

# Reported Anxiety and Exercise-Associated Adverse Events in MPN Patients: A Mixed-Methods Approach (OSHO #106)

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## 1. Introduction

- In 2021, multicenter study on physical activity behavior in patients with myeloproliferative neoplasms (MPN)<sup>1</sup>
- 45% of the participants reported anxieties about adverse events (AEs) related to physical activities.
- Anxieties were associated with reduced daily activity and less sport.
- Insufficient physical activity can negatively impact health.
- Lack of data: actual frequency and types of AEs that occur in the context of sport in MPN patients

## 2. Aim of the Study

The study examines anxiety and AEs in sports, as well as coping strategies among adult MPN patients who are active in sports.

## 3. Methods

**Study design:** Mixed-methods

In cooperation with the MPN Network Germany

### 1. One-time online survey via SurveyMonkey

- Demographic and health-related variables
- Current sporting activities (FITT-Criteria)
- Anxieties and coping strategies
- AEs in sports



### 2. Interviews via Zoom (n = 9)

- Problem-centered interviews
- Analysing by a multiprofessional team
  - using MAXQDA
  - based on "Grounded Theory"

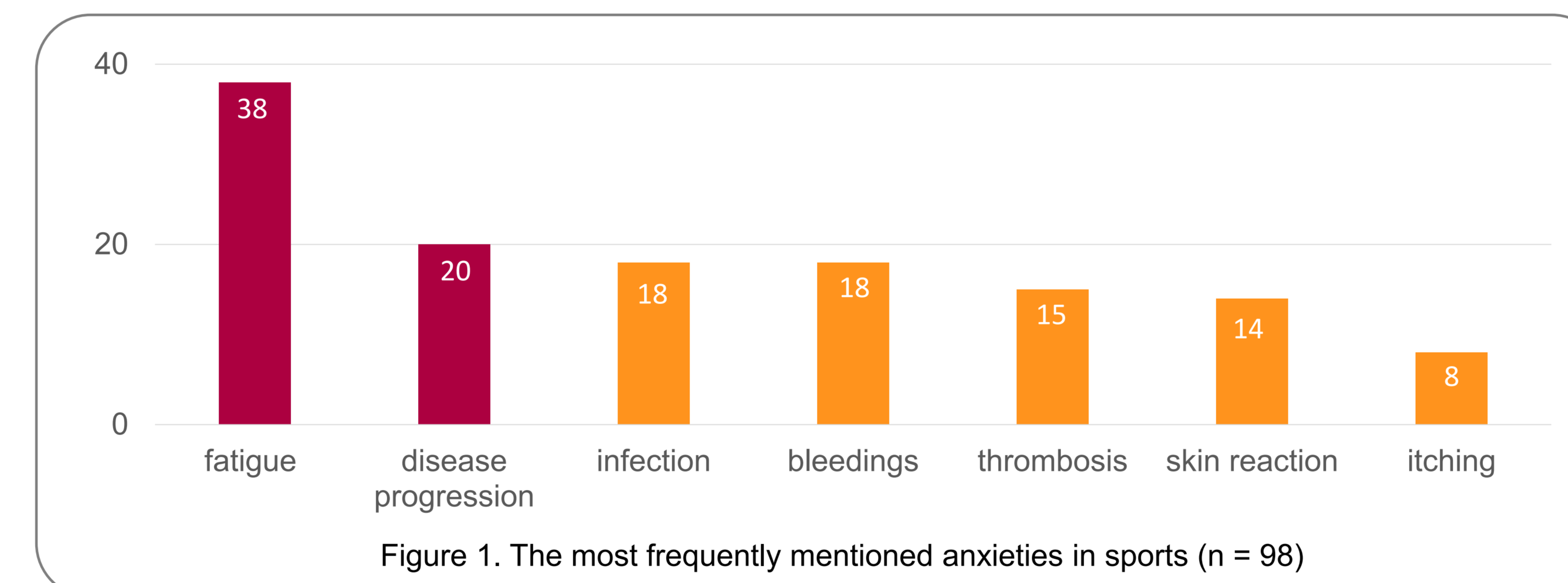


## 4. Results of the survey

- Analysed questionnaires n = 98
- 67% female, age 58 ± 12 years (ranging from 25 – 83 years)
- Years since diagnosis: 7.7 ± 7.3 years
- 60% under active medical treatment, 40% „watch-and-wait“
- ~ 50% of participants reported suffering from moderate to severe fatigue
- Average of 1,734 ± 1,552 MET minutes per week (ranging from 75 – 8.760)
- Cycling (n = 36) and other endurance sports (n = 35) dominated

