

# Self-reported Indirect Costs are Underestimated in a Canadian Cohort of Patients with SLE

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## INTRODUCTION

- Indirect costs experienced by SLE patients reflect lost productivity in work force and non-work force activities and can be expressed as:
- Self-reported costs: patient self-reports of lost productivity
  - Calculated costs: the difference between productivity of an age-and-sex matched general population and self-reported productivity

## STUDY AIMS

- Compare self-reported indirect costs to calculated costs based on an age-and-sex matched general population
- Assess indirect costs across organ damage states in a Canadian SLE cohort

## METHODS

- Patients fulfilling the ACR or Systemic Lupus International Collaborating Clinics (SLICC) Classification Criteria for SLE from 6 Canadian centres were enrolled from 2013 to 2017
  - Participants completed a validated questionnaire on lost productivity (child care, housework, shopping, odd jobs, volunteering, employment, absenteeism, presenteeism)
  - Lost productivity was calculated as:
- Self-reported costs: the difference between the time patients reported they would be engaged in work force and non-work force activities if not ill versus the time they reported working &
  - Calculated costs: the difference between the time worked by an age-and-sex matched general population (Statistics Canada) in work force and non-work force activities versus the time patients reported working
- Annual indirect costs associated with damage (SLICC/ACR Damage Index (SDI)) were obtained from multiple regressions adjusting for age, race/ethnicity, and disease duration

## RESULTS

All Patients	
No. of patients:	1368
Disease Duration, years (mean + SD)	16.8 (11.6)
Age at Diagnosis, years (mean + SD)	33.0 (13.5)
Gender (% Female):	90.4
Ethnicity (% Caucasian):	70.9
Employed (%):	49.6
SLEDAI-2K (mean + SD)	2.15 (3.07)

