ABSENTEEISM IN ADULT PATIENTS WITH MODERATE-TO-SEVERE TREATED ATOPIC DERMATITIS IN PORTUGAL: AN ECONOMETRIC ANALYSIS

ID: PSY6

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Background and Objective

- Atopic dermatitis (AD) is a common, inflammatory skin disease that typically runs a chronic course of flares and remissions.
- AD has been found to have a particular impact on the social functioning and physiological wellbeing of the patients.
- The aim of this study is to model absenteeism in adult patients treated for moderate-to-severe atopic dermatitis in Portugal.

Methods

Data source

Study design

- Cross-sectional study conducted in 157 community pharmacies in Portugal

Patients included

- ≥ 18 years old
- Self-reported AD disease
- Medicated with

1) topical calcineurin inhibitors,
2) topical corticosteroids plus systemic therapy or
3) systemic therapy alone

Data collection

Two-part questionnaire:

- First part collected data on AD medication (filled by pharmacists)
- Second part collected socio-demographic characteristics, AD follow-up, and disease impact on health status and employment (self-administered)

Respondents and Data

- Respondents selected were employed patients who reported the number of work days missed (N=395)

Data analysis

A two-part model - zero-inflated negative binomial (ZINB)- was used to estimate the predictors of absenteeism related to AD

Response variable = number of absenteeism days due to AD, in the previous 6 months

$$Logistic\ model: P(number\ of\ absenteeism\ days = 0) = \alpha + \beta_{1\ age} + \beta_{2\ female} + \beta_{3\ private\ setting} + \beta_{4\ general\ practiotioner}$$

$$Negative\ binomial\ model: P(number\ of\ absenteeism\ days = n) = \alpha + \beta_{1\ age} + \beta_{2\ female} + \beta_{3\ embarrassment} + \beta_{4\ systemic\ therapy} + \beta_{2\ region}$$

- All analyses used Stata, version 14. (StataCorp, 2015)

Results

- The sample population had a mean age of 42. The majority were female
- About half of the patients were followed in private settings
- The majority of patients were treated with systemic therapy
- Almost 84% of patients reported that AD caused some level of embarrassment

Table 1. Baseline characterization (N=395)	
Mean age in years (sd)	41.73 (0.57)
Gender female, n (%)	221 (55.95)
Health region, n (%)	
North	163 (41.27)
Centre	44 (11.14)
Lisbon and Tagus Valley	139 (35.19)
Alentejo	15 (3.80)
Algarve	26 (6.58)
Islands	8 (2.03)
Private service, n (%)	207 (52.41)
General practitioner, n (%)	113 (28.61)
Systemic therapy, n (%)	313 (79.24)
Embarrassment, n (%)	
None	64 (16.20)
A little	184 (46.58)
Some	89 (22.53)
A lot	58 (14.68)

Figure 1. Patient distribution by number of absenteeism days due to AD, in the previous 6 months.

