

Health-related quality of life in persons with COPD attending self-management courses and pulmonary rehabilitation compared with the general population

R. Andenæs 1, K. Hvinden 2, M. S. Fagermoen 3, A. Lerdal 3

1. Oslo and Akershus University College, 2. Glittrelinikken, 3. Oslo University Hospital, NORWAY

Background

Chronic obstructive pulmonary disease (COPD) can have a pervasive effect on all areas of life. The disease may cause life-long medical treatment, hospitalizations, absence from work, and activity limitations, and negatively impact psychological well-being and HRQoL.

Aims

To explore relationships between socio-demographic variables, paid work, and physical activity, with physical and mental health variables in persons with COPD, and to compare their health-related quality of life scores with scores from the general population

Study design

- A cross-sectional correlational study design was used
- Data collected within the first 2 days of commencement of educational and rehabilitation courses at 6 different sites.
- Participations from both in- and out-patient pulmonary rehabilitation or self-management courses included.

Variables included

- Short Form 12v2
- Levels of physical activity
- Sociodemographics

RESULTS

Of 127 course attendees, 100 (78.7%) consented to participate. Valid responses on all items were recorded for 88 participants.

Socio-demographic characteristics of study participants

	All N=88	Men n=47 (53.4 %)	Women n=41 (46.6 %)	<i>t</i>	<i>p</i>
Age (years)	M (SD) 64. (9.7)	M (SD) 64.4 (10.2)	M (SD) 64.1 (9.2)	0.18	0.86
Level of formal educ	N (%)	n (%)	n (%)	χ^2 (df)	<i>p</i>
7-9 yrs	27 (30.7)	13 (27.7)	14 (34.1)	6.35 (4)	0.18
10-11 yrs	22 (25.0)	16 (34.0)	6 (14.6)		
12 yrs	14 (15.9)	5 (10.6)	9 (22.0)		
13-15 yrs	15 (17.0)	9 (19.1)	6 (14.6)		
≥16 yrs	10 (11.4)	4 (8.5)	6 (14.6)		
Marital status				χ^2 (df)	<i>p</i>
Married/cohab	53 (60.2)	32 (68.1)	21 (51.2)	2.60 (1)	0.11
Employment status				χ^2 (df)	<i>p</i>
Paid work	19 (21.6)	12 (25.5)	7 (17.1)	0.93 (1)	0.34

Note. No statistically significant differences between men and women on any of the variables by Chi-square or *t*-tests analysis.

Men reported higher HRQoL than women on four of the SF-12 dimensions and with clinical effect sizes; bodily pain ($d = 0.51$), vitality ($d = 0.45$), emotional role ($d = 0.55$), and mental health ($d = 0.45$). Men also reported higher PCS than women ($d = 0.45$). All $p < 0.05$.

Bivariate relationship showed that younger participants and those in paid work reported higher PCS scores than those with higher age and not in paid work.

Being male, and being physically active were associated with higher MCS.

Except for mental health, respondents scored lower on all HRQoL subdomains compared with norms.

Multivariate regression analysis showed that work predicted improved PCS-scores (<0.01), with control for sex and marital status. Levels of physical activity predicted improved MCS-scores (0.04).

Conclusions

- Being younger, male, physical active, and participate in paid work are factors related to HRQoL in people with COPD attending pulmonary rehabilitation.
- Physical HRQoL is reduced compared to the general population.

Figure 2. Norm-based scoring of SF-12-profile (HRQoL) for the participants with chronic obstructive pulmonary disease (Mean scores, SD and 95%CI, N=88).

Scores from the 1988 general US population used as norms: (mean score =50, SD=10)

