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ORIGINAL ARTICLE

## The role of empowerment and quality of life in depression severity among unemployed people with affective disorders receiving mental healthcare

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### ABSTRACT

**Purpose:** Sick leave and unemployment are highly prevalent among people with affective disorders. Their depression severity is disabling and inversely related to having employment. No evidence-based vocational rehabilitation exists for this target group. Knowledge is therefore needed to understand the psychosocial factors that affect depression severity in order to develop new rehabilitation interventions. This study examined relationships between depression severity and empowerment, working life aspirations, occupational engagement, and quality of life in unemployed people with affective disorders receiving mental healthcare.

**Method:** In this cross-sectional study of 61 participants, instruments on psychosocial factors and questions on descriptive sociodemographic and clinical characteristics were administered. Descriptive, correlation, and regression statistics were applied.

**Results:** Correlation and regression analyses showed significant inverse relations between depression severity and empowerment and quality of life. The odds for more severe depression decreased with higher empowerment and quality of life. However, neither extent of engagement in daily life nor working life aspiration was related to depression severity.

**Conclusions:** An empowerment approach and strategies, which support the quality of life, are needed in development of vocational rehabilitation interventions, and bridging of mental healthcare and vocational services.

### ARTICLE HISTORY

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### KEYWORDS

Depression; bipolar disorder; sick leave; return to work; vocational rehabilitation

### ► IMPLICATIONS FOR REHABILITATION

- Enhancing empowerment and quality life in the return to work process can decrease depression severity in unemployed people with affective disorder.
- There is a need to address work issues in addition to symptom reduction in primary and mental healthcare.
- Bridging the service and time gap between vocational rehabilitation and healthcare is recommended for mitigating long-term unemployment for people with affective disorders who want to work.

### Introduction

Affective disorders such as depression and bipolar disorder are highly prevalent and constitute a major source of disability that lead to long-term sick leave and unemployment.[1–4] People with bipolar disorder are studied together with people with depression since their depressive episodes have greater effect on their disability and employment status than manic episodes.[5,6] In Sweden, rates of sick leave increased during 2005–2012 and affective disorders constitute the largest cause of recurrent sick leaves, and women are over-represented.[4,7,8] Approximately 7% of people on long-term sick leave (>60 days) are unemployed.[7] This group typically receives treatment in mental healthcare with access to medication, counseling and psychological therapy. However, regaining health does not automatically lead to acquiring employment and participating in working life for this group.[8] They are at risk of ending up in a gap between mental healthcare treatments and vocational rehabilitation services from other authorities.[9–11] In addition, comorbidity, e.g., substance abuse,[12] attention deficit, and hyperactivity disorder (ADHD),[13] exhaustion disorder [14] and somatic disease,[15,16] contribute to disability

and make the return to work process even more complex. The need of support for attaining employment seems clear. To date, there is no evidence-based vocational rehabilitation intervention that target people with affective disorders.[8,17] This is the case for the employed [18] and the unemployed.[19] However, very little is known of the life situation and the intervention needs of this group of people. Further investigation on depression severity and its relation to psychosocial functioning and quality of life is therefore crucial in order to develop such new vocational interventions.

Previous research on people with affective disorders generally shows a negative relationship of depression severity with employment status,[5,20,21] work ability,[22] psychosocial functioning,[6,23] and quality of life.[24,25] Lower levels of psychosocial functioning and quality of life can remain even though depression has decreased.[28–30] A positive relation between depression severity and persistent difficulties in work ability is found.[23,26,27] Unemployed people are particularly vulnerable.[1,23,26,31,32] However, no previous studies take into account whether psychosocial components in terms of perceived empowerment, aspiration to work, and time use and engagement level are related with depression severity for this target group. In accordance with

research design literature,[33] we aim for a correlational design and propose a conceptual framework to support the assumptions of relationships below.

