Each session ended with applied relaxation, a coping technique that teaches patients to relax rapidly when signs of anxiety occur in everyday life. Applied relaxation has been proven effective for control of various anxiety and somatic and psychosomatic disorders. At the end of each session, homework assignments were given, mainly focused not only on applied relaxation techniques but also on tasks related to the session topic. In addition, participants were asked to keep a diary containing information regarding exercise, food intake, adjustments in medication, and stressful life events.

2.13 | Ethics

The Gävle-Dala research ethics committee approved the study (Dnr 2000346), and each patient gave a written informed consent.

2.14 | Statistics

Descriptive data are presented as numbers, percentages, and means, including standard deviations and 95% confidence intervals. The first questionnaire set was used as a baseline.
study design with 3 treatment periods allows for comparisons between treated and not-yet-treated subjects within 1 model, and provides treatment effects adjusted for the time between study entry and treatment. Model-based standardized effect sizes for within-subject effects were calculated by dividing the absolute treatment effect by the within-subject (residual) standard deviation. We chose the random intercept mixed model because it allows testing for both time and treatment effects, in situations with repeated measurements.

Comparisons of SF-36 domains were done with the nonparametric Mann-Whitney U test for between groups, and with the Wilcoxon signed-rank test for paired data. Standardized effect sizes for comparisons of SF-36 domains between groups were estimated using Cohen d and using standardized response mean (SRM), for change between baseline and postintervention. Standardized effect sizes were interpreted as follows: trivial (<0.20), small (0.20-0.49), moderate (0.50-0.79), and large (≥0.80).

In all statistical analyses, a 2-sided P value lower than 0.05 was considered statistically significant. Because of the semiexploratory nature of this study, we choose not to adjust for multiple testing. This should be kept in mind when interpreting the results. All statistical analyses were performed using SPSS version 22 (IBM, Armonk, NY).

3 | RESULTS

3.1 | Patient characteristics

Patient characteristics, including health complaints, are summarized in Table 1. Mean age was 49.7 (SD 11.1) years with a female majority n = 43 (79.6%). The 3 most common health complaint categories were musculoskeletal pain, infections, and psychosocial distress.

### TABLE 1 Patient characteristics at baseline

| Variable                        | Total n = 54 (%) |
|---------------------------------|-----------------|
| Female sex                      | 43 (79.6%)      |
| Married/cohabitate              | 45 (83.3%)      |
| Child(ren) at home              | 18 (33.3%)      |
| University                      | 4 (7.4%)        |
| Employed                        | 35 (64.8%)      |
| Body mass index ≥30 kg/m²       | 12 (22.2%)      |
| Naturopathic drug use           | 12 (22.2%)      |
| Alternative medicine use        | 18 (33.3%)      |
| Health complaint categories     |                 |
| Musculoskeletal pain            | 42 (77.8%)      |
| Infections                      | 39 (72.2%)      |
| Psychosocial distress           | 29 (53.7%)      |
| Digestive problems              | 26 (48.1%)      |
| Skin complaints                 | 19 (35.2%)      |
| Injuries                        | 12 (22.2%)      |
| Headache and tinnitus complaints| 16 (29.6%)      |
| Genitor urinary complaints      | 13 (24.1%)      |
| Circulatory complaints          | 13 (24.1%)      |
| Respiratory complaints          | 16 (29.6%)      |

3.2 | Health care-related outcome measurement

No difference regarding number of visits to GPs was noted between baseline and after treatment.

At baseline, 10 patients used antidepressant medication and 3 additional patients received antidepressive treatment during the study period. The use of benzodiazepines and morphine-based pain medication showed similar patterns. Only 1 patient used benzodiazepine medication continually, and 7 had temporary prescriptions. Morphine-based pain medications were continually used by 3 patients, while 8 had temporary prescriptions.

The number of referrals from primary care to specialist care showed no difference during the study period (baseline vs after treatment).

