

BMJ Open Emotions and encounters with healthcare professionals as predictors for the self-estimated ability to return to work: a cross-sectional study of people with heart failure

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ABSTRACT

Objectives: To live with heart failure means that life is delimited. Still, people with heart failure can have a desire to stay active in working life as long as possible. Although a number of factors affect sick leave and rehabilitation processes, little is known about sick leave and vocational rehabilitation concerning people with heart failure. This study aimed to identify emotions and encounters with healthcare professionals as possible predictors for the self-estimated ability to return to work in people on sick leave due to heart failure.

Design: A population-based cross-sectional study design was used.

Setting: The study was conducted in Sweden. Data were collected in 2012 from 3 different sources: 2 official registries and 1 postal questionnaire.

Participants: A total of 590 individuals were included.

Statistics: Descriptive statistics, correlation analysis and linear multiple regression analysis were used.

Results: 3 variables, feeling strengthened in the situation ($\beta=-0.21$, $p=0.02$), feeling happy ($\beta=-0.24$, $p=0.02$) and receiving encouragement about work ($\beta=-0.32$, $p\leq 0.001$), were identified as possible predictive factors for the self-estimated ability to return to work.

Conclusions: To feel strengthened, happy and to receive encouragement about work can affect the return to work process for people on sick leave due to heart failure. In order to develop and implement rehabilitation programmes to meet these needs, more research is needed.

INTRODUCTION

For many people, the ability to work and provide for themselves are important aspects of life and of self-identity.^{1–3} This is also true for people who live with heart failure. Heart failure is a chronic progressive condition caused by an inability of the heart to deliver a required amount of oxygenated blood to the body's cells and tissues. A failing heart results in symptoms such as fatigue or

Strengths and limitations of this study

- The postal questionnaire has been used in several population-based studies, implying high reliability and validity in data.
- Data from the two official registries in use are highly reliable, still there might be flaws due to registration procedures.
- The cross-sectional design means that there is no causality in predictions and there can be some non-response bias due to the relatively low response rate.
- This study was conducted in Sweden, but the results can be generalised to other European countries with similar conditions.

breathlessness.⁴ The condition is also characterised by an unpredictable course meaning acute exacerbations unexpectedly interrupt stable periods.⁵ This causes difficulties for people with heart failure to work and to maintain an active place in working life. Subsequently, many patients with heart failure are sick-listed for long periods and there is a risk they never return to work.⁶ To be unable to work can lead to internal conflicts, or losses such as loss of self-esteem, economic security or social belonging.^{7 8}

In spite of medical advances, the prevalence of heart failure continues to rise. It is estimated that about 1–2% of the population have heart failure.⁴ Elderly (over 65 years) are most affected, but the condition also affects people under the age of 60–65. The prevalence of heart failure among people younger than 65 years has been estimated to 0.7–1%.^{9 10} Younger people with heart failure experience poor quality of life and poor health. In addition, they suffer more than older people from depression and/or low mood.^{8 11–14}

Sociodemographic factors such as being born in a foreign country, low level of education, low income, being older and female gender are associated with long-term sick leave and/or early retirement.^{6 15} But there are also other factors that can affect long-term sick-listed patients' ability to return to work. Such factors include how healthcare professionals encounter the sick-listed person.^{16–19} Also emotional responses can affect the ability to return to work.²⁰ Emotions are evoked and experienced when encountered by other people, especially when encountered by people who are perceived as particularly significant.²⁰ In the context of the present study, such significant people are healthcare professionals.

There is virtually no research about how to support people with heart failure regarding sick leave and working life. In addition, rehabilitation programmes and interventions for people with heart failure commonly focus on medication, physical activity or self-care²¹ which means aspects related to working life tend to be forgotten or unnoticed. In order to develop targeted interventions, there is a need for more understanding about factors that possibly affect sick leave and return to work for people with heart failure. The aim of this study was to investigate emotions and encounters with healthcare professionals as possible predictors for heart failure patients' self-estimated ability to return to work.

METHOD

This was a population-based cross-sectional study conducted in Sweden. Data were collected from three different sources during fall 2012: two official registries and one postal questionnaire. First, the regional Ethics Review Board in Uppsala, Sweden, approved the study (2011/074).