Table 1. Baseline demographic and clinical manifestations of patients

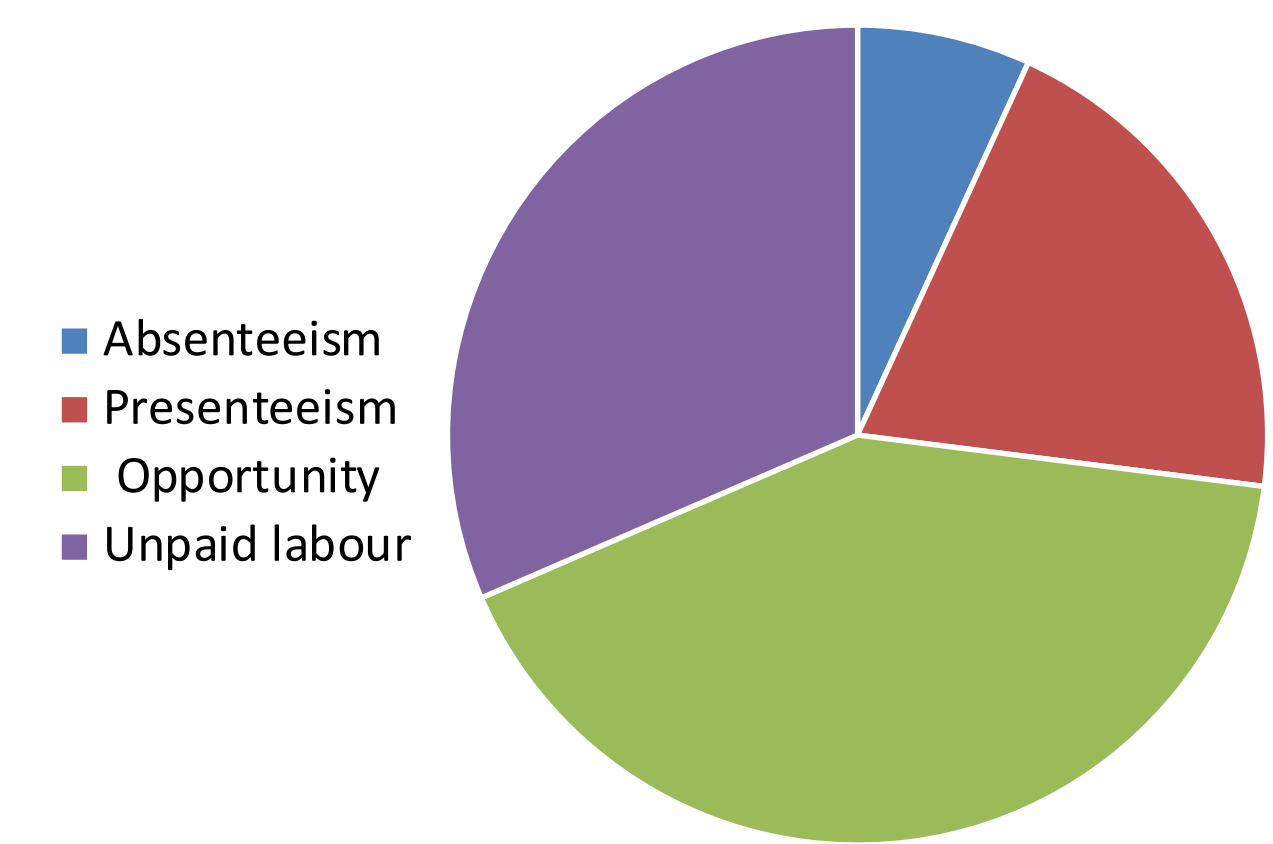


Figure 1. Annual indirect self-reported cost components

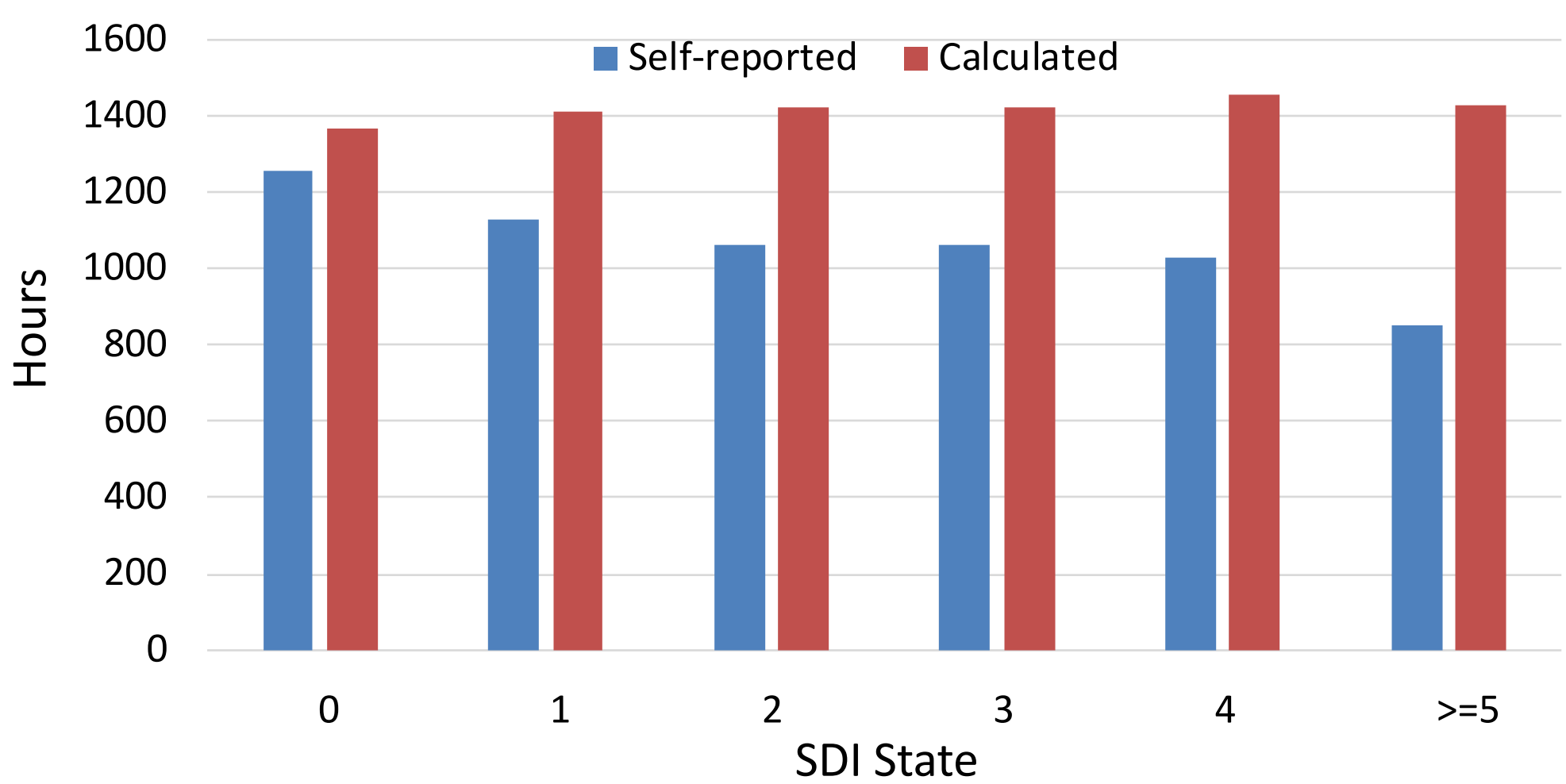


Figure 2. Self-reported versus calculated annual hours of unpaid labour, stratified by SDI