Empowerment is reported to play a vital role in vocational rehabilitation for people with psychosis, i.e., severe mental illness.[34] Empowerment concerns individual, organizational, and community levels, with a psychological dimension that refers to self-efficacy and self-esteem.[35] A key aspect of this dimension is the individual's perceived control over several life domains, and having the possibility and ability to make one's own important decisions in life spheres.[35] In contrast, a European study of people with affective disorders showed that alienation, social withdrawal, and discrimination were negative consequences of depression severity.[36] Therefore, empowerment is presumed to relate adversely to depression severity among people with affective disorders on long-term unemployment. They may find it difficult to believe they can work and make decisions in accordance with their work-life aspirations.[37] Hence, "working life aspiration" is believed to play an important role of empowerment in return to work success.[38,39]

Another recognized way to evaluate psychosocial functioning is by time use methods. These provide a glimpse of real-life functioning and engagement in daily occupations and participation in society.[40] Here, occupations refer not only to work, but to all activities we participate in.[41] Level of occupational engagement describes the extent to which time use is characterized by a balance of activity and rest, meaningful occupations, social interplay, the ability to reflect and make sense of experiences, spending time in social and geographical environments, as well as taking initiative and having daily routines.[40] In people with severe mental illness, a higher level of occupational engagement is linked to better self- and health-related variables, fewer symptoms [40,42] and work potential.[43] Accordingly, depression severity can be assumed to impinge negatively on level of occupational engagement and thus disability. To our knowledge, no studies have focused on the relationship between time use characteristics and depression severity. Moreover, quality of life is an important subjective health outcome in depression, not fully studied among people with affective disorders in relation to their vocational rehabilitation context and is also explored.

The present study aimed to investigate depression severity and its relationship to empowerment, working life aspiration, occupational engagement, and quality of life as perceived by unemployed people with affective disorders in mental healthcare. A second aim was to describe the target group's situation, in terms of socio-demographic and clinical characteristics. We hypothesized that depression severity is adversely related to levels of empowerment, working life aspiration, occupational engagement, and quality of life.

## Methods

### *Research context, procedure, and participants*

This study has a cross-sectional study design and is part of a REHSAM (Rehabilitation and Coordination Program) research project that aims to develop effective vocational rehabilitation for people with affective disorders who are on long-term sick leave. The REHSAM project was conducted at four mental healthcare centers situated in small to medium-sized towns in the region of the Skåne County Council in the southern Sweden. The head of the division of mental healthcare service and the research coordinator of this County Council chose the centers. Following criteria were attended to; diversity in geography and demography as well as

rural and urban characteristic of town where the mental healthcare centers were situated, and centers not being involved in research by the time of the study. Each center agreed to participate in the study and the REHSAM project as a whole. Several introductory meetings were held. First, there was a meeting with the managers, and then with all staff, including psychiatrists, psychologists, occupational and physical therapists, nurses, and social Counselors.

The inclusion criteria for participants included the desire to return to work, diagnosis of depression or bipolar disorder, aged between 18 and 63 years, unemployed for the preceding year, able to read and understand Swedish, and able to attend project information meetings. Exclusion criteria included having a physical disability or being suicidal (as assessed by the mental healthcare team). Potential participants received verbal and written project information from their treatment contact or by reading leaflets available in the waiting rooms. A project coordinator at each center held information meetings regularly. A web-site and waiting room posters or contact with treatment staff were used to notify participants of meeting dates and times. The meetings provided verbal and written information about the study, duration of involvement, procedural questions, and the voluntary and confidential nature of participation. Most participants signed their informed consent at this meeting; others wished to consider involvement and returned later for assignment to a meeting. Participants were contacted by a research assistant, and invited to an interview. The procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 1983. This study was approved by the regional ethical board in Lund, Dnr 2011–544.

Seventy-seven participants provided written consent. Fourteen did not attend the interview, although three appointments were scheduled. Two participants were excluded since they did not meet the inclusion criteria. One had multiple sclerosis, and one did not fulfill the diagnostic criteria. The final study sample was with 61 participants. Forty-four were female and 17 were male; this distribution is in line with national sick leave data from the Swedish Social Insurance Agency.[7]

### *Data collection*

Data collection took place at the mental healthcare centers and lasted for up to two hours. A break was included, if needed. Two experienced interviewers, hired as research assistants in the REHSAM project administered the measurement instruments. They were trained in instrument coverage and usage prior to data collection. Data collection lasted for 12 months, starting from October 2012.

