

Age and gender differences in Direct Non-Health costs for formal and informal assistance, costs for productivity loss among Italian Behçet patients

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Background

Behçet syndrome (BS) is a rare multisystem vasculitis primarily characterized by recurrent urogenital ulcers and sight threatening uveitis, even other involvement could be present such as joints, skin, vessels and central nervous system (CNS) and gastrointestinal system.

To our knowledge there are very few studies exploring the economic dimension of BS.

The present study aims to assess direct non-health costs for formal and informal assistance as well as indirect costs among patients with Behçet syndrome (BS) in Italy and to evaluate gender and age differences.

Methods

A cross-sectional study was conducted among adult BS patients in Italy using an ad-hoc developed questionnaire whose aim was to investigate several dimensions related to BS. Among the other information resource use related to direct health costs, direct non-health costs and indirect costs due to productivity losses were collected.

Costs for formal and informal assistance as well as productivity losses were estimated respectively using the proxy-good method and the human capital approach. All costs were referred to 2022.

We analysed the effect of age and gender on costs using a two-part model to account for the distribution of costs data and considering:

- ⌘ a probit model for the first part;
- ⌘ a generalized linear model with a gamma distribution and log link in the second part.

All models were also adjusted for years since diagnosis and education level.

Results

A total of 207 patients answered the survey and were considered in the present study. The majority of patients declared they need help for homework and daily activities and 66.2% (n=137) declared assistance from a professional with an average of 41(min;max=0;30) hours/year; 61.4% (n=127) received informal assistance from family members with a mean of 1,007(min;max=0;9,120) hours/year. Mean costs for formal and informal assistance were 476€(min;max=0;8,87) per patient/year and 11,593€(min;max=0;104,971) per patient/year respectively.

A total of 131 patients (63.3%) declared themselves to be workers while 8.2% (17/207) were unable to work because of the disease.

Mean working days lost were 10(min;max=0;120) days/year and mean costs associated to productivity loss being 1,381€(min;max=0;16,574) per patient/year.

Overall mean direct non-health (also comprising direct non-health costs other to assistance) and indirect costs were 14,071€(min;max=0;108,209) per patient/year.

Results from regression models suggested that costs for productivity loss were significantly lower among males ($\beta=-0.531(0.213)$, p-value=0.013) and increased as age increases ($\beta=0.315(0.106)$, p-value=0.003), males were also less likely to incur in costs for formal and informal assistance ($\beta=-1.081(0.254)$, p-value<0.001). No significant differences were found with respect to education level.

Conclusions

Rare diseases imply a great burden on patients, their family and the Society at all because of the burden of disease and associated costs.

Results from the present study help quantifying costs for daily assistance and those related to productivity losses among BS patients in Italy and they also suggest that costs for informal care and productivity losses may disproportionately affect females and older patients.

References

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