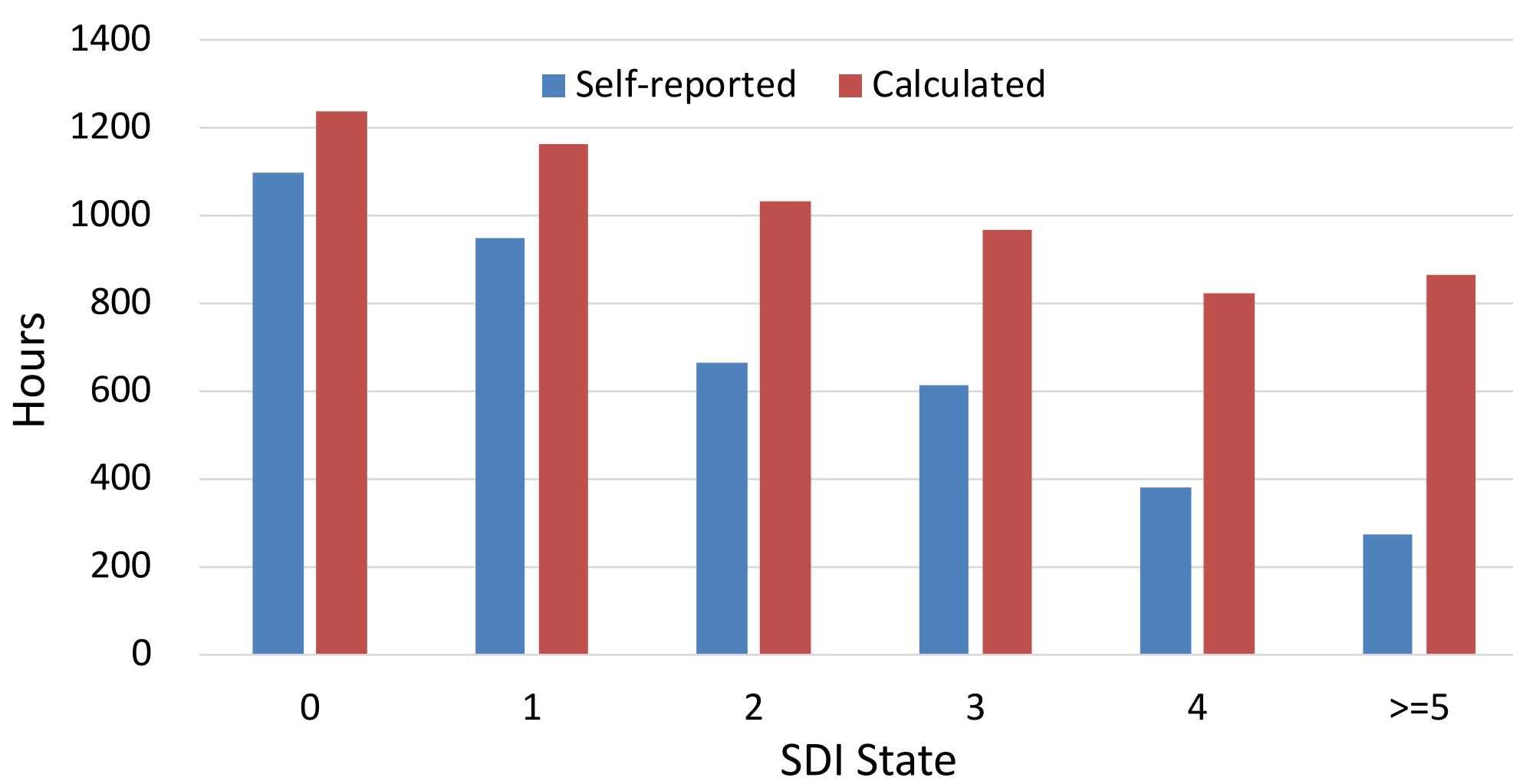


Figure 3. Self-reported versus calculated annual hours of paid labour, stratified by SDI