### *Measures*

A questionnaire on socio-demographics and clinical characteristics (including somatic comorbidity) was administered first. The diagnosis registered was set by the medical doctor at each mental healthcare center and was again validated against medical records. Other measures of clinical characteristics (comorbidity) and functioning are presented below.

### *Depression severity*

MADRS-S, the Montgomery-Åsberg Depression Self Rating Scale, was used to measure depression severity.[44] MADRS-S is widely used in both practice and research. The rating scale has good psychometric properties.[45] The self-rating scale has nine questions,

graded 0–6, and a sum score of 0–54. MADRS-S targets mood, feeling of unease, sleep, appetite, ability to concentrate, initiative, emotional involvement, pessimism, and zest for life. Scores indicate no or very light depression (0–12 points), light depression (13–19 points), moderate depression (20–34 points), and severe depression (>35 points).

### **Empowerment**

The Swedish version of the Empowerment scale (ES), was administered.[46] The ES was developed by Rogers et al.[47] The scale consists of 28 statements (items) and five subscales: self-efficacy/self-esteem, power/powerlessness, community activism, righteous anger, and optimism/control over the future. Respondents rate each statement, e.g., “Generally I am able to overcome hindrances”, according to an agreement scale from “strongly agree = 1” to “strongly disagree = 4”. The sum score ranges from 28 to 112 points. A higher score indicates a greater notion of empowerment. The ES instrument has sound psychometric properties.[46]

### **Working life aspiration**

The empowerment scale does not include a self-efficacy/self-esteem item specifically related to individual aspiration to work. We therefore included one item from the Worker Role Self-Assessment scale (WRS) to address participants confidence in achieving a working life.[48] The item has a good predictive validity for such expectation.[38,39]

### **Occupational engagement (time use)**

Profiles of Occupational Engagement in people with Severe mental illness (POES) instrument was used to determine participant level of occupational engagement.[49] POES has a good psychometric properties,[49–51] it is generic and does not involve diagnosis specific features. In this sense, it is suitable for people with long-term mental illness irrespective of diagnosis.[51] Cronbach’s alpha in the current sample was  $\alpha = 0.923$ . However, there was an indication of ceiling effect as the distribution of responses for the highest rating category, “continuously engaged”, exceeded 20% in some items. POES consists of two parts, a time-use diary, where the participants fill in their occupations, social and geographical environment, and reflections and reactions on occupation performed the last 24 h. The completed time-use diary is then assessed, the second part, according to the nine items on a four point scale, and concerns the extent to which the participant has a balance of daily rhythm of activity and rest, time spent in a variety of geographical and social environments, a variety and range of occupations, manages social interplay, reflects on occupational experience, experience meaningful occupations, has routines, and initiates own activities.[49] The sum score ranges from 9 to 36 points. A higher score indicates a higher level of occupational engagement.

### **Quality of life**

The Manchester Short Assessment of Quality of Life Scale (MANSA) is generic, has sound psychometric properties [52] and is available in a Swedish version.[53] MANSA contains 12 items on perceived satisfaction with life domains on a seven-point rating scale, from 1 = “could not be worse” to 7 = “could not be better”, with a sum score of 12–84 points. The domains cover satisfaction on life as a whole, finances, friends, family relations, leisure, living conditions, safety, fellow residents, sexual life, physical health, and mental health.

### **Clinical characteristics and comorbidity**

The Alcohol Use Disorders Identification Test (AUDIT) was administered as a measure of risk or misuse of alcohol.[54] The questionnaire consists of ten questions, with answers graded 0–4. The sum score extends from 0 to 40. Cutoff scores for hazardous use were set at >6 for women and >8 for men, according to Bergman and Källmén (2002). Test-retest and internal reliability are satisfactory.[55]

