Financial Distress and its Determinants in Rheumatoid Arthritis

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Financial distress is prevalent in RA and is associated with depression, not expensive disease modifying therapies.

FORWARD
The National Databank for Rheumatic Diseases

BACKGROUND

- Financial toxicity a.k.a. financial distress: the characterization of the adverse effects that healthcare costs can exert on patient financial wellbeing, underutilized as an important patient reported health outcome
- The Functional Assessment of Chronic Illness Therapy – Comprehensive Score for Financial Toxicity (FACIT-COST) questionnaire is a quantitative measure of financial distress recently validated in chronic diseases
- Hypothesis: Financial distress is prevalent in patients with rheumatoid arthritis (RA) and is associated with more expensive therapeutic regimens and presence of comorbidities
- Objective: Describe financial distress in RA, compare participants with RA and non-inflammatory musculoskeletal disease (NIMSKD), and identify determinants of financial distress

METHODS

- We identified adult respondents enrolled in the FORWARD registry who had RA or NIMSKD and completed the FACIT-COST questionnaire
- In this cross-sectional study, the FACIT-COST score was analyzed as a continuous variable (higher score indicates less financial distress) and as a binary variable (presence of financial distress with threshold <26)
- Double LASSO was applied to linear and logistic regression to select best multivariable models evaluating associations between financial distress and predictors

RESULTS

- RA patients had lower FACIT-COST scores indicative of more financial distress than patients with NIMSKD with mean (SD) scores of 30.2 (9.4) and 34.0 (8.4), respectively (unadjusted-p<0.001) (Figure 1). Financial distress was more frequent in RA than NIMSKD (29% vs. 15%; unadjusted-p<0.001).
- In univariate analyses, younger age, lower household income, less frequent college education, being married, being retired, male sex, and Caucasian race were associated with presence of financial distress in patients with RA.
- In multivariable logistic regression models, determinants of financial distress in RA included depression (aOR 1.13; 95% CI 1.09-1.16) and disease severity (aOR 1.21; 95% CI 1.13-1.28)) (Figure 2). Use of biologic or targeted synthetic disease-modifying anti-rheumatic drugs were not associated with financial distress in adjusted models. Differences in financial distress by diagnosis persisted following multivariable adjustment (Figure 3).

Table 1: Descriptive Characteristics (N=3617)

Variables	RA (n=2277)	NIMSKD (n=1340)
Demographics		
Age (years)	69.77 (10.69)	68.79 (10.22)
Total Household Income (USD/10^3)	73.37 (42.10)	90.77 (41.47)
College education, %	54.05	73.24
Employed, %	20.13	28.20
Married, %	64.09	71.31
Retired, %	60.13	61.95
Male, %	16.09	33.28
Caucasian, %	90.85	96.76
Insurance status		
Medicare, %	70.09	66.04
Quality of Life		
PAS (0-10)	3.45 (2.21)	1.94 (2.05)
Comorbidities		
RDCI (0-9)	2.03 (1.66)	1.70 (1.58)
BMI (kg/m^2)	28.38 (6.96)	26.56 (6.55)
PHQ8 (0-24)	4.37 (4.42)	3.12 (3.72)
Treatments		
Biologic, %	49.71	1.12
DMARD, %	59.51	-----

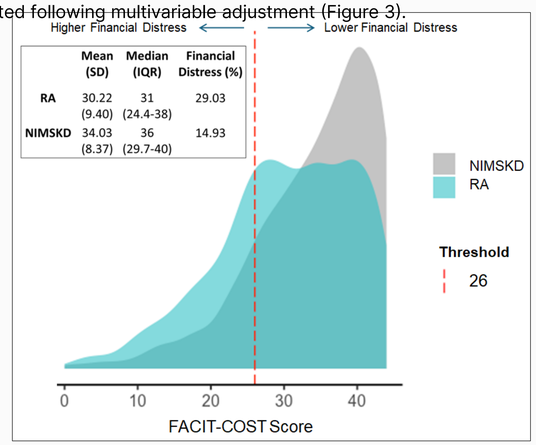

Figure 1: Distribution of FACIT-COST Scores by RA and NIMSKD

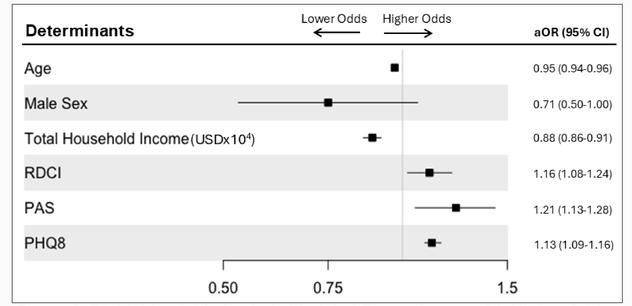

Figure 2: RA Multivariable Logistic Model of Determinants with Higher Odds of Financial Distress, Threshold Score <26

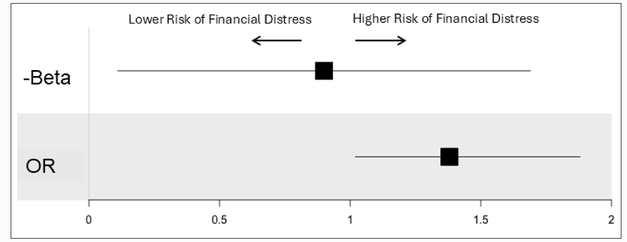

Figure 3: Effect of RA Diagnosis on FACIT-COST Score (-Beta) and Odds Ratio (OR) on Financial Distress

CONCLUSION

- Financial distress is prevalent in patients with RA and appears to be greatest in those with comorbidities, specifically depression
- Future prospective studies are needed to examine causal directionality to elucidate whether future interventions aimed at comorbid conditions result in clinical benefit through reductions in financial distress

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