# Healthcare Resource Utilization and Economic Burden Among Adults With Alopecia Areata in the Kingdom of Saudi Arabia

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## BACKGROUND

- Alopecia areata (AA) is an autoimmune disease characterized by patchy or complete nonscarring hair loss on the scalp, with or without additional loss of facial and/or body hair[1]

- Individuals with AA can experience significant impacts on their health-related quality of life and psychosocial well-being, with associated financial implications[2-4]

- The prevalence of AA in the Kingdom of Saudi Arabia (KSA) is estimated to be 2.3%[5]; however, data on healthcare resource utilization and the economic burden of AA in the KSA are limited

## OBJECTIVE

- To assess the healthcare resource utilization and associated economic burden of AA in adults in the KSA

## METHODS

### Study design and data source

- The study analyzed data from the Adelphi Real World AA Disease Specific Programme™ (DSP),[6,7] a cross-sectional survey of dermatologists and their consulting patients with AA that was conducted in the KSA from September 2022 to March 2023 (**Figure 1**)

- Participating dermatologists provided data on patient demographics, clinical characteristics, and treatment information for 4 of their consulting patients (1 with currently mild AA, 1 with currently moderate AA, and 2 with currently severe to very severe AA)

- A subset of these patients voluntarily completed a survey, independently of their physicians, on associated out-of-pocket costs for prescribed medication for AA

