

DOES THE REHABILITATION-MOTIVATION CHANGE DURING AN INPATIENT CARDIAC REHABILITATION?

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Background & Aim

The change in lifestyle, a higher life expectancy and advances in the field of medical care leads to an increase in chronic diseases such as of coronary heart disease (Schoenenberger & Erne, 2009). Motivational factors to undergo a cardiac rehabilitation and the change of these factors during inpatient rehabilitation are seldom assessed and it is known that only few patients take part in an aftercare-program (Cooper et al., 1999). The purpose of this study was to identify patient's rehabilitation motivation and their changes during an inpatient cardiac rehabilitation.

Method

In 2012, 84 patients (mean age 56 years, sd 6, range 34-65; 66% men) filled in the PAREMO-20 (Nübling et al., 2005), a German measure of rehabilitation-motivation at the beginning and the end of an inpatient cardiac rehabilitation to conduct a pre-post comparison.

PAREMO-20 consists of the six scales (1) „Need for assistance and psychological burden of suffering = Emotional distress“, (2) „Restrictions of everyday life because of physical burden of suffering = Physical limitations“, (3) „Reactions of significant others to the illness = Social support“, (4) „Readiness to change in terms of preventive behaviour = Readiness to change“, (5) „Initiative and knowledge = Knowledge“ and (6) „Hopelessness and Scepticism = Scepticism“ (Hafen et al., 2001; Nübling et al., 2005).

The patients were divided into 3 clinical groups (myocardial infarction [MI; n=24], hypertension, angina pectoris [H/Ap; n=28], coronary-heart-disease [CHD; n=30] in order to examine whether there were differences in rehabilitation-motivation between the groups.

Results

As expected, the patients showed statistically significant changes on the PAREMO-20 between the beginning and end of the rehabilitation. The level of knowledge improved statistically significant ($p < .0001$), emotional distress ($p = .028$) and physical limitations ($p = .039$) decreased (Table 1). In a survey conducted three months after completion of rehabilitation (n = 73 subjects) reported only six subjects at (8.7%), to visit a rehabilitation aftercare program.

Overall, there are only small gender differences in rehabilitation motivation (Table 2). Women showed higher emotional distress ($p = .034$) at the beginning and a higher level of information ($p = .001$) at the end of rehabilitation.

There were only slight differences in the rehabilitation motivation among the three groups of patients at the beginning and end of rehabilitation (Table 3). Patients with myocardial infarction had the highest scores on the scale "Social support" at the beginning of rehabilitation. At the end of rehabilitation, patients with CHD described obvious physical limitations.

PAREMO-20 Scales (range of scores)	T1 M / SD	T2 M / SD	Testing $T_{(df)}$ p
Emotional distress (3-12)	6.06 / 2.43	5.67 / 2.37	$T_{(83)} = 2.242$; $p = .028$
Physical limitations (4-16)	9.98 / 3.30	9.45 / 3.27	$T_{(83)} = 2.097$; $p = .039$
Social support (4-16)	8.99 / 2.89	9.05 / 2.84	$T_{(83)} = -.302$; $p = .763$
Readiness to change (3-12)	9.21 / 2.20	8.92 / 2.08	$T_{(83)} = 1.542$; $p = .127$
Knowledge (3-12)	9.02 / 2.30	10.17 / 1.70	$T_{(83)} = -5.041$; $p = .000$
Scepticism (3-12)	5.76 / 1.81	5.93 / 1.79	$T_{(83)} = -.832$; $p = .408$

Table 1: Change in rehab-motivation during the rehabilitation

Conclusion

The results showed that rehabilitation-motivation changed during inpatient cardiac rehabilitation: the patients elevated their level of information regarding rehabilitation, they also reduced emotional distress and physical limitations. Gender differences in terms of rehabilitation-motivation were barely detectable, as well as differences between the three clinical groups. It was noticeable that less than 10% of patients attending an outpatient aftercare program. For this reason, during the inpatient rehabilitation significantly more information should be given about outpatient aftercare programs to increase the participation in these activities with the aim to reduce of mortality and morbidity and to improve quality of life (Cooper et al., 1999; Hahmann, 2012; Laimer, 2010).