Sample

Several highly reliable registries are available for research in Sweden. The registries are population-based and contain person-related information. In addition, each individual has an unique civic registration number that makes it possible to connect data from a registry with another.²² For the current study, two registries were used: the Social Insurance Agency's sick leave registry and Statistic Sweden's population registry.

In Sweden, all residents are entitled to healthcare. The healthcare system is largely tax-funded. When an individual gets ill, the income loss is compensated by the employer for the first 14 days. After that, the Swedish Social Insurance Agency pays sickness benefit. Also, unemployed or self-employed people are paid sickness benefit. If an individual's working capacity is permanently reduced due to illness or disability, he or she obtains sickness or activity compensation.²³

The eligibility criteria were being on sick leave due to heart failure (ICD diagnosis I50.0) during the period of 1 March 2012 to 31 May 2012. First, Sweden Statistics obtained information from the Swedish Social Insurance

Agency's sick leave registry about people who had been sick-listed due to heart failure during the current period. The Social Insurance Agency could identify 1351 participants. There were 64 objects that were excluded due to death or because they had moved abroad. Statistics Sweden distributed a comprehensive questionnaire to the identified persons. After 2 postal reminders, 590 people had responded to the survey (response rate 45.8 per cent). Since return of the questionnaire counted as consent to participate, these 590 respondents were included in the study.

Data collection

The questionnaire was developed at Karolinska Institutet, Stockholm, Sweden. It has previously been used in several studies.^{16 17 24–26} The questionnaire is based on findings from qualitative and quantitative studies, clinical experiences, theoretical considerations and pilot studies.²⁵ Thus, high face validity can be claimed.²⁴ The questionnaire contains questions about positive and negative encounters with healthcare professionals and social insurance officers, what emotions the encounters have evoked, and whether the encounters have facilitated or impeded the respondents' self-estimated ability to return to work. In the present paper, the focus for the analysis was emotions evoked by positive and negative encounters with healthcare professionals. Since the questionnaire is very comprehensive, other parts of it have been reported elsewhere.^{18 19 27 28}

The respondents were asked to answer 'yes' or 'no' to whether they had been positively encountered by healthcare professionals in relation to their sick leave due to heart failure. In turn, the same question was asked regarding negative encounters. Healthcare professionals were defined as physicians, nurses, physiotherapists, counsellor/psychologists, occupational therapists, naprapaths/chiropractors or 'other professions'. The respondents answered the questions once for all types of health professionals, that is, there were not separate questions for each group of healthcare professionals. Next, if the respondents answered 'yes', they were asked to respond to 10 statements about emotions evoked by positive encounters with healthcare professionals. There were four possible responses ranging from 'Agree to a great extent' to 'Do not agree at all'. In similar, they were asked to respond to 11 corresponding statements about emotions evoked by negative encounters.

Next, the respondents were asked to estimate whether positive encounters with healthcare professionals had facilitated or impeded their ability to return to work. There were six possible responses: 'Have not been positively encountered', 'Impeded very much', 'Impeded to a certain extent', 'No impact', 'Facilitated to some extent' or 'Facilitated very much'. They were also asked to respond to corresponding statements about negative encounters. Finally, the respondents were asked four questions about how they had been supported by healthcare professionals with regard to heart failure. The

questions concerned whether they had received useful information, useful advice and support about paid work, encouragement about paid work and encouragement about being on sick leave. There were four possible responses: 'Always/almost always', 'Often', 'Rarely' and 'Never/almost never'.

Sociodemographic variables (sex; year of birth; age at the end of 2012; marital status, country of birth: level of education and annual income) were obtained from Statistic Sweden's population registry.

Data analyses

Descriptive statistics were used for frequencies and proportions. Correlations between variables were calculated with Pearson's correlation coefficients (r). Variables with significant coefficients ($p < 0.001$) were included in a second stage of analyses. Linear multiple regression analysis was used to explore the shared variance between the dependent variable (positive encounters' impact on the self-estimated ability to return to work) and the independent variables (feeling respected, contended, liked, strengthened in the situation, appreciated, energetic, happy, proud, relived/reassured, optimistic, disappointed, angry/annoyed, powerless, submissive, sad, weak/low-spirited, pessimistic, misunderstood, anxious/scared, wronged, ashamed, received useful information, received useful advice and support about paid work, receiving encouragement about paid work and sick leave). The non-standardised (B) and standardised (β)

coefficients with respective p values were also calculated.