**Figure 1.** Study design
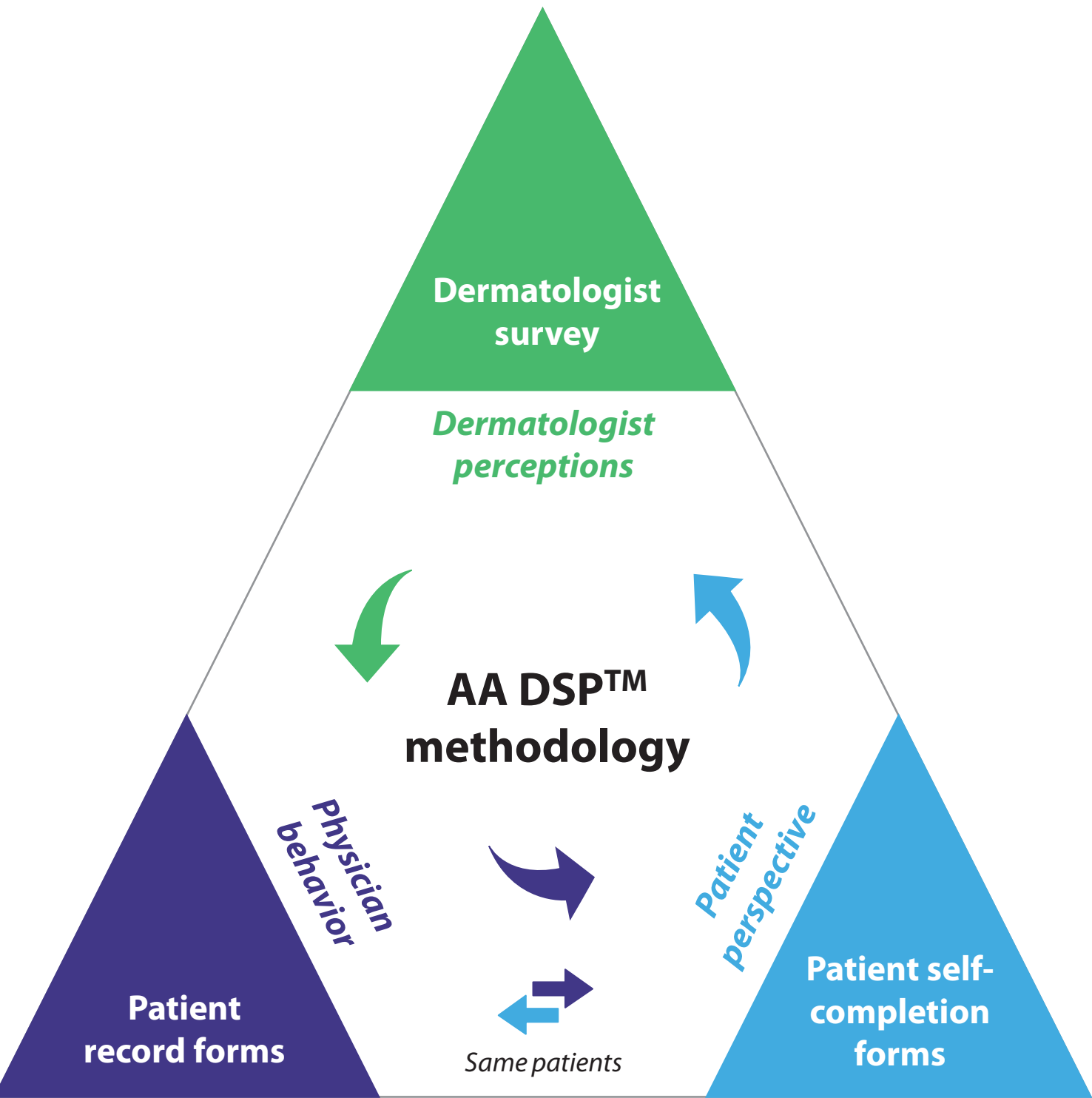


DSP, Disease Specific Programme.

### Inclusion criteria

- Patients:
  - Age ≥18 years
  - A physician-confirmed diagnosis of AA
  - Not currently involved in a clinical trial
- Dermatologists:
  - Actively involved in AA treatment management
  - A minimum monthly workload of 4 adults with AA (including at least 1 patient with currently mild, 1 patient with currently moderate, and 2 patients with currently severe to very severe AA)

### Analysis

- Results were stratified by physician-estimated percent scalp hair loss (SHL)
- Statistical analysis was conducted using STATA version 17 (StataCorp, College Station, TX). Statistical analyses across percent SHL groups were conducted using analysis of variance (ANOVA) for numeric variables and Fisher exact test for categorical variables, with chi-squared tests used when Fisher exact test could not be calculated

## RESULTS

### Patient demographics

- A total of 185 patients were included in the analysis; 56 patients had ≤20% SHL, 41 had 21% to 49% SHL, and 88 had ≥50% SHL (**Table 1**)
- The median (IQR) age was 28.0 (23.0-33.0) years, 58.4% of patients were male, and most patients were diagnosed with AA by a dermatologist (95.6%)
- In total, 97 patients (52.4%) had severe to very severe AA (as assessed by the physician)