The Swedish version of Adult Attention Deficit and Hyperactivity Disorder Self Report Scales (ASRS) [56] was administered to screen for attention and hyperactivity symptoms. The questionnaire consists of 18 items that score symptom frequency on a scale of 0–4, with 72 as the highest possible sum score. Nine items assess symptoms of inattention and the other nine reflect hyperactivity. Less than 17 points in either subscale indicates that ADHD is unlikely. A sum >24 in either subscale indicates a high probability of ADHD.[57]

Karolinska Exhaustion Disorder Scale (KEDS) was administered to rate symptoms of exhaustion disorder.[14] The scale has nine questions rating difficulties in the domains of concentration, memory, physical stamina, mental stamina, recovery, sleep, hypersensitivity to sensory impression, experiences of demands and irritation/anger. The scale is 0–6, with 54 as the highest sum score. A cutoff score of 19 has a high ability to discriminate between presence and absence of exhaustion disorder.[14]

### **Psychosocial functioning**

Global Assessment of Functioning Scale (GAF) was used to assess level of psychological and social functioning. GAF integrates symptoms and level of functioning, and is widely used in clinical settings.[58] The scale is from 1 to 100, where a higher score refers to fewer symptoms and better psychosocial functioning. The psychometric properties of the scale are good.[58,59] A trained research assistant performed this assessment.

### **Data analyses**

Descriptive statistics were applied for socio-demographic and clinical data. Non-parametric statistics were used for calculations of the ordinal data. Spearman’s rank correlation test was used to investigate relationships between depression severity and psychosocial variables. The Mann–Whitney U-test was applied to control for group differences between depression and bipolar disorder. Multicollinearity was checked using multicollinearity diagnostics by variance inflation factor (VIF) score.[60] Multicollinearity was assumed if the VIF score was >5. A stepwise logistic regression model was then applied. Depression severity was the dependent variable, dichotomized into no or mild depression versus moderate to severe depression at the median value. If the psychosocial variables were associated with depression severity at  $p < 0.10$ , they were included in the model. The SPSS Statistics 22 was used for all data analyses, and the significance level was set at  $p < 0.05$ .

### **Results**

Descriptive statistics are presented in Table 1. The majority of participants were female, lived with a partner or parents, married, had children, completed high school, and originated from Sweden. Two-thirds had depression; 31% had bipolar disorder. Most participants had experienced between 1 and 4 illness episodes. While 42% reported no hospital admission, 41% reported hospitalization once or twice. Each participant received treatments and counseling

Table 1. Background characteristics of study participants ( $n = 61$ ).

Socio-demographics	N (%)
Female/male	44 (72)/17 (28)
Age in years, mean (SD)	41 (10)
Civil status	
Married/not married or divorced	20 (33)/30 (49) or 11 (18)
Cohabiting/living alone ( $n = 60$ )	30 (49)/30 (50)
Have children, yes/no	37 (61)/24 (39)
Educational level	
Comprehensive school	9 (15)
6th form college	33 (54)
College/university	19 (31)
Country of origin (Sweden)	56 (92)
Work history	
Work experience yes/no	58 (95)/3(5)
Years since last employment, mean (SD) ( $n = 55$ )	4.4 (3.1)
Clinical characteristics	
Depression/bipolar disorder	42 (69)/19 (31)
Age in years at first contact with psychiatry, mean (SD) ( $n = 59$ )	28 (12)
Illness episodes, mean (SD) ( $n = 47$ )	6 (9)
Hospital admission, mean (SD) ( $n = 59$ )	2 (5)
Admissions: 0/1–2 times/3–5 times	42%/41%/15%
First contact with psychiatry, years, mean (SD) ( $n = 58$ )	12 (10)
Mental healthcare service	
Medication ( $n = 57$ )	51 (90)
Counseling ( $n = 58$ )	46 (79)
Cognitive behavioral therapy ( $n = 55$ )	21 (38)
Psychiatric dynamic therapy ( $n = 51$ )	6 (12)
Physical therapy ( $n = 55$ )	14 (25)
Occupational therapy ( $n = 52$ )	8 (15)
Comorbidity	Median (min–max)
ASRS1 (inattention) ( $n = 61$ )	20 (1–31), cut off score <17 and >24
ASRS2 (hyperactivity) ( $n = 61$ )	15 (2–29), cut off score <17 and >24
AUDIT (alcohol use) ( $n = 61$ )	2 (0–10), cut off score >6 (women) and >8 (men)
KEDS (exhaustion) ( $n = 61$ )	26 (9–49), cut off score >19
GAF (functioning) ( $n = 55$ )	59 (42–77)
Somatic disease yes/no ( $n = 42$ )	23/19
Income and benefit characteristics	
Income in Euros, mean (SD) ( $n = 50$ )	EUR 1032 (456)
Sick leave	29 (47)
Welfare benefit	16 (27)
Livelihood support	6 (10)
Unemployment benefit	5 (8)
Other	5 (8)
Vocational status ( $n = 60$ )	
No prevocational intervention	35 (57)
Prevocational intervention, Social Insurance Agency and Public Employment Service*	15 (25)
Prevocational intervention at day center	3 (5)
Supported employment at PES*	2 (3)
Education/internship	2 (3)/1 (2)