## RESULTS

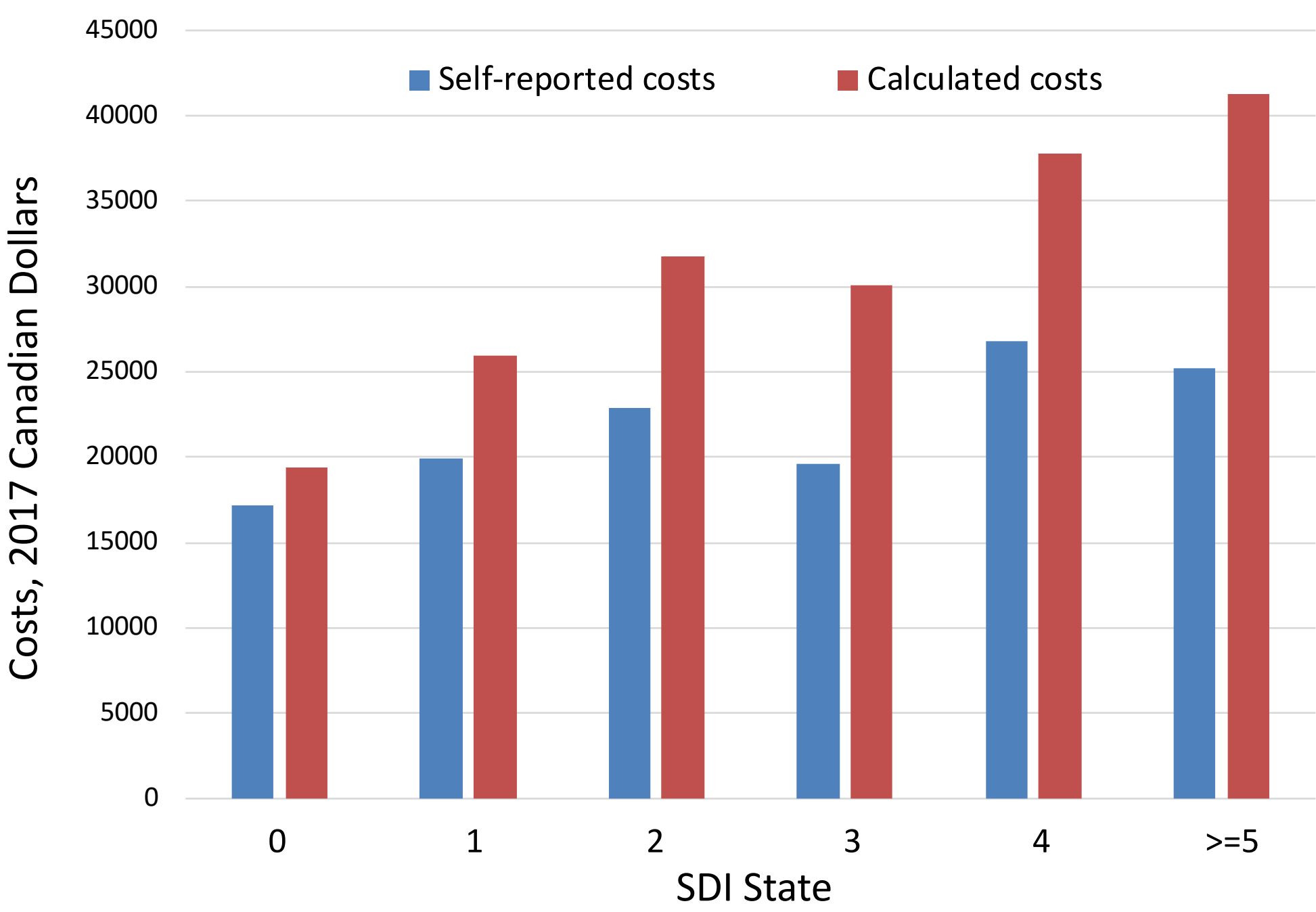


Figure 4. Self-reported versus calculated annual total indirect costs, stratified by SDI

Damage State (SDI)	Total Cost Difference 2017 CDN \$ (95% CI)
0	2271 (-3463, 8005)
1	6009 (204, 11814)
2	8881 (2928, 14835)
3	10402 (2844, 17959)
4	10912 (285, 21539)
≥5	15989 (7563, 24415)

Table 2. Cost difference between self-reported and calculated indirect costs, stratified by SDI

## CONCLUSIONS

- Indirect costs are greater when calculated using an age-and-sex matched population versus patient self-reports
- Patients' expectations of their productivity appear to plateau with higher SDI states and lost productivity is a major issue regardless of the extent of disease damage
- Although at SDI=0, mean indirect costs did not differ between methods, for SDI ≥1 through SDI ≥ 5, calculated indirect costs were greater and the difference between methods increased significantly between lower and higher SDIs
- Future economic studies should not only rely on self-reports of lost productivity, but should also incorporate a comparison of the patient productivity with actual productivity of an age-and-sex matched general population to fully capture indirect costs of SLE
- Limitations of this study include a limited number of patients with high SDI, and the study was based within tertiary academic centres and may not be representative of the entire SLE population