RESULTS

Table 1 show sociodemographic characteristics for all respondents and for respondents who had experienced positive and negative encounters, respectively, with healthcare professionals. Numbers and proportions of answers about emotions evoked by encounters with healthcare professionals are shown in Table 2. Most respondents agreed that positive encounters evoked feelings of being respected.

Concerning negative encounters, a majority of those who responded agreed that feelings of disappointment were evoked. Table 3 shows sociodemographic data for respondents who perceived that positive and negative encounters, respectively, had facilitated or impeded their self-estimated ability to return to work.

Figure 1 shows that most of the respondents had received useful information ($n=509$). About half of the respondents had received useful advice and support ($n=486$) or encouragement about paid work ($n=483$). One-fourth had been encouraged to be on sick leave ($n=484$).

Table 4 shows the Pearson's correlation coefficients between all included variables. All emotions evoked by positive encounters were significantly correlated with the impact of positive encounters on self-estimated ability to return to work ($r=0.15-0.26$, $p < 0.001-0.001$).

In addition, 'Received useful information', 'Received useful advice and support about paid work' and

Table 1 Sociodemographic characteristics for all respondents and for respondents who had experienced positive and negative encounters, respectively, with healthcare professionals

Categorical variable	All respondents, n (%)	Respondents with experience of positive encounters, n (%)	Respondents with experience of negative encounters, n (%)
All	590 (100)	558 (100)	78 (100)
Gender			
Male	414 (70)	390 (70)	52 (67)
Female	176 (30)	168 (30)	26 (33)
Age categories			
23–59	269 (46)	255 (46)	41 (53)
60–67	321 (54)	303 (54)	37 (47)
Country of birth			
Sweden	491 (83)	468 (84)	65 (83)
Other	99 (17)	90 (16)	13 (17)
Marital status			
Married	316 (54)	308 (55)	46 (59)
Unmarried	150 (25)	142 (25)	17 (22)
Divorced/widowed	124 (21)	108 (19)	15 (19)
Income			
Low	108 (18)	101 (18)	18 (23)
Average	297 (50)	281 (50)	36 (46)
High	185 (31)	176 (32)	24 (31)
Level of education			
Compulsory	145 (25)	138 (25)	18 (23)
High school	345 (58)	323 (58)	47 (60)
University	100 (17)	97 (17)	13 (17)

Table 2 Numbers and percentages for respondents that to a certain or great extent agreed to statements about emotions evoked in encounters with healthcare professionals.

I felt...	Total number of responses, n (%)	Positive encounters, n (%)	I felt...	Total number of responses, n (%)	Negative encounters, n (%)
...respected	499 (100)	470 (94)	...disappointed	98 (100)	61 (62)
...strengthened in my situation	486 (100)	433 (89)	...angry/annoyed	95 (100)	58 (61)
...relieved/reassured	494 (100)	439 (89)	...powerless	98 (100)	58 (59)
...liked	477 (100)	422 (89)	...weak/low-spirited	94 (100)	52 (55)
...contended	488 (100)	429 (88)	...submissive	96 (100)	53 (55)
...appreciated	472 (100)	385 (82)	...sad	96 (100)	52 (54)
...optimistic	482 (100)	386 (80)	...pessimistic	96 (100)	50 (52)
...energetic	476 (100)	370 (78)	...misunderstood	96 (100)	47 (49)
...happy	474 (100)	364 (77)	...anxious/scared	96 (100)	44 (46)
...proud	460 (100)	291 (63)	...wronged	96 (100)	40 (42)
			...ashamed	94 (100)	22 (23)

The question read: 'How well do the following statements describe how you felt in your encounters with this person within healthcare?' The response options ranged from 1 'Agree to a great extent' to 4 'Do not agree at all'.