\*PES: Public Employment Service.

in mental healthcare and 39% had contact with social services or primary care. Long-term pain was reported as the most common somatic comorbidity. Three participants reported having no work history. The average time since last employment was 4.4 years. The majority ( $n = 35$ , 57%) was not engaged in any vocational rehabilitation, while 18 (29%) participated in prevocational services through the Social Insurance Agency and Public Employment Service.

#### **Association of depression severity with empowerment, working life aspiration, occupational engagement, and quality of life**

Twenty-nine participants reported no to light depression severity. Thirty-two reported moderate to severe depression by MADRS-S. No significant differences between groups with depression or bipolar disorder were found in MADRS-S or other variables. As shown in Table 2, empowerment and quality of life correlated negatively with depression severity. Collinearity was analyzed

Table 2. Associations between depression severity (MADRS-S) and empowerment, working life aspiration, occupational engagement, and quality of life ( $n = 61$ ).

	Mean (SD)	Median (min–max)	Correlation coefficient, $r_s$	$p$ values
Empowerment ( $n = 60$ )	72 (8)	73 (52–90)	–0.476	0.001
Working life aspiration, ( $n = 60$ )	2 (1.0)	2 (1–5)	0.217	0.096
Occupational engagement ( $n = 58$ )	27 (5.8)	27 (9–36)	–0.048	0.721
Quality of life	46 (9)	47 (22–63)	–0.611	0.001

between empowerment and quality of life. The VIF score was 1.2 and indicated absence of serious collinearity problem. No significant correlations were found between depression severity and occupational engagement or working life aspiration.

#### **Multiple logistic regression analysis**

First, we adjusted for age, gender, and educational level. No statistically significant associations with depression severity were found

**Table 3.** Results of logistic regression with depression severity as dependent variable ( $n = 61$ ).

	$\beta$	S.E.	Wald	$p$ values	Odds ratio	95% CI
Empowerment ( $n = 60$ )	-0.109	0.049	4.897	0.027	0.90	0.81–0.99
Quality of life	-0.115	0.048	5.705	0.017	0.89	0.81–0.98

in this model. The variables empowerment, working life aspiration, and quality of life were included in the regression model. Results showed that the odds of belonging to the group with moderate to severe depression decreased with higher levels of empowerment and quality of life. Work aspiration was non-significant in this model. As shown in Table 3, the odds ratio for empowerment was 0.90 (95% CI 0.81–0.98), indicating that with every additional step on the ES scale, the odds decreased, for an individual to belong to the group with moderate to severe depression. This was similar for quality of life, which had an odds ratio of 0.89 (95% CI 0.81–0.98). The Hosmer and Lemeshow goodness-of-fit test showed a  $p$  value of 0.532, indicating that the model fits the data well.