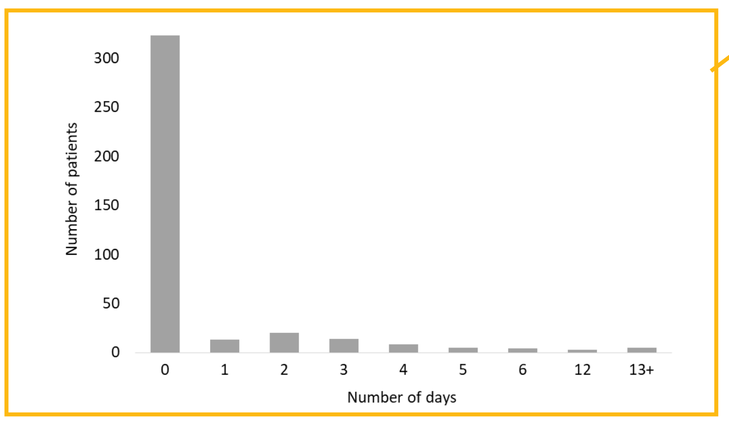
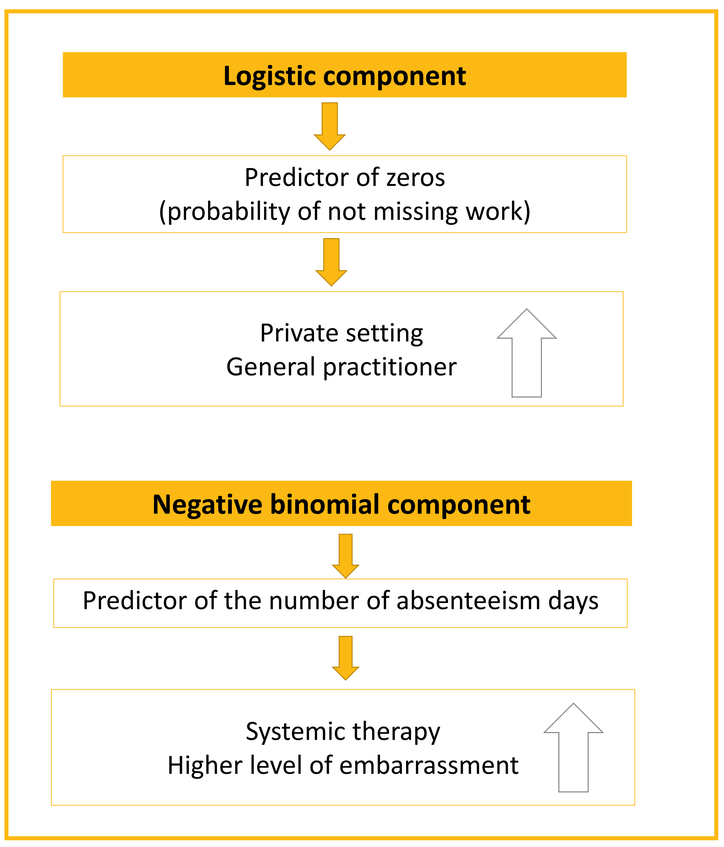


Figure 2. Predictors identified in each component of the ZINB model.



- 81.8% of patients reported not having missed work due to AD
- The mean number of absenteeism days was 0.88 (sd=3.9)
- In the patients that missed work, the mean number of absenteeism days was 4.8 (sd=8.0)

Table 2. Marginal effects of the ZINB for the number of absenteeism days.		
Independent variable	Effect (SE)	90% CI
Age	-0.004 (0.01)	[-0.02; 0.02]
Female	0.18 (0.27)	[-0.26; 0.62]
Private service	-0.54 (0.22) **	[-0.90; -0.18]
General practitioner	-0.92 (0.28) ***	[-1.37; -0.46]
Systemic therapy	0.77 (0.40)*	[0.11; 1.44]
Embarrassment		
None	Baseline	
A little	0.14 (0.20)	[-0.20; 0.48]
Some	0.66 (0.33) **	[0.11; 1.21]
A lot	1.46 (0.64) **	[0.41; 2.51]
Health region		
North	Baseline	
Centre	0.66 (0.52)	[-0.19; 1.51]
Lisbon and Tagus Valley	-0.06 (0.23)	[-0.45; 0.32]
Alentejo	4.02 (2.52)	[-0.13; 8.17]
Algarve	-0.50 (0.25) **	[-0.91; -0.09]
Islands	-0.24 (0.34)	[-0.81; 0.33]
Number of observations: 395; Log likelihood = -334.03		

**p-value<0.05 ***p-value<0.01. SE, standard error; CI, confidence interval.

Conclusions

- AD is a disease that affects the daily life of patients, resulting in productivity losses
- The level of embarrassment and the type of medication are predictors of absenteeism in patients with moderate-to-severe AD

- Patients **with high levels of embarrassment** miss on average more days than patients that do not report any level of embarrassment
- Patients on **systemic therapy** miss on average more days than those that are not on systemic therapy

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