

# Associations of illness perception and treatment adherence in a cohort of patients on chronic hemodialysis

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## INTRODUCTION

Patients' perceptions of illness influence various parameters of disease and treatment differently in acute and chronic settings. This could be demonstrated in individuals constantly being on some chronic disease or treatment. The aim of this study was to evaluate the connections of illness perception and treatment adherence in a cohort of patients undergoing hemodialysis.

## METHODS

A cross-sectional study of 102 patients on chronic hemodialysis was carried out in two hemodialysis centers. The patients were on dialysis more than 3 months, with 3 dialysis sessions per week. We used these self-report instruments in all patients: The Revised Illness Perception Questionnaire (IPQ-R), and The End-Stage Renal Disease Adherence Questionnaire (ESRD-AQ).

## RESULTS

Illness representations		Treatment plan adherence
Timeline (acute/chronic)	r	-0,297
	p	0,002
	N	102
Consequences	r	-0,258
	p	0,009
	N	102
Personal control	r	-0,006
	p	0,954
	N	102
Treatment control	r	-0,013
	p	0,900
	N	102
Illness coherence	r	0,169
	p	0,090
	N	102
Timeline cyclic	r	0,093
	p	0,353
	N	102
Emotional representation	r	-0,232
	p	0,019
	N	102

Table 1. Correlation of treatment adherence and illness representations

The cohort consisted of 56 male and 46 female, with average age of 54.2±13.8. We found a weak negative correlation of treatment adherence with timeline ( $r=-0,297$ ,  $p=0.002$ ), consequences ( $r=-0.258$ ,  $p=0.009$ ) and emotional representations ( $r=-0.232$ ,  $p=0.019$ ) subscales, other principal component of IPQ-R were not significantly associated with ESRD-AQ parameters (table 1). In a multivariate linear regression model, emotional representations ( $\beta=-0.215$ ,  $p<0.05$ ), age ( $\beta=-0,243$ ,  $p<0.05$ ) and smoking status ( $\beta=-0.238$ ,  $p<0.05$ ) were independent predictors of treatment adherence in the cohort (table 2).

	B	Beta	t	p	VIF*
Timeline	-0,162	-0,190	-1,909	0,059	1,324
Consequences	-0,098	-0,099	-1,057	0,293	1,180
Emotional representation	-0,118	-0,215	-2,264	<b>0,026</b>	1,205
Age	-0,068	-0,243	-2,587	<b>0,011</b>	1,181
Gender	0,848	0,110	1,072	0,286	1,404
Smoking status (yes)	-2,154	-0,238	-2,457	<b>0,016</b>	1,252

Table 2. Correlation of treatment adherence and illness representations, according to demographic parameters \*VIF, variance inflation factor

## DISCUSSION

Better treatment adherence on chronic hemodialysis could be achieved in patients with strong emotional representations because of the illness itself, elder age, and non-smoking status. A longitudinal design is needed to examine the outcomes in a period of treatment in the same individuals but changing types of renal replacement therapy, i.e. switching to peritoneal dialysis or being transplanted.