**Table 1.** Patient demographics by percent SHL

| Characteristic | Overall (N=185) | ≤20% SHL (n=56) | 21% to 49% SHL (n=41) | ≥50% SHL (n=88) | P value |
|---|---|---|---|---|---|
| **Age, years** | n=185 | n=56 | n=41 | n=88 | |
| Mean (SD) | 28.3 (6.7) | 24.4 (6.2) | 28.4 (6.2) | 30.8 (6.2) | **<0.0001** |
| Median (IQR) | 28.0 (23.0-33.0) | 22.0 (20.0-27.0) | 27.0 (25.0-29.0) | 32.0 (26.5-35.0) | |
| **Sex, n (%)** | n=185 | n=56 | n=41 | n=88 | |
| Female | 77 (41.6) | 29 (51.8) | 13 (31.7) | 35 (39.8) | 0.1 |
| Male | 108 (58.4) | 27 (48.2) | 28 (68.3) | 53 (60.2) | |
| **Ethnicity, n (%)** | n=185 | n=56 | n=41 | n=88 | |
| Afro-Caribbean | 1 (0.5) | 0 (0.0) | 1 (2.4) | 0 (0.0) | |
| Asian-Indian subcontinent | 47 (25.4) | 15 (26.8) | 14 (34.1) | 18 (20.5) | |
| Asian (other) | 24 (13.0) | 7 (12.5) | 7 (17.1) | 10 (11.4) | 0.03 |
| Iranian | 4 (2.2) | 0 (0.0) | 3 (7.3) | 1 (1.1) | |
| Middle Eastern (combined) | 109 (58.9) | 34 (60.7) | 16 (39.0) | 59 (67.0) | |
| Other | 1 (0.5) | 0 (0.0) | 0 (0.0) | 1 (4.2) | |
| **Physician who diagnosed patient, n (%)** | n=182 | n=55 | n=40 | n=87 | |
| Dermatologist | 174 (95.6) | 53 (96.4) | 40 (100.0) | 81 (93.1) | |
| Pediatrician | 1 (0.5) | 0 (0.0) | 0 (0.0) | 1 (1.1) | 0.4 |
| General practitioner | 6 (3.3) | 1 (1.8) | 0 (0.0) | 5 (5.7) | |
| Other specialist | 1 (0.5) | 1 (1.8) | 0 (0.0) | 0 (0.0) | |
| **Insurance type, n (%)** | n=185 | n=56 | n=41 | n=88 | |
| Public insurance company | 66 (35.7) | 14 (25.0) | 17 (41.5) | 35 (39.8) | |
| Voluntary, private health insurance | 74 (40.0) | 16 (28.6) | 18 (43.9) | 40 (45.5) | **0.0002** |
| Other | 5 (2.7) | 1 (1.8) | 0 (0.0) | 4 (4.5) | |
| No insurance coverage | 40 (21.6) | 25 (44.6) | 6 (14.6) | 9 (10.2) | |
| **Current physician-assessed severity, n (%)** | n=185 | n=56 | n=41 | n=88 | |
| Mild | 43 (23.2) | 42 (75.0) | 1 (2.4) | 0 (0.0) | |
| Moderate | 45 (24.3) | 9 (16.1) | 35 (85.4) | 1 (1.1) | **<0.0001** |
| Severe to very severe | 97 (52.4) | 5 (8.9) | 5 (12.2) | 87 (98.9) | |

SHL, scalp hair loss.