PAREMO-20 Scales (range of scores)	♂ (n=55) M / SD	♀ (n=29) M / SD	Testing $T_{(df)}$ p
Beginning of Rehab			
Emotional distress (3-12)	5.64 / 2.29	6.86 / 2.53	$T(53) = 2.180$; $p = .034$
Physical limitations (4-16)	9.69 / 2.94	10.52 / 3.89	$T(45) = 1.004$; $p = .321$
Social support (4-16)	9.36 / 2.93	8.28 / 2.70	$T(61) = -1.704$; $p = .093$
Readiness to change (3-12)	9.27 / 2.07	9.10 / 2.47	$T(49) = -.351$; $p = .754$
Knowledge (3-12)	8.80 / 2.19	9.15 / 2.49	$T(52) = 1.183$; $p = .242$
Scepticism (3-12)	5.78 / 1.70	5.72 / 2.03	$T(49) = -.131$; $p = .897$
End of Rehab			
Emotional distress (3-12)	5.40 / 2.30	6.17 / 2.45	$T(54) = 1.401$; $p = .167$
Physical limitations (4-16)	9.16 / 2.97	10.00 / 3.78	$T(47) = 1.035$; $p = .306$
Social support (4-16)	9.15 / 2.82	8.86 / 2.90	$T(56) = -.430$; $p = .669$
Readiness to change (3-12)	9.04 / 1.97	8.69 / 2.29	$T(50) = -.692$; $p = .492$
Knowledge (3-12)	9.76 / 1.76	10.93 / 1.28	$T(74) = 3.472$; $p = .001$
Scepticism (3-12)	5.82 / 1.79	6.14 / 1.81	$T(56) = .774$; $p = .442$

Table 2: Gender differences in the rehab-motivation

PAREMO-20 Scales (range of scores)	MI (n=24) M / SD	Hypertension (n=28) M/SD	CHD (n=30) M/SD	Testing F ; p; post-hoc
Beginning of Rehab				
Emotional distress (3-12)	5.75 / 2.38	6.79 / 2.60	5.60 / 2.30	$F = 1.981$; $p = .145$
Physical limitations (4-16)	10.17 / 3.57	9.46 / 3.21	10.10 / 3.19	$F = .375$; $p = .689$
Social support (4-16)	10.13 / 3.15	7.96 / 1.95	8.83 / 3.01	$F = 4.035$; $p = .021$ post-hoc: I vs II
Readiness to change (3-12)	8.96 / 2.01	9.48 / 1.93	9.10 / 2.51	$F = .798$; $p = .454$
Knowledge (3-12)	9.17 / 2.53	8.96 / 2.17	9.06 / 2.31	$F = .049$; $p = .952$
Scepticism (3-12)	5.75 / 2.05	5.93 / 1.65	5.53 / 1.80	$F = .340$; $p = .713$
End of Rehab				
Emotional distress (3-12)	5.42 / 2.47	5.89 / 2.54	5.63 / 2.25	$F = .253$; $p = .777$
Physical limitations (4-16)	9.21 / 3.64	8.36 / 2.78	10.50 / 3.18	$F = 3.315$; $p = .041$ post-hoc: II vs III
Social support (4-16)	9.88 / 2.69	8.29 / 2.48	9.07 / 3.16	$F = 2.075$; $p = .132$
Readiness to change (3-12)	8.29 / 2.07	9.39 / 2.10	8.93 / 2.07	$F = 1.818$; $p = .169$
Knowledge (3-12)	10.33 / 1.43	10.29 / 1.78	10.00 / 1.80	$F = .318$; $p = .728$
Scepticism (3-12)	5.96 / 2.12	5.82 / 1.42	6.07 / 1.89	$F = .132$; $p = .876$

Table 3: Differences in the rehabilitation motivation among the three clinical groups

References

- Cooper, A., Lloyd, G., Weinman, J. & Jackson, G. (1999). Why patients do not attend cardiac rehabilitation: role of intentions and illness beliefs. *Heart*, 82, 234-236.
- Hafen, K., Jastrow, J., Nübling, R. & Bengel, J. (2001). Entwicklung eines Patientenfragebogens zur Erfassung der Reha-Motivation (PAREMO). *Die Rehabilitation*, 40, 3-11.
- Hahmann, H.W. (2012). Kardiologische Rehabilitation. Aktueller Stand und zukünftige Anforderungen. *Das Herz*. DOI: 10.1007/s00059-011-3559-8.
- Laimer, H. (2010). Update: Kardiologische Rehabilitation. *Journal für Kardiologie – Austrian Journal of Cardiology*, 17, 109-166.
- Nübling, R., Kriz, D., Horwig, J., Wirtz, M., Fuchs, S., Hafen, K., Töne, N. & Bengel, J. (2005). Normierung des Patientenfragebogens zur Erfassung der Reha-Motivation – PAREMO. Abschlussbericht. Freiburg: Albert-Ludwigs-Universität. Privatinstitut für Evaluation und Qualitätssicherung im Gesundheits- und Sozialwesen mbH.
- Schoenenberger, A.W. & Erne, P. (2009). Koronare Herzkrankheit – Definition und Epidemiologie. *Therapeutische Rundschau*, 66, 223-229.

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