## Discussion

The study assumption of an inverse association between depression severity and psychosocial and health variables was partially confirmed. The relationship with empowerment can partly be ascribed to the broad gap between mental healthcare and vocational rehabilitation. This was reflected in the mean of 4.4 years since last employment, and that the majority lacked prevocational engagement or rehabilitation. Such a long wait can worsen disability, foster helplessness, depressive thoughts, feelings of alienation, and a pessimistic view of future employment. The consequence is lack of empowerment to influence one's own rehabilitation. There is an obvious risk for depression recurrence or sustained disability, i.e., difficulty in psychosocial functioning.[26,61,62] Hillborg et al. [37] reported that experience of deficient support in vocational rehabilitation, misunderstandings, and incongruent demands from authorities foster growing feelings of disempowerment. In contrast, reinforcement of self-efficacy is achieved in a social context where the individual is acknowledged as a capable person.[37] Such a confirmation and empowerment approach is an important ingredient in new vocational interventions, in order to support individual confidence in decision-making and to strengthen motivation towards an employment goal. The time-gap between services highlights the importance of access to vocational interventions, and of promoting integration of vocational mental healthcare services.

Quality of life showed a negative association to depression severity, and this is in line with previous studies in other research contexts.[24,25] Social support is an important determinant of quality of life.[53] Accordingly, providing social support or facilitating connections with important others is essential in the mental health and rehabilitation context.[63–65] This might help build individual self-efficacy, positively impact empowerment,[66] and counteract reported alienation and social withdrawal.[36] The fact that quality of life might remain at a low level,[28,30] even though depression severity decreases, confirms the need of psychosocial support to increase subjective well-being.

The target group, unemployed people with affective disorders in mental healthcare in Sweden, reported on somatic comorbidity, exhaustion disorder (KEDS), and attention deficit disorders (ASRS), which complicates their picture. The literature emphasizes that it is a complex matter to correctly diagnose depression, differentiate between psychiatric and somatic comorbidity, and assess rehabilitation needs.[15,16] Whether such factors have a negative impact on

quality of life and reemployment is difficult to say. This was not part of the study. However, our descriptive results can help form new research hypotheses. No alcohol misuse was reported. Participant psychosocial functioning was better (GAF,  $m = 59$ ) than people with a first episode of major depression (GAF,  $m = 49.2$ ) [24] and unemployed people in mental healthcare in the United States (GAF,  $m = 52.5$ ).[25] This could be due to the need to adapt to everyday life because of long-term unemployment. Such an assumption is supported by our non-significant results of the inverse relation between depression severity and occupational engagement and time use. Participant engagement in lifestyle might be a consequence of ~60% having children and 50% cohabiting. This social situation may generate a variety of occupations that need to be performed throughout the day. In fact, engagement in different occupations helps unemployed people with affective disorders to move on during the day and to experience achievements.[67] Study participant engagement level may reflect readiness to reenter the labor market, as shown among the severely mentally ill.[43] On the other hand, empowerment was higher among people with severe mental illness,[43] compared to participants in the present study. This indicates the importance of including an empowerment approach in vocational rehabilitation. Similar and worse quality of life were reported in both mental illness groups.[68]

## Strength and limitations

The small sample size makes generalizations difficult. External validity is restricted to unemployed people with affective disorders who receive treatment in mental healthcare in Sweden. In addition, the cross-sectional design prevents us from drawing cause and effect conclusions. A randomized controlled study is needed to evaluate causal associations. However, cross-sectional studies are important for the elaboration of a new problem and of testing assumptions related to a new research area.[33] The results are informative on important elements for developing vocational interventions for people with affective disorders. Regarding the indicated ceiling effect when using the POES instrument in people with affective disorders, it is a signal to further assess occupational engagement according to POES, in relation to various target groups, as discussed in a previous study.[51] Furthermore, the aim of the present study was not to analyze associations between depression severity and different comorbid diagnoses, but to contribute to a description of this target group, which is in need of vocational support. Including comorbidity in a correlation and regression analysis to examine the preliminary influence of comorbidity on depression severity would be interesting but warrants another research focus.

## Conclusions

Empowerment and quality of life influence depression severity as reported by unemployed people with affective disorders. There is a time and service gap between mental healthcare and vocational services that may negatively impact depression severity. An empowerment approach and strategies, which support quality of life, are needed in the development of vocational rehabilitation interventions and the bridging of mental healthcare and vocational services.

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## Disclosure statement

The authors report no conflict of interests in relation to this paper.

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