Table 3 Sociodemographic characteristics and respondents' perceptions of how positive and negative encounters with healthcare professionals influenced their ability to return to work

Categorical variables	All n, (%)	Return to work was...			
		Positive encounters		Negative encounters	
		...facilitated, n (%)	...not influenced, n (%)	...impeded, n (%)	...not influenced, n (%)
	590 (100)	255 (100)	258 (100)	34 (100)	221 (100)
Gender					
Male	414 (70)	178 (70)	178 (69)	25 (74)	151 (68)
Female	176 (30)	77 (30)	80 (31)	9 (26)	70 (32)
Age					
23–59	269 (46)	138 (54)	108 (42)	21 (62)	98 (44)
60–67	321 (54)	117 (46)	150 (58)	13 (38)	123 (56)
Country of birth					
Sweden	491 (83)	223 (87)	218 (84)	24 (71)	187 (85)
Other	99 (17)	32 (13)	40 (16)	10 (29)	34 (15)
Marital status					
Married	316 (54)	140 (55)	136 (53)	17 (50)	122 (55)
Unmarried	150 (25)	66 (26)	69 (27)	7 (21)	56 (25)
Divorced/widowed	124 (21)	49 (19)	53 (21)	10 (29)	43 (19)
Income					
Low	108 (18)	25 (10)	59 (23)	10 (29)	50 (23)
Average	297 (50)	116 (45)	138 (53)	15 (44)	118 (53)
High	185 (31)	114 (45)	61 (24)	9 (26)	53 (24)
Level of education					
Compulsory	145 (25)	68 (27)	65 (25)	5 (15)	60 (15)
High school	345 (58)	147 (58)	148 (57)	25 (74)	121 (55)
University	100 (17)	40 (16)	45 (17)	4 (12)	40 (18)

The question read: 'How have positive (negative) encounters from healthcare professionals affected your ability to return to work?' There was one response option that read 1 'I have not been positively (negatively) encountered'. The other response options ranged from 2 'Impeded (facilitated) very much' to 6 'Facilitated (impeded) very much'.

'Received encouragement about paid work' significantly correlated with the impact of positive encounters on self-estimated ability to return to work. Descriptive statistics are presented in [table 5](#).

A multiple regression analysis was conducted for the variables that significantly correlated with self-estimated ability to return to work ([table 6](#)). The model showed 23% of variance being shared with the dependent and

Figure 1 The respondents' perceptions about information, advice/support and encouragement.

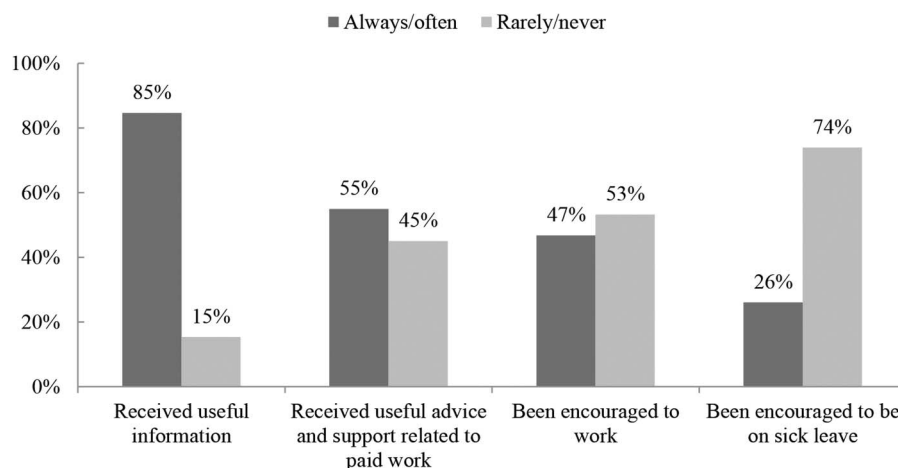


Table 4 The Pearson's correlation coefficients (r) and p values for all variables in the multiple regression model

Questionnaire item	Impact of positive encounters with healthcare professionals on self-estimated ability to return to work*	
	(r)	p Value
Liked†	0.16	0.001
Strengthened in my situation†	0.25	<0.001
Energetic†	0.24	<0.001
Relieved/reassured†	0.20	<0.001
Optimistic†	0.26	<0.001
Appreciated†	0.19	<0.001
Respected†	0.15	0.001
Contented†	0.21	<0.001
Happy†	0.25	<0.001
Proud†	0.23	<0.001
Received useful information‡	0.16	<0.001
Received useful advice and support about work‡	0.24	<0.001
Received encouragement about work‡	0.34	<0.001

*Scale 1–6 (1 Was not positively encountered, 2 Impeded much, 3 Impeded to a certain extent, 4 No impact, 5 Facilitated to a certain extent, 6 Facilitated much). Higher scores indicate more positive impact.