### Healthcare resource utilization and the economic burden of AA

- In the past 12 months, the total mean (SD) and median (IQR) number of dermatologist visits were 4.9 (2.8) and 4.0 (3.0-6.0), respectively (**Figure 2**)
- In the ≤20% SHL cohort, the mean and median number of dermatologists visits were 3.6 (2.9) and 3.0 (2.0-4.0), respectively, while in the ≥50% SHL cohort, they were 5.9 (2.7) and 6.0 (4.0-7.0)
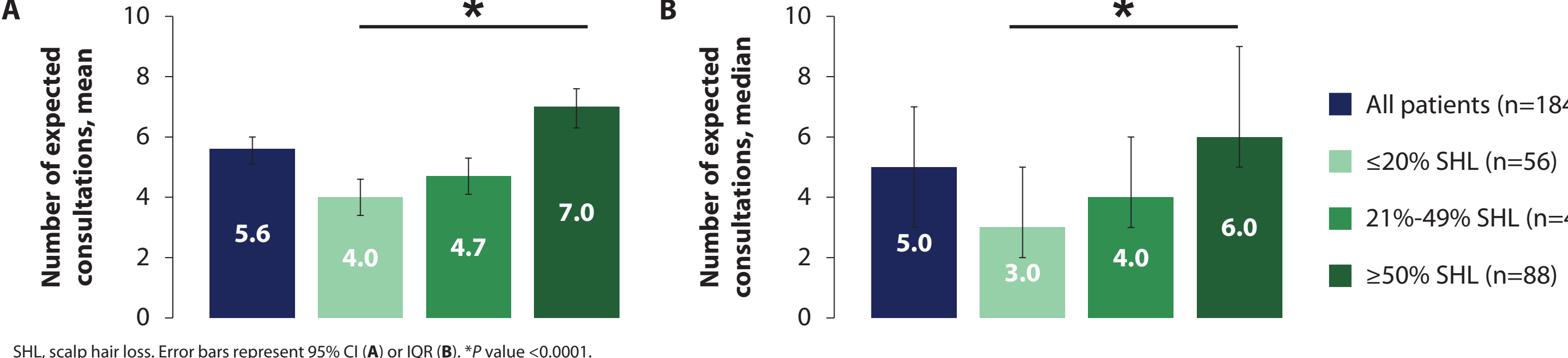
**Figure 2.** Mean (**A**) and median (**B**) number of dermatologist visits in the past 12 months by percent SHL
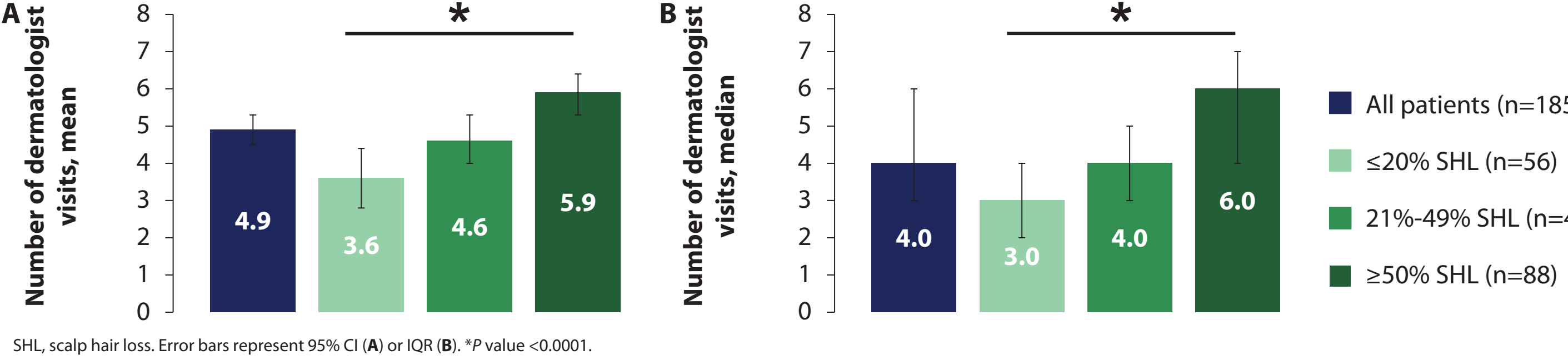


SHL, scalp hair loss. Error bars represent 95% CI (**A**) or IQR (**B**). *P value <0.0001.

- The total expected mean (SD) and median (IQR) consultations over the next 12 months were 5.6 (2.9) and 5.0 (3.0-7.0), respectively, and ranged from 4.0 (2.3) and 3.0 (2.0-5.0) in the ≤20% SHL cohort to 7.0 (3.0) and 6.0 (5.0-9.0) in the ≥50% SHL cohort (**Figure 3**)

**Figure 3.** Mean (**A**) and median (**B**) expected number of consultations over the next 12 months by percent SHL



SHL, scalp hair loss. Error bars represent 95% CI (**A**) or IQR (**B**). *P value <0.0001.

- The mean (SD) and median (IQR) number of medications that patients were currently receiving for AA were 2.3 (1.8) and 2.0 (1.0-3.0), respectively (**Figure 4**)
- The median (IQR) monthly out-of-pocket costs per patient for prescription medication was 240 (135-450) Saudi Arabia riyal (SAR) in the ≤20% SHL cohort and 300 (120-600) SAR in the ≥50% SHL cohort (**Figure 5**)