3.3 | BAI and BDI

Beck’s Anxiety Inventory and BDI results are summarized in Tables 2 and 3. The mean score of BAI at baseline was 16.7 (SD 9.5) and after treatment, 13.6 (SD 7.7); thus, a moderate reduction (ES = 0.70) of anxiety symptoms (P = .001) occurred. There was a significant reduction (P = .022) but small reduction (ES = 0.46) in depression symptoms according to BDI (16.3, SD 9.5 vs 15.7, SD 9.8). The variable time did not affect outcome. The improvement was consistent over time for 6 and 12 months respectively (P = .001). Patients did not improve during the waiting period (6 and 12 months respectively), supporting

### TABLE 2 Questionnaire (BAI, BDI, ELS, CSQ, MPI-S) scores in frequent attenders in primary care at baseline and posttreatment

| Questionnaire                        | Baseline (n = 54) | Posttreatment |
|--------------------------------------|------------------|---------------|
| Becks Anxiety Inventory (BAI)        | 16.7 (9.5)       | 13.6 (7.0)    |
| Becks Depression Inventory (BDI)     | 16.3 (9.5)       | 15.7 (9.8)    |
| Everyday Life Stress (ELS)           | 22.6 (11.0)      | 21.6 (10.5)   |
| Coping Strategy Questionnaire (CSQ)  |                  |               |
| Diverting attention                  | 10.3 (8.0)       | 11.0 (8.4)    |
| Reinterpreting pain sensations       | 5.0 (5.4)        | 4.8 (4.8)     |
| Coping self-statements               | 14.4 (7.9)       | 14.6 (7.3)    |
| Ignoring sensations                  | 11.1 (7.0)       | 11.2 (6.7)    |
| Praying/hoping                       | 9.9 (7.5)        | 8.2 (7.3)     |
| Catastrophizing                      | 12.5 (9.3)       | 10.2 (7.9)    |
| Increased behavioral activities      | 13.5 (7.7)       | 12.7 (7.2)    |
| Pain behaviors                       | 13.5 (7.2)       | 14.6 (7.3)    |

**Multidimensional Pain Inventory (MPI-S)**

| Pain impact                          | Baseline (n = 54) | Posttreatment |
|--------------------------------------|------------------|---------------|
| Life interference                    | 2.7 (1.7)        | 2.4 (1.7)     |
| Support                              | 2.8 (1.8)        | 2.8 (1.8)     |
| Life control                         | 2.5 (1.7)        | 2.9 (1.7)     |
| Pain severity                        | 2.8 (1.7)        | 2.6 (1.7)     |
| Affective distress                   | 2.8 (1.2)        | 2.4 (1.1)     |

**Responses by significant others**

| Distracting responses                | 1.7 (1.5)        | 1.6 (1.4)     |
| Negative responses                   | 1.0 (1.3)        | 0.9 (1.3)     |
| Solicitous responses                 | 2.3 (1.7)        | 2.0 (1.5)     |

*Abbreviation: SD, standard deviation.*
3.4 \textit{ELS, CSQ, and MPI-S}

As shown in Table 3, ELS showed a tendency toward reduced stress symptoms, with a small ES. This improvement was most pronounced after 6 months; conversely, waiting for treatment had no effect on outcome.

Coping Strategy Questionnaire scores after treatment were significantly changed in 3 of the 8 subscales (Table 3) indicating reduced use of the coping strategies \textit{praying/hoping} and \textit{catastrophizing} but an increase in \textit{pain behavior}. Notably, \textit{pain behavior} was more frequently used during the waiting period and did not change after treatment. \textit{Catastrophizing} was less often used after treatment, indicating an improvement.

The MPI-S score showed no significant difference after treatment with 1 exception; life control had a significant improvement with a moderate ES. Multidimensional Pain Inventory-Swedish version is summarized in Table 3.

3.5 \textit{SF-36}

Treatment did not affect outcome with regard to SF-36. Neither waiting for treatment nor time after treatment had an effect on HRQoL. Frequent attenders in this cohort were compared to Swedish population norms. In all 8 domains and both MCS and PCS, mean scores were significantly worse and the ES was large. After treatment, there was no difference compared to baseline. Short Form-36 is summarized in Table 4.

3.6 \textit{HADS}

Cognitive behavioral therapy significantly lowered anxiety and depression scores as measured with HADS from sessions 9 and 10 respectively. This effect remains at follow-up after 3 months after intervention (Figure 1).