†Scale 1–4 (1 Agree to a great extent, 2 Agree to a certain extent, 3 Disagree to a certain extent, 4 Disagree to a great extent). Lower scores indicate more agreement.

‡Scale 1–4 (1 Always/almost always, 2 Often, 3 Rarely, 4 Never/almost never). Lower scores indicate more support.

Table 5 Descriptive statistics for all variables in the multiple regression analysis: the respondents' perceptions of how positive encounters influenced their ability to return to work, emotions evoked by positive encounters and experiences of receiving information, advice/support and encouragement about paid work (n=372)

Questionnaire item	Mean	SD
Impact of positive encounters with healthcare professionals on self-estimated ability to return to work*	3.9	0.9
Liked†	1.7	0.7
Strengthened in my situation†	1.6	0.7
Energetic†	1.9	0.8
Relieved/reassured†	1.7	0.7
Optimistic†	1.8	0.8
Appreciated†	1.8	0.8
Respected†	1.5	0.7
Contented†	1.7	0.7
Happy†	1.9	0.9
Proud†	2.2	0.9
Received useful information‡	1.8	0.7
Received useful advice and support about work‡	2.4	1.0
Received encouragement about work‡	2.6	1.0

*Scale 1–6 (1 Was not positively encountered, 2 Impeded much, 3 Impeded to a certain extent, 4 No impact, 5 Facilitated to a certain extent, 6 Facilitated much). Higher scores indicate more positive impact.

†Scale 1–4 (1 Agree to a great extent, 2 Agree to a certain extent, 3 Disagree to a certain extent, 4 Disagree to a great extent). Lower scores indicate more agreement.

‡Scale 1–4 (1 Always/almost always, 2 Often, 3 Rarely, 4 Never/almost never). Lower scores indicate more support.

independent variables ($R^2=0.26$, adjusted R^2 0.23, $F=9.55$, $p<0.001$). Significant β and B values were found for three variables: feeling strengthened in the situation, feeling happy and been encouraged about paid work.

Emotions evoked by negative encounters were not significantly correlated with the impact of positive encounters on self-estimated ability to return to work (r between -0.05 and 0.12 , p between 0.3 and 0.9).

Furthermore, 'Received encouragement about being on sick leave' was not significantly correlated with the self-estimated ability to return to work ($r=-0.02$, $p=0.73$).

DISCUSSION

The results of the present study demonstrate that when people on sick leave due to heart failure perceive, they

Table 6 B, β and p values for the independent variables from the multiple regression analysis with self-estimated ability to return to work as dependent variable*

Questionnaire item	B	β	p Value
Liked†	-0.05	-0.04	0.59
Strengthened in my situation†	0.28	0.21	0.02
Energetic†	0.09	0.08	0.28
Relieved/reassured†	-0.03	-0.02	0.80
Optimistic†	0.10	0.09	0.33
Appreciated†	-0.11	-0.09	0.31
Respected†	-0.14	-0.10	0.18
Contended†	-0.04	-0.03	0.75
Happy†	0.25	0.24	0.02
Proud†	-0.09	-0.09	0.29
Received useful information‡	0.07	0.05	0.35
Received useful advice and support about work‡	0.05	0.06	0.31
Received encouragement about work‡	0.28	0.32	<0.001

*Scale 1–6 (1 Was not positively encountered, 2 Impeded much, 3 Impeded to a certain extent, 4 No impact, 5 Facilitated to a certain extent, 6 Facilitated much). Higher scores indicate more positive impact.

†Scale 1–4 (1 Agree to a great extent, 2 Agree to a certain extent, 3 Disagree to a certain extent, 4 Disagree to a great extent). Lower scores indicate more agreement.