**Figure 4.** Mean (**A**) and median (**B**) number of medications that patients were currently receiving for AA by percent SHL
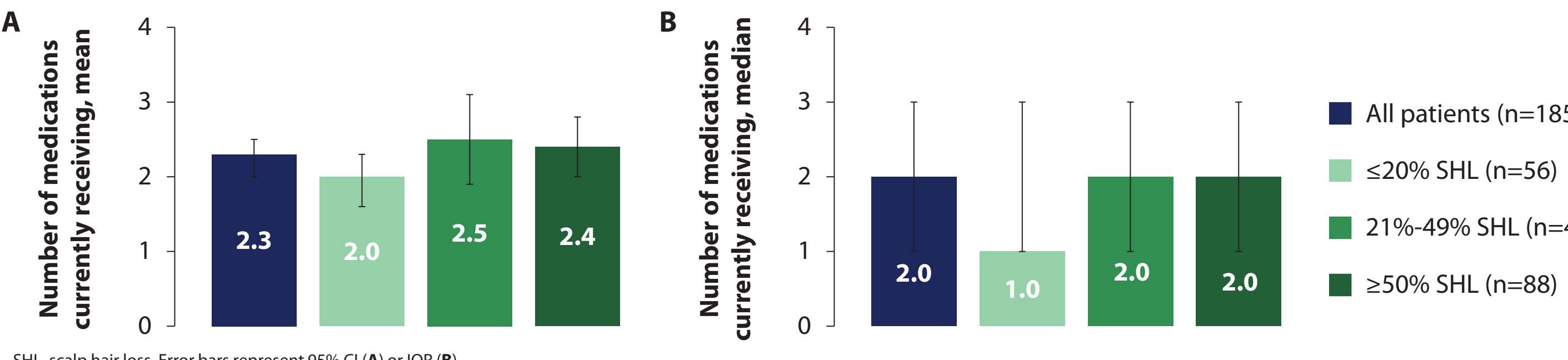


SHL, scalp hair loss. Error bars represent 95% CI (**A**) or IQR (**B**).

**Figure 5.** Mean (**A**) and median (**B**) monthly OOP costs for prescription medications per patient by percent SHL
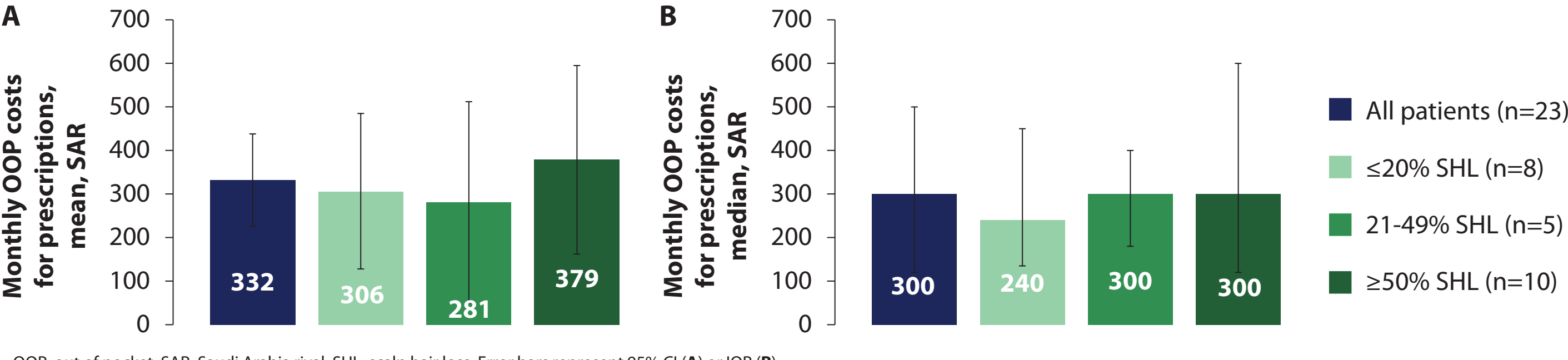


OOP, out of pocket; SAR, Saudi Arabia riyal; SHL, scalp hair loss. Error bars represent 95% CI (**A**) or IQR (**B**).

## LIMITATIONS

- Data are self-reported by patients and may be subject to recall bias
- Reported data may be limited due to missing fields or limited access to a patient's medical record forms
- The sample size for the out-of-pocket costs analysis was small (n=23)
- Findings of this study may not be generalizable to other age groups, disease conditions, or geographic regions

## CONCLUSIONS

- Adults with AA had substantial healthcare resource utilization, with frequent dermatologist visits and out-of-pocket costs for medication in the KSA
- The burden was more pronounced in patients with extensive hair loss of ≥50% SHL than patients with ≤20% SHL

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