4 \textit{DISCUSSION}

The health complaints targeted for CBT in the present study were musculoskeletal pain and psychosocial distress, which was defined as subjective reports of stress, anxiety, and depression; these were the most common reasons among FAs for visits to GPs. In the present study, CBT reduced anxiety and depression, increased life control, and reduced the use of the coping strategies of “praying and hoping” and “catastrophizing”. Health-related quality of life, measured with the generic questionnaire SF-36, was not significantly affected by treatment.
4.1 Interpretation of results

The levels of anxiety and depression reported by FAs in the current study was mild to moderate at baseline, but was further reduced as a function of treatment. The effects might seem moderate, but these findings are reliable because they cross-validate over 2 independent measures of anxiety and depression: BAI and BAI on the one hand and HADS on the other.

Taking into account the mild to moderate levels of anxiety and depression displayed, it can be argued that FAs are correct in that psychosocial factors are not the main reason they need help from GPs. Anxiety and depression might simply be the consequences of other health issues, and if the cause of despair is managed, symptoms may vanish without any CBT interventions. Also, if anxiety and depression are considered a result of maladaptive illness behavior, that would explain why all symptoms do not apply to all patients with the same diagnosis, and why symptom alleviation is reached by different interventions for different individuals. The anxiety reduction after intervention found in our sample may partly be explained by the use of alternative coping methods as well as by the applied relaxation intervention.

Impact of pain was indeed reduced, which in part may explain the reduced anxiety and depression after CBT. Less life interference and affective distress, along with a higher degree of life control, could improve patients’ life situations.

In our study, FAs presented several concurrent medically unexplained complaints, and most had previously sought help on several occasions.

### TABLE 4

| SF-36 Domains                      | Frequent Attenders Baseline | Swedish Population Norms (n = 1524) | Frequent Attenders Postintervention | Frequent Attenders Baseline vs Postintervention |
|-----------------------------------|----------------------------|------------------------------------|-----------------------------------|------------------------------------------------|
|                                   | n = 54                     |                                    |                                   |                                                 |
|                                   | Mean (SD) 95% CI           | Mean (SD) 95% CI                   | Mean (SD) 95% CI                  | Mean (SD) 95% CI                                |
| Physical functioning              | 67.2 (23.8) 60.5-73.9      | 87.1 (18.5) 86.2-88.1              | 67.2 (25.7) 60.0-74.5             | 0.00                                           |
| Role physical                     | 52.5 (43.4) 40.3-64.7      | 82.0 (32.4) 80.4-83.7              | 47.6 (43.7) 35.3-59.8             | -0.17                                          |
| Bodily pain                       | 49.1 (25.8) 41.9-56.4      | 72.1 (26.8) 70.8-73.5              | 48.4 (27.2) 40.8-56.1             | -0.09                                          |
| General health                    | 48.8 (24.5) 41.9-55.8      | 73.2 (23.2) 72.0-74.4              | 48.0 (22.2) 41.8-54.3             | -0.08                                          |
| Vitality                          | 41.0 (26.5) 33.7-48.4      | 67.7 (23.1) 66.6-68.9              | 47.3 (24.1) 40.5-54.0             | 0.28                                           |
| Social functioning                | 64.2 (27.2) 56.6-71.8      | 88.2 (20.2) 87.2-89.2              | 67.7 (25.5) 60.5-74.8             | 0.14                                           |
| Role emotional                    | 52.7 (45.2) 39.8-65.5      | 86.1 (28.1) 84.7-87.6              | 58.2 (43.6) 45.9-70.4             | 0.11                                           |
| Mental health                     | 59.1 (21.9) 53.0-65.2      | 80.0 (19.1) 79.0-80.9              | 63.0 (19.1) 57.7-68.4             | 0.20                                           |
| Physical component summary        | 40.6 (11.6) 37.3-44.0      | 49.5 (9.6) 49.0-50.0               | 38.3 (12.1) 34.9-41.7             | -021                                           |
| Mental component summary          | 38.2 (13.6) 34.2-42.1      | 50.0 (10.2) 49.4-50.5              | 41.1 (12.2) 37.7-44.5             | 0.21                                           |

Effect size: standardized response mean.
Abbreviations: CI, confidence interval; SD, standard deviation.

a Frequent attenders vs norms: all comparisons significant (Mann-Whitney U test, P < .0001); effect size: Cohen d.

b Frequent attenders baseline vs postintervention: all comparisons nonsignificant (Wilcoxon signed-rank test).