‡Scale 1–4 (1 Always/almost always, 2 Often, 3 Rarely, 4 Never/almost never). Lower scores indicate more support.

are positively encountered by healthcare professionals, it can enhance their perceptions of being able to return to work. In addition, to feel happy or strengthened in the situation can predict self-estimated ability to return to work. In addition, it has been described that if healthcare professionals show sick-listed people that they believe in their ability to work, the perception of being facilitated back to work increases.^{18–26} All this can contribute to patient empowerment.

Patient empowerment can be defined in a variety of ways. One basic assumption is that positive emotions, such as feeling strengthened or happy, can contribute to patient empowerment.²⁹ Furthermore, patient empowerment has been described as a process and an outcome implying patients' active participation in their own healthcare.³⁰ This signifies that sick-listed persons' inner resources can be strengthened through interactions with other people.²⁰ Patient empowerment has also been described as an activity that involves 'recognition and active support of the patient's ability and responsibility to self-manage his or her disease' (ref. 31, p. 5). It has also been described that healthcare professionals can facilitate patient empowerment by acknowledgement of the patients' perceived ability to handle important aspects of her or his health or disease.³² Healthcare professionals can also participate in the patients' process of change by bringing their own knowledge to the situation.³² In addition, healthcare professionals can activate and encourage patients to take own responsibility for their health concerns, to take actions to improve health

and to become experts in self-management of their own health.³¹ Practical ways of doing this can be by providing educational programmes, patient activation or health promotion interventions.³¹ See, for example, Shearer *et al*³² that found that a telephone-delivered empowerment intervention facilitated self-care in people with heart failure. Lynöe *et al*¹⁶ describe that patients can experience healthcare encounters as more positive if they also feel respected. On the contrary, encounters can be perceived as more negative if the patients are feeling wronged.¹⁶ In the present study, none of these emotions were identified as predictors for the self-estimated ability to return to work for people with heart failure. This can possibly be explained by the different populations in the different studies.

Concerning the population in the present study, though, people with heart failure are often offered participation in cardiac rehabilitation programmes that have the main focus on medication, self-care, physical activity or patient education.²¹ However, information about how to manage the work situation is often limited, implying that the patients can experience that they are abandoned by the healthcare professionals with regard to their return to work processes.³³ The results of the present study show that experiences of being encouraged about work correlated with the perception of being able to return to work. In a recent study about women with breast cancer, it was found that women who had been encouraged to work had lower risk of sick leave and also higher work capacity.³⁴ In the current study, these associations were not examined.

One challenge, though, for healthcare organisations is to develop rehabilitation programmes for patients with heart failure that include not only medical treatment, self-care and physical activity. Instead, there is a need for psychosocial interventions that can support the patients' return to work processes when possible,³⁵ for example, through psychologically strengthening patients in their situation, and providing encouragement for their return to work. Another challenge is that even though physicians, and especially physicians within primary care, are responsible for sickness certification and assessments of patients' work ability,^{36–37} they do not perceive work integration or vocational rehabilitation as part of their assignment.^{38–39} Other challenges involve boundaries between professions.³⁹ Even though sick-listing is mainly dealt with by physicians, other healthcare professionals are also more or less involved. For example, nurses are frequently contacted by patients concerning sick-listing issues³⁹ and assess appropriate actions regarding sick-listing and physiotherapists are often involved in the management of the patients' physical limitations.^{38–39} Suggested interventions for improvement and optimal tailoring of patients' sick leave and/or return to work processes include training and education for physicians,^{36–37} availability to multidisciplinary teams^{37–39} and also case management.³⁷ On the basis of the present results, no conclusions can be drawn about how to best

design rehabilitation programme for patients on sick leave due to heart failure. Subsequently, in order to identify how the management of sick leave and return to work can be optimised, more intervention studies are needed.

CONCLUSIONS

Positive encounters with healthcare professionals that result in feelings of being strengthened or happy or to receive encouragement about return to work can promote heart failure patients' perceptions about their ability to return to work. It is important to note that the present study investigated patients' perceptions of how different encounters influenced their ability to work. Accordingly, the actual return to work rate was not investigated. To some degree, the results have enhanced our understanding about factors that possibly affect rehabilitation and return to work for people with heart failure, but further studies are needed. In particular, intervention studies are needed.

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