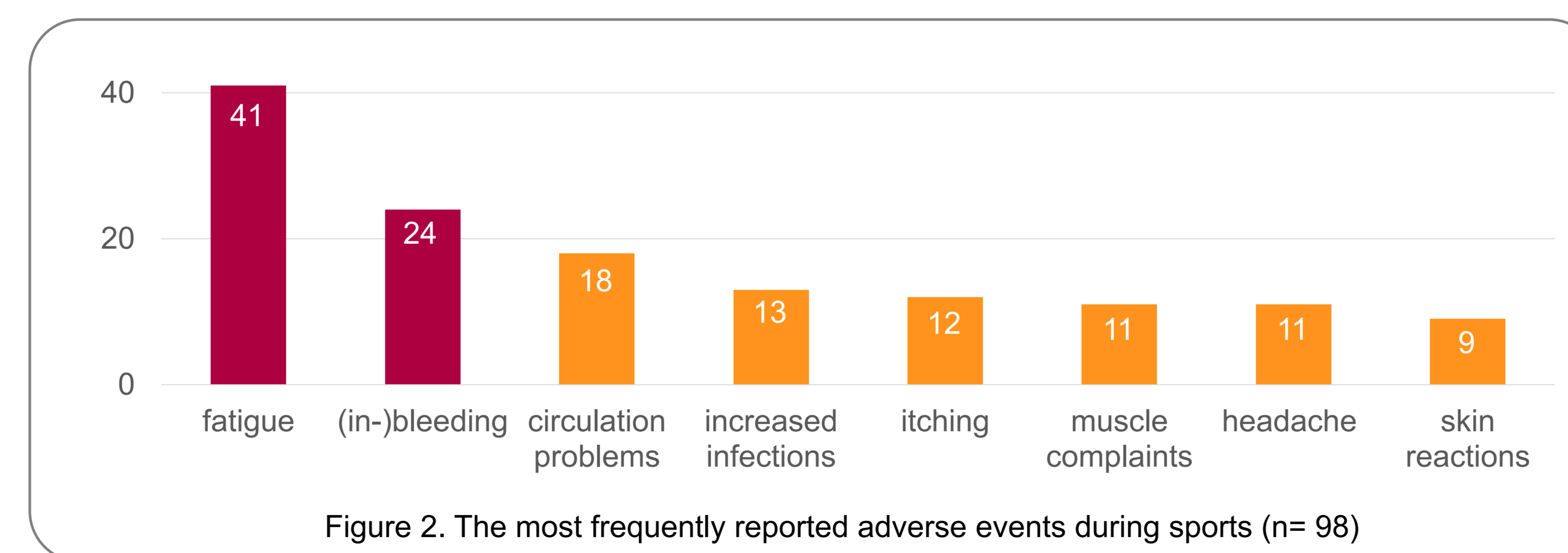
### Reported anxieties during sports

- 67% reported anxieties – increasing fatigue standing out (Fig. 1)



### Reported Adverse Events related to sporting activities

- 70% reported at least one recurrent AE (Fig. 2)



- General decline in performance since diagnosis: 54%, of which only temporary 14% and permanent 86%
- There are correlations between fatigue and training intensity ( $p = 0.018$ ):
  - Only light intensity, 90% of whom reported fatigue
  - Only moderate intensity, 35% of whom reported fatigue
  - Only intensive intensity, 14% of whom reported fatigue
- Patients with fatigue train alone more often

## 5. Discussion

- Physical activity levels are significantly above the recommendations (600 MET).
- Quantitative data show that 2/3 of MPN patients who are active in sports have fears during training.
- These fears appear to be based on experience, as 3/4 of all respondents have experienced at least one AE (repeatedly).
- Fatigue is one of the most significant symptoms that should be given more attention in the future.
- Results confirm the need for specific training recommendations for MPN patients.
- Qualitative data analysis in progress.

## Funding

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## Reference

<sup>1</sup>Felser, S et al. (2023). Anxieties, age and motivation influence physical activity in patients with myeloproliferative neoplasms - a multicenter survey from the East German Study Group for Hematology and Oncology (OSHO #97). *Frontiers in Oncology* 12: 1-11. DOI: 10.3389/fonc.2022.1056786