FIGURE 1 Development over time of Hospital Anxiety and Depression Scores (HADS) measured session by session. Scores are presented as mean values including 95% confidence interval. The P value is calculated from the random intercept model.
occasions without sufficient symptomatic relief. The use of CBT with a focus on the 2 most prevalent complaint categories resulted in lowered anxiety and depression, the perception of a somewhat reduced impact of pain on life, and a few altered coping strategies, but no change in generic HRQoL. Short Form-36 is a widely used generic instrument that is not disease specific. In the present study, there was no change in HRQoL after CBT. However, SF-36 is probably not sensitive enough to measure these changes, and important aspects of FAs' complaints may not be completely covered. Instead, additional outcome measurements may be needed to evaluate and judge the efficacy of CBT for FAs.

4.2 | Other studies

Cognitive behavioral therapies have been proven effective for a number of diagnoses, including anxiety and pain. In this study, lower anxiety and depression ratings were shown as results of CBT. We demonstrated that CBT in a group setting, including psychological as well as pain-control interventions in the same treatment program, was useful for FAs. Interventions are most often chosen to address specific symptoms or conditions, but here, we tried an overall approach. Frequent attenders differ from other patient groups in their demand for health care services, including staff time, and they are hard to sort into diagnostic categories. The extent of CBT was, in part, determined by the applied relaxation training manual and seems to be beneficial for this particular patient group. Applied relaxation, the base ingredient in the present study, originates from behavioral therapy, and its practice leads to reduced pain and anxiety, an increase in perceived control, and reduced symptoms. This is consistent with our results. In previous studies, psychological factors have been of great interest when trying to explain the excessive help-seeking pattern among FAs. However, in at least 1 study, FAs did not agree with the statement that psychological factors explained their malaise.

Coping strategies for pain changed as a function of CBT, and these changes reflect less use of passive coping strategies such as catastrophizing and praying and hoping. In previous research, catastrophizing was associated with low ratings of self-efficacy, whereas hoping and praying were associated with a perceived external focus, ie, reasons for suffering are attributed to factors outside of the individual. Catastrophizing was also related to poorer emotional adjustment with increased anxiety and depression. Our results indicate an increased sense of internal control and self-efficacy, but this need to be examined in more detail.

Musculoskeletal pain and psychosocial distress are both known to affect HRQoL. Frequent attenders included in the study rated their HRQoL worse than the Swedish norm population on all SF-36 domains. This is conceptually consistent with previous findings, even though different outcome measurements have been used. Although we found no improvement of HRQoL in the present study, 1 previous multicomponent intervention including assessment, medication, education, monitoring, and evaluation showed HRQoL improvement in FAs suffering from depression. The improved outcome from using such an approach is likely because of several factors, including continuous physician contact and the fact that the intervention involved the patients' own GPs.

Most FAs are content with their GP, and the impact of trust and contentment with health care providers is crucial for successful outcomes when it comes to patients who suffer from the kinds of illness that necessitate frequent medical consultations. The combination of psychological and medical staff involved in CBT in the present study contributes to increased impact of this treatment rationale. Indeed, this combination approach was identified in a study on individual CBT as being an important influence on the visiting patterns of FAs.

4.3 | Limitations of the study

The selection of patients deserves special attention, because they were invited in a research context to take part in a CBT group therapy administered by a single health care provider. Also, long-term results beyond the follow-up period remain unknown. Furthermore, the CBT concept is broad, and specific applications vary, which may hamper generalization of these results. In addition, the heterogeneous group of FAs may possibly benefit more from individualized CBT and disease-specific management programs including multiprofessional teams addressing both physical and psychological components of the illness at hand. It is unknown if health complaints and/or organization of health care in this study have changed over time. This study is limited by the small sample size; statistical hypothesis testing may be subject to type II errors. Future studies on FAs may include larger patient groups (preferably with predefined degree of symptoms) to allow for randomization to different treatment modalities given in-group or individually. Another interesting approach would be to include FAs with varying health issues and randomize them into treatment primarily addressing either physical illness or psychological distress.

5 | CONCLUSIONS

Cognitive behavioral therapy given in a group setting results in decreased feelings of anxiety and depression in the short term among FAs, and effects remain durable over a time period of 1 year. Group CBT changed the impact of pain on their life, reflecting improved life control. Nonadaptive coping strategies, ie, praying and hoping and catastrophizing, decreased. The results imply that broad treatment content is useful for a heterogeneous group of FAs. Thus, FAs benefit from CBT given in a group setting.

ACKNOWLEDGEMENTS

The authors acknowledge language editing by Jo Ann LeQuang of LeQ Medical and Ivar Lund Olsen, GP, for consultations of medical records and participation in treatment session.

FUNDING

The Region Gävleborg and FINSAM funded this research project.
CONFLICT OF INTEREST
No conflicts of interest declared.

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REFERENCES
1. Hajek A, Bock JO, König HH. Association of general psychological factors with frequent attendance in primary care: a population-based cross-sectional observational study. BMC Fam Pract. 2017;18(1):48.
2. Sirri L, Fava GA, Sonino N. The unifying concept of illness behavior. Psychother Psychosom. 2013;82(2):74-81.
3. Smits FTM, Wittkampf KA, Schene AH, Bindels PJ, Van Weert HC. Interventions on frequent attenders in primary care: a systematic literature review. Scand J Prim Health Care. 2008;26(2):111-116.
4. Gill D, Sharpe M. Frequent consultants in general practice: a systematic review of studies of prevalence associations and outcome. J Psychosom Res. 1999;47(2):115-130.
5. Mechanic D. Sociological dimensions of illness behavior. Soc Sci Med. 1995;41(9):1207-1216.
6. Simon GE, Manning WG, Katzelnick DJ, Pearson SD, Henk HJ, Helstad CP. Cost-effectiveness of systematic depression treatment for high utilizers of general medical care. Arch Gen Psychiatry. 2001;58(2):181-187.
7. Katzelnick DJ, Simon GE, Pearson SD, et al. Randomized trial of a depression management program in high utilizers of medical care. Arch Fam Med. 2000;9(4):345-351.
8. Malins S, Kai J, Atha C, et al. Cognitive behavior therapy for long-term frequent attenders in primary care: a feasibility case series and treatment development study. Br J Gen Pract. In press:2016; 2016.
9. Hall NM, Kuzminskyte R, Pedersen AD, Ørnbal E, Fink P. The relationship between cognitive functions, somatization and behavioral coping in patients with multiple functional somatic symptoms. Nord J Psychiatry. 2011;65(3):216-224.
10. Reibel DK, Greeson JM, Brainard GC, Rosenzveig S. Mindfulness-based stress reduction and health-related quality of life in a heterogeneous patient population. Gen Hosp Psychiatry. 2001;23(4):183-192.
11. Grossman P, Niemann L, Schmidt S, Walach H. Mindfulness-based stress reduction and health benefits: a meta-analysis. J Psychosom Res. 2004;57(1):35-43.
12. Elander J, Robinson G, Mitchell K, Morris J. An assessment of the relative influence of pain coping, negative thoughts about pain, and pain acceptance on health-related quality of life among people with hemophilia. Pain. 2009;145(1):169-175.
13. Keeley P, Creed F, Tomenson B, Todd C, Borglin G, Dickens C. Psychosocial predictors of health-related quality of life and health service utilisation in people with chronic low back pain. Pain. 2008;135(1):142-150.
14. Andersson SO, Mattsson B, LYNÖ N. Patients frequently consulting general practitioners at a primary health care centre in Sweden—a comparative study. Scand J Public Health. 1995;23(4):251-257.
15. Bergh H, Marklund B. Characteristics of frequent attenders in different age and sex groups in primary health care. Scand J Prim Health Care. 2003;21(3):171-177.
16. Vedsted P, Christensen MB. Frequent attenders in general practice care: a literature review with special reference to methodological considerations. Public Health. 2005;119(2):118-137.
17. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring clinical anxiety: psychometric properties. J Consult Clin Psychol. 1988;56(6):893-897.
18. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. Arch Gen Psychiatry. 1961;4(6):561-571.
19. Burell G, Granlund B. Women's hearts need special treatment. Int J Behav Med. 2002;9(3):228-242.
20. Claesson M, Birgander LS, Lindahl B, et al. Women's hearts—stress management for women with ischemic heart disease: explanatory analyses of a randomized controlled trial. J Cardiopulm Rehabil. 2005;25(2):93-102.
21. Rosenstiel AK, Keefe FJ. The use of coping strategies in chronic low back pain patients: relationship to patient characteristics and current adjustment. Pain. 1983;17(1):33-44.
22. Jensen IB, Linton SJ. Coping Strategies Questionnaire (CSQ): reliability of the Swedish version of the CSQ. Cog Behav Ther. 1993;22(3-4):139-145.
23. Bergström G, Jensen IB, Bodin L, Linton SJ, Nygren ÅL, Carlsson SG. Reliability and factor structure of the Multidimensional Pain Inventory–Swedish Language version (MPI-S). Pain. 1998;75(1):101-110.
24. Bergström G, Bodin L, Jensen IB, Nygren ÅL. Long-term, non-specific spinal pain: reliable and valid subgroups of patients. Behav Res Ther. 2001;39(1):75-87.
25. Kerns RD, Turk DC, Rudy TE. The West Haven-Yale Multidimensional Pain Inventory (WHYMPI). Pain. 1985;23(4):345-356.
26. Sullivan M, Karlsson J, Ware JE. The Swedish SF-36 Health Survey—I. Evaluation of data quality, scaling assumptions, reliability and construct validity across general populations in Sweden. Soc Sci Med. 1995;41(10):1349-1358.
27. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scand. 1983;67(6):361-370.
28. Lisspers J, Nygren A, Söderman E. Hospital Anxiety and Depression Scale (HAD): some psychometric data for a Swedish sample. Acta Psychiatr Scand. 1997;96(4):281-286.
29. Öst LG. Applied relaxation: description of a coping technique and review of controlled studies. Behav Res Ther. 1987;25(3):397-409.
30. Öst L-G. Tillämpad avslappning: manual till en beteendeterapeutisk coping-teknik. Uppsala: Universitetstryckeriet; 2001.
31. Linton SJ, Götestam KG. A controlled study of the effects of applied relaxation and applied relaxation plus operant procedures in the regulation of chronic pain. Br J Clin Psychol. 1984;23(4):291-299.
32. Morris SB, DeShon RP. Combining effect size estimates in meta-analysis with repeated measures and independent-groups designs. Psychol Methods. 2002;7(1):105-125.
33. Butler AC, Chapman JE, Forman EM, Beck AT. The empirical status of cognitive-behavioral therapy: a review of meta-analyses. Clin Psychol Rev. 2006;26(1):17-31.
34. Hauswaldt J, Hummers-Pradier E, Junius-Walker U. Health service use among patients with chronic or multiple illnesses, and frequent attenders—secondary analysis of routine primary care data from 1996 to 2006. Dtsch Arztebl Int. 2012;109(47):814-820.
35. Öst LG, Breitholtz E. Applied relaxation vs. cognitive therapy in the treatment of generalized anxiety disorder. Behav Res Ther. 2000;38(8):777-790.
36. Smits FT, Brouwer HJ, Zwitserlood AH, et al. Why do they keep coming back? Psychosocial etiology of persistence of frequent attendance in primary care: a prospective cohort study. J Psychosom Res. 2014;77(6):492-503.
37. Turner JA, Holtzman S, Mancl L. Mediators, moderators, and predictors of therapeutic change in cognitive–behavioral therapy for chronic pain. *Pain*. 2007;127(3):276-286.

38. Kersnik J, Scvab I, Vegnuti M. Frequent attenders in general practice: quality of life, patient satisfaction, use of medical services and GP characteristics. *Scand J Prim Health Care*. 2001;19(3):174-177.

39. Patel S, Kai J, Atha C, et al. Clinical characteristics of persistent frequent attenders in primary care: case–control study. *Fam Pract*. 2015;32(6):624-630.

40. Bergh H, Baigi A, Fridlund B, Marklund B. Life events, social support and sense of coherence among frequent attenders in primary health care. *Public Health*. 2006;120(3):229-236.

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**How to cite this article:** Strömbom Y, Karlsson J, Fredrikson M, Melin L, Magnusson P. Cognitive behavioral therapy for frequent attenders in primary care. *Health Sci Rep*. 2018;1:e80. [https://doi.org/10.1002/hsr2.80](https://doi.org/10.1002/hsr2.80)